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*'It ain't what you do (It's the way that you do it)':  
Reciprocity, co-operation and spheres of exchange in  
two community currency systems in the North of  
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**'It ain't what you do (It's the way that you do it)'<sup>1</sup>:**

**Reciprocity, co-operation and spheres of exchange in two  
community currency systems in the North of England.**

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**Department of Anthropology  
Durham University**

**2012**

**Thesis submitted for the Degree of Doctor of Philosophy**

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<sup>1</sup> Song by Oliver and Young, recorded in 1939 by Ella Fitzgerald.

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### Declaration of originality:

Unless explicitly stated otherwise, all the work presented in this thesis (including the analysis of data originating from Woolgone LETS) is both my own work, and original to my PhD.

### Statement of copyright:

The copyright of this thesis rests with the author. No quotation should be published without prior consent, and information derived from it should be acknowledged.

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I am much indebted to the advice and wisdom of my friend Sue, who set up Woolgone LETS - inspiring me to set up Durham Exchange - and then went on to experiment with time banking.

Finally, I would like to give my thanks to the staff and members of Steelwear Time Bank<sup>2</sup> themselves, especially for allowing me to continue with my research even through the stressful time when the group faced closure. Particular thanks are owed to staff members Tamsin and Jonathan, for trusting me and taking the time to explain things to me, and to time bank member Meseret, who has given me and my family an insight into the experience of being an asylum seeker, becoming a valued friend in the process. Having come along to a Durham Exchange meeting, Meseret shared her view that community currency systems can be very different from each other, but that this does not mean that one kind is better than another. This is something I have always tried to keep in mind, along with the wise words of another time bank member:

*We are all connected. Give something and you will also receive,  
if not through the time bank then in other ways...*

## Dedication:

To my mother, Ingrid, who might have written a few theses herself, if she hadn't had me.

---

<sup>2</sup> The time bank, its staff and members have all been given pseudonyms to protect their identities.

## THESIS MAP:

<b>INTRODUCTION</b>	<b>Ch.3 METHODOLOGY OF STEELWEAR TIME BANK CASE-STUDY</b>
<b>Ch.1 COMMUNITY CURRENCY SYSTEMS IN THE UK</b>	<b>Ch.4 A CASE STUDY OF STEELWEAR TIME BANK AND ITS MEMBERS</b>
<b>Ch.2 CO-OPERATION IN COMMUNITIES: A MULTI-DIMENSIONAL APPROACH</b>	
<b>PART I: SOCIAL CONNECTIONS AND THEIR INFLUENCE ON WELL-BEING</b>	<b>Ch.5 SOCIAL COHESION AND SOCIAL REACH IN STEELWEAR TIME BANK</b>
<b>PART II: RECIPROCITY, CO-OPERATION AND MUTUAL AID</b>	<b>Ch.6 RECIPROCITY AND CO-OPERATION IN STEELWEAR TIME BANK</b>
<b>PART III: COMMUNITY CURRENCY SYSTEMS: BETWEEN THE SPHERES?</b>	<b>Ch.7 SPHERES OF EXCHANGE IN STEELWEAR TIME BANK</b>
	<b>THESIS CONCLUSIONS</b>
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## INTRODUCTION

Here I give a brief account of my previous research and experience of community currency systems, then go on to introduce the theoretical underpinnings of the current thesis, before presenting my initial impressions of Steelwear and its time bank.

### 1. My MA research into Woolgone LETS

Woolgone LETS is a Local Exchange Trading System based in and around a small market town in the North of England. My MA dissertation on Woolgone LETS (Panther, 2000) focused on how the community currency system had avoided a 'tragedy of the commons' (Hardin, 1968), despite the fact that members' balances were not published as in other LETS systems.

I began by looking at the history of alternatives to capitalism in the UK, and at the origins and rationale behind LETS as a movement. My fieldwork with Woolgone LETS took place from June to September 2000, and was based upon participant observation. I became a member of the system and carried out participant observation looking at the behaviour, values and norms of the individuals involved, being particularly interested in how group values and norms were promulgated and sustained in the midst of the surrounding market economy. I also looked at the types of transactions carried out, categorising transactions as directly reciprocal, repeated one-way, or one-off. In my analysis I drew heavily on models of co-operation arising from game-theory, and on Ostrom's work on the avoidance of 'the tragedy of the commons' in the sharing of common resources (Ostrom, 1990).

My findings were that on the whole LETS members treated transactions as social favours rather than as market transactions, and that strongly held group values and norms relating to fairness, equality and trust meant there was very little free-riding activity, despite the group existing in the middle of the cut-throat market economy and not publishing balances. Qualitative data collected as a participant observer suggested that 'friendship appears to be closely linked with trading activities, each encouraging the other' (Panther, 2000). This data appeared to support Axelrod's model of co-operation being based upon direct reciprocity: the development of trusting partnerships between pairs of individuals (Axelrod and Hamilton, 1981).

However, my analysis of transaction data<sup>3</sup> revealed that on average only 17% of a member's transactions involved direct reciprocity, which led me to conclude instead that 'developing trading relationships with trusted partners is not essential for co-operative behaviour to be

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<sup>3</sup> This analysis was based on transaction data from the 25 members who lived in Woolgone itself and carried out more than 10 transactions.

evolutionarily stable' (Panther, 2000). I took this as evidence against Axelrod's model, and as support for the idea that co-operation might instead be based upon indirect reciprocity as posited by Nowak and Sigmund (1998).

Upon further investigation, I discovered that the proportion of directly reciprocal transactions increased with number of transactions carried out. Unfortunately, it was not clear whether this was due to more active members having different strategies from less active members, or to members initially trading widely and only later narrowing down to a few trusted partners, as might be predicted by Axelrod's model (Axelrod and Hamilton, 1981). It did appear, however, that different members had different behavioural strategies, as when members were grouped in terms of number of transactions completed, individuals within each group had different dominant transaction types.

While clearly my MA work gave me a useful starting place for my PhD research, ten years have passed since I completed that work, and the current research is original in many ways:

- 1) It involves taking a *comparative* approach to two very different types of community currency system. In 2000, when I completed my MA, time banks were only just being introduced to the UK. Carrying out fieldwork in Steelwear time bank for my PhD has enabled me to see my earlier work with Woolgone LETS in a completely new light, adding salience to some features while making others seem less significant.
- 2) In terms of methodology, since finishing my MA I have learned to use social network analysis to investigate transaction data. This has made it much easier to investigate different types of reciprocity, and also to relate behavioural strategies to overall network structure, a relationship which was previously invisible to me.
- 3) There have been many advances in the complexity of game theory models over the last ten years, and my PhD research has enabled me to delve much deeper into this field, while I retain an interest in Ostrom's work on the features of small-scale organisations which successfully manage common-pool resources.
- 4) In the current research I explore the concept of social capital for the first time. This concept has become very fashionable recently, but continues to be ill-defined.
- 5) The survival of community currency systems within the mainstream economy has led me to explore the concept of spheres of exchange, which has rarely been applied to industrialized societies.

## **2. Setting up a community currency system in Durham**

In 2001, much inspired by my experiences in Woolgone LETS, I started my own community currency system, Durham Exchange, in the small city of Durham where I live.

While setting up Durham Exchange, I became aware that there were two distinct types of community currency system in the UK, LETS and Time Banks. I decided that it would be fruitful to compare these different types, with their different organisational practices and different underlying ideologies, for my PhD. The hope was that such a comparative approach would not only illuminate the relative benefits of each type of system, thus suggesting ways forward for community currency practitioners in the UK, but also – on a deeper level – give some insights into how co-operation in groups of people evolves and is sustained.

We eventually decided to set up Durham Exchange as a hybrid time bank/LETS, hybrid because we use the rule that every member's time is valued equally (as in all time banks), but we are run by our members rather than by paid staff (as in most LETS). I am still involved with this group, both as a member, and by helping to run it. While I have not carried out any quantitative research on Durham Exchange data, clearly my day-to-day experiences as a core member of this system have given me valuable insights into the kinds of issues faced by the organisers and members of other community systems, and has put me in the position of being to speak to such people as equals.

## **3. An introduction to the theoretical underpinnings of this thesis.**

Early evolutionary theory trumpeted the notion that our very genes were 'selfish' (Dawkins, 1976). Yet forms of co-operation have long been observed in groups of unrelated human beings, for instance amongst hunter-gatherers (e.g. Lee, 1979; Woodburn, 1982) and peasant farmers (Erasmus, 1965; Panter-Brick, 1993; Layton, 2000). Conversely, it has been found that individuals who live alone - even in societies where food and shelter are relatively abundant - have a decreased life expectancy (Berkman and Glass, 2000). It appears that there is some kind of critical balance between the need to look after oneself and one's immediate family, and the need to belong to the wider community, with all the commitments and sacrifices this entails.

In terms of theoretical background, my work attempts to bring together several disciplines, all of which have attempted to uncover the nature of this balance, each taking a different lens to the problem, and each resulting in a particular constellation of ideas and terminology.

In anthropology, there has been much interest in different forms of reciprocity. Give and take between individuals, or groups of individuals, may be seen as the fundamental mechanism

underlying our human societies, albeit one which takes different forms according to cultural and environmental factors and traditions. Whereas a continuing cycle of giving and taking between two particular individuals is thought to cement a trusting relationship between them (Malinowski, 2002 [1922]; Mauss, 1954 [1923]) the idea of reciprocity has been extended to explain how whole groups of people may be woven together. In what Sahlins called 'generalised' reciprocity (Sahlins, 1972), a culture exists in which individuals give to others in need, not expecting any return from the individuals they have helped, but knowing that they themselves will receive help when in need.

Political scientist Elinor Ostrom has carried out studies of large numbers of communities who co-operatively manage scarce common resources, and found that particular organisational features of such communities - including the promulgation of particular values and norms and the existence of sanctions against individuals who fail to conform to these - are essential if a 'tragedy of the commons' type scenario is to be avoided. She has also found that it is important that groups are able to change how they operate in response to local conditions (rather than having rules dictated from above) (Ostrom, 1990).

In game theory, attempts to simulate co-operation have tended to focus on behavioural strategies, rather than on norms and values. Whereas Axelrod and Hamilton (1981) based their model of co-operation on individuals copying each other's behaviour, resulting in the formation of trusting partnerships between pairs of co-operators, Nowak and Sigmund (1998) created a model in which individuals interacted more widely, basing decisions on whom to interact with on other individuals' reputations. However, in order for co-operation to be an evolutionarily stable strategy, it has been found again and again that a community must be made up of individuals with *different* behavioural patterns, including a few free-riders to keep co-operators on their toes (e.g. Lotem, Fishman et al., 1999). Recently, attempts have been made to look at how such communities are structured, with the finding that co-operators tend to cluster together, thus increasing the strength of their behavioural strategy in the community as a whole (e.g. Kun, Boza et al., 2010).

Another view of the nature of social life and co-operation comes from the fields of development and public policy, where the concept of social capital (Bourdieu, 1984, 1990 [1980]; Coleman, 1988; Putnam, 1993) has become fashionable as a marker of the success, or otherwise, of development projects. Such capital is supposed to be a kind of social glue, knitting together individuals into communities. However, it has been pointed out that the more well-glued together a community becomes, the more insular it tends to be, with the result that it is harder for members of the community to share resources (including information) with members of adjacent communities (Portes and Landolt, 2000).

Finally, as computers have become more powerful, there has been increasing interest in the field of social network analysis: the study of the networks of relations which link individual human beings. Social network analysis has provided useful tools with which to investigate both patterns of behaviour between individuals, and the structure of networks as wholes (e.g. Granovetter, 1973; Krackhardt, 1998; Burt, 2005). On the back of these new analytical tools have come new theories about how network structure evolves, and about the properties of different structural arrangements. These include concepts such as that of triadic closure: the idea that there is a tendency for people to make friends with their friends' friends; and the idea that certain network structures possess special properties: while a small world network efficiently transmits information, a scale-free one is particularly resilient to the loss of nodes (Barabási and Albert, 1999).

These theories are not simply attempts to talk about the same things, using different words. They come from very different conceptual places, often embodying very different attitudes to the nature of human life and sociality. As a result, at times it is very difficult to bring these ideas together. At the same time, the attempt makes it clearer where the strengths and weaknesses of different approaches lie, and what further work is needed in order to truly understand the concept of co-operation, and how communities built upon it may be best developed.

In this study, I look at co-operation within the context of community currency systems. A community currency system (e.g. LETS, Time Banks) is a non-profit-making organisation which uses a local and (usually) virtual currency to measure and record the flow of social favours between individuals. While different types of system have different goals, dilemmas and difficulties, often their effects include the creation or enhancement of a feeling of community amongst system members (Williams and Windebank, 2001; Seyfang, 2002; North, 2010).

Community currency systems provide a particularly apposite context in which to carry out research into the nature of co-operation: they aim to cultivate co-operation, by encouraging the exchange of social favours between community members; meanwhile, their practice of recording all transactions provides a rich source of quantitative data which can be analysed in conjunction with qualitative data obtained through participant observation and interviews.

#### **4. First impressions of Steelwear and its Time Bank**

You have to negotiate everything in Steelwear: it is a village within a city; the normal rules of urban life don't seem to apply here. On the high street, wholesale fruit and vegetable shops jostle with discount computer hardware stores, snack bars, and travel agents offering Haj

pilgrimage trips. The first time I drive into the area, I have to slam on the brakes to avoid a lorry-load of vegetables reversing out of a narrow side street into the main road.

To either side of the main road there are long rows of two-up, two-down terraced houses, each with a blank-faced metal security door, and many with barred windows. None have front gardens, but each has a rusty hook to hold a hanging basket. On some a long-deceased basket still swings, relics of a past development project.

Pedestrians have priority here: ladies in saris with pushchairs and trailing toddlers wander nonchalantly across the street. Predictably, outsiders to the area often cause accidents as they attempt to go about their business as normal. I learn to drive cautiously, ready to draw to an abrupt halt when a pushchair appears. In an effort to reduce accidents, the council has installed a considerable amount of road furniture, which forces participation in a co-operative dance, each driver taking turns to pass through artificially narrowed openings. There are vicious speed bumps to deter joy-riders; they will take the bottom off your car if you don't have the insider knowledge to navigate them at the correct angle.

When I get out of my car, I narrowly miss standing on a rotting tomato. Debris litters the pavement, much of it from the fruit and vegetable retailers, whose bags and mouldy onion skins blow into piles in the gutters. When I look up, however, I am surprised by a window full of gleaming and incredibly intricate gold jewellery, while across the street, a shop is a rainbow of vibrant sari silks.

Massive concrete street-planters jut out into the road – another traffic-calming measure. Their thorny shrubs hide a multitude of sins, from discarded cat litter to half-eaten takeaways. Further down the street, some kids throw a bottle out of a top-floor window. It isn't aimed at anyone, but smashes magnificently over the bare tarmac to a chorus of giggling from above.

I am here to carry out research into Steelwear Time Bank, 'a community based time banking initiative and drop-in centre' set up as a registered charity in 2000 to enable local residents to 'exchange time and skills with each other' (Steelwear Time Bank website).

The time bank office itself is situated part way down a residential street, five minutes' walk from the main shopping street in one direction, and five minutes' walk to the local park and community centre in the other. It occupies the downstairs flat of a traditional Victorian brick-built terraced house. The front room of the house is the main office, where Jonathan the broker sits arranging exchanges with his computer and phone, assisted by part-time staff Shana and Roshni. This office is open from 10-12 and from 2-4, Monday to Friday. Local people drop in to chat, ask for advice, and use the photocopier.

The time bank staff members are usually busy, often stressed, but always welcoming. Members drop by in a steady stream: one has lost his door key, another wants to use the

photocopier, the third is stressed about a job application. In between the phone rings, and the broker tries to set up exchanges for a member who wants help with his garden, and another who needs a lift to the doctor. Despite all this, the staff make time to chat with anybody who drops by, and I am usually offered a cup of tea when I arrive.

In one of the back rooms, Tamsin sits, masterminding the whole operation. She spends much of her time feverishly searching out funding for the time bank to continue, and retreats here to fill in endless funding applications. The other back room adjoins the tiny kitchen, and is used for interviews as well as for small group activities, e.g. having cups of tea after gardening. It is decorated with a large photographic map of the area with important locations marked, snapshots of members, and a magnificent wall-hanging created by a member at a past art workshop.

There is also a tiny bathroom, the bath full of time bank gardening equipment. The bath is at once a relic of this building's past use as a dwelling place, and a reminder of the transitory nature of its present use as an office: this project currently only has short-term funding; when the time bank eventually runs out of funding sources and closes down, the flat will once more revert to living accommodation.



## Ch.1 COMMUNITY CURRENCY SYSTEMS IN THE UK

### INTRODUCTION

In this thesis I will be presenting case-studies of two very different types of community currency system: Local Exchange Trading Schemes [LETS] and Time Banks. This chapter sets the scene with a definition of community currency systems, a brief explanation of how they operate, their use as a tool to build social cohesion, and their position with regards to the mainstream economy, in relation to other forms of alternative currency systems. This is followed by a description of how LETS and Time Banks first came into being, and how they currently operate in the UK. Next, the focus is on the successes and challenges associated with the two differing models of community currency system, in comparison with more traditional forms of volunteering. Finally, an attempt is made to imagine what the future holds for community currency systems in the UK, in the context of the current economic downturn, and in relation to the present government's vision of 'Big Society'.

### Section 1: COMMUNITY CURRENCY SYSTEMS: HOW DO THEY WORK, AND WHAT ARE THEY FOR?

#### 1. What is a community currency system?

In this thesis the term *community currency system* is used to describe a not-for-profit organisation using a local currency to measure and record transactions between its members, with the aim of building or strengthening a sense of community amongst them. While some community currency systems are established within a pre-existing community of some sort, others seek to build a new community where there was none before.

I would add that a desire to build a sense of community does not preclude such groups from *also* hoping to boost the local economy by their actions, although some community currency systems (eg. Time Banks) explicitly state that this is not their remit. Similarly, while some community currency systems see themselves as presenting an alternative to the mainstream economic system, others see their role as supportive, or complementary, to it.

In the UK, community currency systems have tended to use virtual currencies rather than physical notes and coins. According to North, 'it is perfectly legal to issue your own currency as long as it obviously does not look like Sterling' (North, 2010:154), and indeed several towns are now doing so (e.g. Totnes, Devon). However, other practitioners have been less sure about the legality of creating one's own physical currency. For instance, Lang presents the Bank Charter Act of 1844 as the moment when it became illegal to create one's own bank notes, and states that 'LETS units exist legally because they are not banknotes: they are a measure of transactions... but there are no LETS notes or coins' (Lang, 1994:114). Historically speaking, those systems which have issued their own physical tokens to use as money appear to have courted eventual suppression by banks and the government (e.g. the scrip currency used in Wörgl, Austria, see Douthwaite, 1996).

Unlike physical tokens, a virtual currency requires a record to be made every time its units change hands. When one member helps another, this is recorded centrally on a computer: one member's account goes up - and the other member's account goes down - by the agreed number of currency units. Despite the extra work involved, this process of keeping records is important because it means the flow of currency can be tracked, which engenders trust both in the currency itself and in the group as a whole: 'What we are doing by recording them [community currency units] on our computer is acting as the community's memory in a way which wouldn't have been necessary a generation or two ago when people were less mobile' (Cahn, quoted without source in Douthwaite, 1996:91). By contrast, systems which issue physical notes or tokens cannot keep records in this way, which depersonalises the currency, giving it an apparent life of its own.

In most community currency systems, members are encouraged both to help others, and to be helped in return. Having a currency means they can give to some individuals and receive from others, whilst keeping track of how much giving and receiving they have done overall (see diagram overleaf).

Ideally, in the long run 'what goes around, comes around', and the majority of balances will oscillate around zero. In reality, in many community currency systems there are members who do all they can to ensure their balance oscillates around a positive figure, never becoming negative, because they associate having a negative balance with being in Sterling debt. As every transaction creates both a negative and a positive unit, the unintended consequence of this behaviour is that there are other members whose balances are always negative.

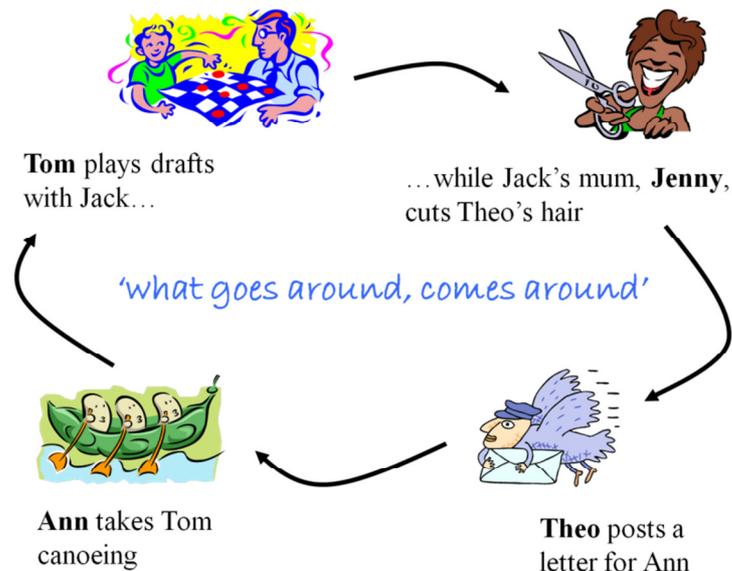


Figure 1: The flow of favours and local currency in a community currency system

## 2. Community currencies: not like money.

Although community currencies are used to measure and record members' activities, they differ from conventional money in a number of important ways:

### i. Community currency units are not scarce

Perhaps the greatest difference between community currencies and national currencies is that community currency units are created *by carrying out transactions*, thus there is no limit to the quantity of community currency available, apart from the time and energy members have to carry out transactions.

### ii. Community currencies are local

Community currency can only be used locally. Dobson writes of 'the futility of local economic development', due to money's innate structural tendency to move to where most profit can be made out of it (Dobson, 1993:36). Unlike money, community currency can only be used by the members of a particular system. This prevents it flowing out of the area, to more prosperous neighbourhoods.

**iii. No interest is chargeable on negative balances**

No interest is chargeable on community currency accounts, thus there is no benefit to be gained from stockpiling units, as they will not gain in value. In fact, in many systems negative balances are not seen as debts, but as essential to the continued flow of currency between members. As each transaction creates an equal number of positive and negative currency units, there can be no positive balances without negative ones.

**iv. Value of community currency units relies upon trust in fellow members**

The value of community currency units is dependent on the continued activity of system members. If system members cease to carry out transactions, the currency will no longer have any value. Therefore system members must trust that their fellow members will continue to be active in the system. If they become unsure about this, and cease to carry out transactions themselves as a result, this can bring about the very collapse of the system that they fear.

**v. Community currencies are often used as a tool to revalue work**

Whilst some community currency systems allow members to decide how much they charge for their work, many others recommend, or even enforce, a set rate so that everybody's work is valued equally (Douthwaite, 1996; North, 2010).

**vi. Value of community currency units is limited by the limited pool of goods and services for which they can be exchanged**

Being local, community currency units can only be exchanged within the limited pool of goods and services available from system members. This means its value will always be lower than that of a national currency<sup>4</sup>.

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<sup>4</sup> Unless there is a national cultural shift towards buying locally-produced items, and living more simply.

It is possible to argue that a community currency system is a formalised version of the mutual aid practised in small-scale peasant or hunting and gathering communities. In such communities individuals help each other at times of need, perhaps by giving food or helping with the harvesting of crops. At a later point they themselves receive help, but not necessarily from those they helped in the first place (Erasmus, 1965; Panter-Brick, 1993; Layton, 2000).

Reciprocity as practised in these self-organizing groups is often both delayed and indirect, thus there is an ever-present risk of free-riding. Members monitor each other's contributions carefully, although they tend to strongly deny doing so (e.g. Layton, 2000:193). In order to be able to monitor each other, it is important that members know each other well, and are able to observe most of the transactions taking place within the group (Ostrom, 1990).

Because community currency systems are often relatively large and their members widely distributed, it would be very hard for individuals to monitor each other informally. Instead, social favours are measured in terms of a virtual currency, and recorded centrally. In addition, many community currency systems publish members' balances regularly and/or set a limit on how positive or negative a balance may become.

Where exactly community currency systems lie in relation to the mainstream economy differs from system to system, and even with the practices of different individual members within a system. This topic will be explored in greater depth in Ch.2 Part III.

### **3. Community currency systems as an answer to social exclusion**

There is plenty of research to suggest that health, well-being, and indeed life expectancy are strongly influenced by the number and quality of links a person has with others (e.g. Berkman, 1983). It has also been shown that nowadays people who are unemployed tend to have less dense social networks, and to mix mainly with other unemployed people (Morris, 1995; Williams and Windebank, 2001:105). Together, these findings have led to the development of the concept of 'social exclusion'.

As de Foucauld points out, social exclusion can be viewed as exclusion from employment, or more broadly in terms of exclusion from social exchange networks:

It is the denial or absence of social contact which fundamentally distinguishes exclusion. The dignity of the individual derives from integration in a social network - or more precisely, into a system of exchange. An individual brings something to an exchange for the other person, acquires a kind of right, recovers his [or her] status as an equal. Social exchange is what provides both a social context and autonomy which are the two essential elements of the individual'

(de Foucauld, 1992; cited in Williams and Windebank, 2001:153)

Community currency networks provide an alternative way of recording and measuring exchanges, and thus are a way of bringing an end to the social exclusion brought about by the increasingly unequal distribution of monetary wealth. Hart (2006:34) speaks of the concept of 'common wealth', reminding us that this wealth is *not* money but 'the human creativity in all of us, resources that have been ill-used for too long, because of the money regime we have been forced to live by'. He goes on to suggest that 'society should be conceived of as a multitude of levels of association and many of these could take the form, as one of their dimensions, of a community with its own circuit of exchange and money'. He sees the use of community currency systems as a step towards 'economic democracy' and hopes that through them 'the dream of abundance that has long inspired humanity would be realized as more than just the riches of a few').

Until recently, the UK government has viewed community currency systems solely in terms of a possible route back to full employment (Williams and Windebank, 2001; Seyfang, 2002). Given the current economic situation in the UK, a more realistic aim might be to support initiatives - such as community currency systems - which facilitate a return to the more connected and sustainable ways of living we had in the past.

The relationship between social exclusion and social network characteristics, such as density, is explored in greater depth in Ch.2 Part I.

## **Section II: HOW THE COMMUNITY CURRENCY MOVEMENT HAS EVOLVED WITHIN THE UK**

### **1. Early experiments involving alternative currencies in the UK:**

As I described in my MA (Panther, 2000), one of the first alternative currency systems in the UK was set up in 1696 by the Quaker, John Bellers, to enable the unemployed to make and trade goods with each other (Douthwaite, 1996). Robert Owen, a 19<sup>th</sup> century mill-owner and manager, put a similar idea into practice with his 'National Equitable Labour Exchange' in 1832. Here people could exchange things they had made for 'labour notes', using these to purchase goods made by others. The value of the goods was determined by how many hours of labour had gone into making them, plus the cost of raw materials (Douthwaite, 1996). Unfortunately, 'the exchanges clogged up with goods which could not be sold elsewhere and did not succeed' (Pearce, 1993:23).

Perhaps the lesson modern day alternative currency systems must draw from Owen's experiences is that they must steer a narrow course between promising what they cannot deliver: 'avoid giving the impression that your money system will solve all the world's problems overnight, and that people will be able to live off the new money', and, on the other hand, being too successful: 'vested interests might not welcome an alternative currency scheme... Be ready for an attack from elites if you are too successful and provide an alternative to a job for low pay!' (North, 2010:61).

In the present day, the two main types of community currency system existing in the UK are Local Exchange Trading Systems [LETS], and Time Banks. While LETS proponents tend to see local currencies as alternatives to the mainstream economy, Time Bankers present themselves as seeking to complement it. In order to gain a fuller understanding of how such groups function in UK society, it is necessary to look at their origins, but also to look at how they have changed over time, both in response to each other, and in response to political and economic pressures.

## **2. Local Exchange Trading Systems/Schemes [LETS]:**

### **2.1 The origins of LETS**

LETS were invented by Michael Linton in 1983, in Comox Valley, Vancouver Island, Canada (Lang, 1994). Linton was an Alexander technique teacher who found that in the recession, few could afford his services. For Linton, LETS was all about economic regeneration: the idea was that a local currency would enable those with little access to national currency to continue to trade goods and services with each other (Dobson, 1993).

Linton created the Green Dollar Local Exchange Trading System, which eventually grew to have around 600 account holders (Douthwaite, 1996). This system, which still exists today, has spawned many more LETS all over the world.

In order to make the system palatable to businesses, Linton has always insisted that systems treat one LETS unit as equal to one unit of national currency. Linton even encourages members to buy LETS with national currency and vice versa: 'That way everyone benefits. The people with a high income and no time support the LETS system, and the member with plenty of time and no cash gets the cash income he needs' (Linton, no date given; cited in Douthwaite, 1996:73).

In terms of management style, Linton takes a hands-off approach. Within each LETS, members use a directory to locate other members who can supply their needs, and decide for

themselves how many LETS units to charge. Members use a cheque book to record transactions, which are stored on a computer. When LETS were first designed, there was not thought to be a need for an office or a broker, nor for a central organization to guide or control the development of LETS as a movement (Dobson, 1993).

In addition, Linton strongly believes that LETS should not set any limits to how negative a member's account becomes, instead relying on regular publication of balances to ensure that no one's account became too negative (Douthwaite, 1996:73). In fact his own Green Dollars account became very negative because he was so busy developing the system that he had little time to earn Green Dollars himself, although some have claimed that he was using the system for his own benefit (Douthwaite, 1996:74).

LETS are the most common form of community currency system globally, with systems in Canada, America, Australia and the UK. Similar systems have grown up in France (the Systeme d'Echange Locaux, or SEL) and Germany (Tauschringe and Talente) (North, 2010:69).

## **2.2 LETS in the UK**

LETS came to the UK in 1985, when Linton presented the idea at The Other Economic Summit [TOES], a meeting for alternative economists which coincided with the G7 world summit meeting. After the meeting, TOES became the New Economic Foundation which for many years worked to promote LETS, setting up the first LETS in Norwich in 1986 (Seyfang, 2002).

By 1994 'systems were being formed in the UK at the rate of more than one a week' (Lang, 1994:ix). By 1999, there were approximately 303 active LETS in the UK, and on average a LETS had 711.5 members and an annual turnover equivalent to £4664 (Williams and Windebank, 2001:155-6).

In accordance with Linton's original concept, LETS in the UK are usually run by the members themselves, with an elected core group being paid in LETS currency to develop the system and to perform administrative tasks. While there is usually a co-ordinator, this person is elected, and will often pass on the responsibility to another member after a few years.

Nowadays, there is a national organization to support LETS in the UK, however this organisation (LETSLINK UK) plays a purely advisory role. Over time, each individual LETS system adapts to fit the needs and values of its members, and thus takes on its own distinct character. As a result, individual LETS often differ not only from each other, but from Linton's original conception of how LETS ought to be.

Most LETS systems continue to use cheques to record transactions, and provide members with directories of skills offered and each other's phone numbers. However, many successful

systems also hold regular social events to help members get to know one another, and encourage members to get together to complete more daunting challenges. Douthwaite recommends that 'if there is a big job to be done...don't try to find one member to do it alone over several days. That's too much like paid work. Provide food and drink and get enough people to come together so that the whole task can be completed in a day. This turns the task into a party' (Douthwaite,1996:88).

Often goods are traded at these social events. While Linton insisted that one LETS unit should be held equal to one unit of national currency (and a statement to this effect appears in the constitutions of many LETS), in practice Sterling is more valuable because it can be spent much more widely (Douthwaite, 1996; North, 2010). Many LETS members recognise this, and instead of attempting to translate Sterling prices directly into LETS ones, exchange items for some amount of LETS currency which is agreeable to both the parties involved in a transaction (Panther, 2000). As I reported in my MA (Panther, 2000), a survey by Letslink UK in 1993 'found that over a third of schemes in the UK had 'deliberately set a different value for their unit in order to divorce it entirely from the mainstream economy' (Lang, 1994:150).

LETS members tend to carry out favours for each other that do not involve their main line of work. For some this is because they feel they do enough of their main line of work already, while for others it is because such work would be taxable (in Sterling). Those few members who do offer their main line of work for LETS currency often charge part LETS currency and part Sterling, so that they can use the Sterling component to pay their taxes (Lang, 1994:118).

Whilst many LETS publish members' balances as Linton recommended, some groups feel this is invasive and instead rely on the Core Group to advise members who are having difficulty either spending or earning LETS currency (Panther, 2000:41). Against Linton's advice, many LETS have set limits on how negative members' balances can become (Douthwaite, 1996:74). In addition, in most LETS members are required to sign a contract promising that they will return their balance to zero before leaving the system (North, 2010:78).

LETS in the UK often emphasize the social and community-building aspects of their work over the economic ones originally prioritised by Linton. While 33% of LETS are originally set up in order to rebuild a sense of community, even LETS which begin with more economic objectives tend to shift towards an emphasis on community-building, with ideological/economic rationales become less prominent (Williams, 2001). It is interesting that Williams links this shift to men starting up LETS, and women later taking on the role of managing them when the men become disillusioned (Williams, 2001).

While Linton stated that a LETS unit must be held equal to one unit of national currency in order to get businesses involved, as I reported in my MA (Panther, 2000) a survey by Letslink in

1993 found that over a third of LETS in the UK had 'deliberately set a different value for their unit in order to divorce it entirely from the mainstream economy' (Lang, 1994:14-16).

It appears that in some ways LETS are rather successful at obtaining their social objectives. In a survey of all UK LETS carried out by Williams and Windebank in 1999, while 76.2% of respondents felt that LETS had 'helped them develop a network of people upon whom they could call for help', 55.6% said LETS 'had helped them develop a wider network of friends', and 31.2% felt LETS 'had helped them make deeper friendships' (Williams and Windebank, 2001:160).

This emphasis on LETS as a tool to build social networks may be, at least in part, because the involvement of businesses - even in Linton's own Green Dollars LETS - continues to be minimal (Douthwaite, 1996). While LETS can be a good way of starting up a business (North, 2010), established businesses are often put off using LETS units because it is hard to find suppliers who will accept them. Even if this problem is solved, for instance by finding LETS members to supply foodstuffs to a café, the problem remains that if a business takes in any quantity of LETS units it will have to start paying a proportion of staff wages in LETS units. This is not a popular move, as staff have to pay taxes on the combined total of Sterling and LETS income (with one LETS unit being treated as equivalent to one Pound Sterling), and these taxes have to be paid in Pounds Sterling (Lang, 1994:98).

All this is not to say that LETS membership has no material benefits for members. Williams (1996:1408) found that unemployed members of Manchester LETS used LETS currency to obtain food (36.7%), clothes (33.3%) and home improvement/maintenance (30%) whereas 'little was spent on luxury goods and services'. He also found that 48.1% of respondents in low income households felt being in LETS had improved their standard of living.

My own experiences of Woolgone LETS (see Panther, 2000) agree more with Douthwaite's findings, that through LETS individuals may obtain 'pleasant optional extras that they would otherwise be unable to afford' (Douthwaite, 1996:77). In Woolgone LETS 65% of transactions were for luxury goods/services such as goose eggs and homemade greetings cards, whilst most basic food items were simply not available (Panther, 2000:38). However, it is important to add that although these were luxury items, this does not mean they had no effect on members' quality of life. One unemployed Woolgone LETS member spoke of how it meant much to him to be able to bring his wife flowers purchased with LETS currency on her birthday, a luxury he would not otherwise have been able to afford. It is possible that in Manchester LETS members were able to obtain more of the basics of everyday life because at the time of Williams' study, Manchester LETS was the biggest in the country, with 500 members, and presumably a concomitant increase in the range of goods and services available.

### 2.3 Obstacles facing, and ways forward for, LETS in the UK

The criticism most often levelled at LETS is that they only appeal to people who are middle-class, with 'green' leanings (e.g. Seyfang, 2002). It appears that an unfortunate side-effect of their having been born out of liberal and environmental zeal is that those most at risk of social marginalization and impoverishment are often put off joining them. As Williams puts it, the very strength of LETS, their ability to draw like-minded people together, is also their weakness: 'it appears that these inclusive mechanisms for some are exclusionary for others' (Williams, 2001). In simple terms, potential members are often put off joining because they see LETS as something for "hippies", not for them.

Williams and Windebank found some confirmation of this, in that 61.3% of members held a university degree or above, while 48% supported the Green Party. However, they also found that membership was 'heavily skewed towards the socially excluded' with only 38% of respondents being employed (and only 19.5% in full-time employment), and only 34% living in a household with an income of £19.5K or more (Williams and Windebank, 2001:157).

While it is sometimes assumed that the middle classes are relatively wealthy in both Sterling and social contacts, the reality is that LETS members frequently come from what Williams has elsewhere called 'the disenfranchised middle class' (Williams, 1996:1397): well-educated individuals who - as a result of the increasing polarisation of society into rich and poor - have not managed to establish themselves in traditionally middle class occupations. Belonging to a LETS can bring about significant material and social improvements in such people's lives.

It is also important to bear in mind that while early LETS were perhaps 'rightly caricatured as being playthings of the "environmentally conscious middle class"', over time the movement appears to have become more inclusive (Williams, 1996). While more evidence needs to be collected to confirm this, it would not be surprising if - like many other social innovations - LETS was first adopted by non-conformists and only later became accepted more widely.

Apart from these identity or image-related issues, it has rightly been argued that those individuals who stand to benefit most from the social network a LETS can provide often do not join, or do not become active members, because they do not believe they have anything to offer other members, and lack the confidence to contact strangers without support (Aldridge, Tooke et al, 2001; Seyfang, 2001).

This is a very real problem, and one which is undoubtedly related to the more basic problem facing LETS: the fact that the people who run LETS usually receive no Sterling income for doing so, and - much as they may wish to support more vulnerable and less confident individuals to become active in LETS - rarely have the time and energy to do so, as they also have part or full time employment elsewhere. Indeed, many LETS have met an untimely end because of

organiser burnout. It does not help that many LETS coordinators have no experience or training in how to run an organisation, and may find it hard to delegate tasks to other members, to prioritize tasks, or to plan for both short and long term development.

Other problems arise in relation to values and behaviour. Some LETS members find it hard to let go of the values and behaviours they have learnt within the market economy. For instance, they avoid having a negative balance (as discussed on p.144), and try to get as many currency units as they can out of every transaction. Meanwhile, others join because they want to help others, and do not see how it is also necessary to spend currency so that other members have the opportunity to earn it. Yet others do not see the importance of recording transactions, and may form small cliques within which favours are not recorded, which may have adverse consequences for the future of the LETS in the long run (Panther, 2000).

Clearly, when these different groups of people get together, there is potential for considerable misunderstandings and upset between them. In order to prevent this, it is important for LETS to establish a strong organisational culture, with group values and norms to replace those of the market economy (Panther, 2000).

Stepping away from issues about identity and values, a more material problem is that where LETS remain small, the range of goods and services available through the system is necessarily very limited. A situation can arise where certain members accumulate a large amount of currency, but find nothing to spend it on, and end up leaving the group. The result is that a LETS that does not grow quickly enough can lose exactly those members whose skills are in high demand by other members.

These are problems many LETS are aware of, but arguably they are far from insurmountable. With small amounts of long-term financial support from government, LETS could continue to be run as bottom-up organisations, while employing someone to support less confident members, helping them to realise what skills they have to offer, introducing them to other members, and helping them to set up their first transactions. Instead of relying solely upon word of mouth to attract new members, grant money could be used to advertise LETS more widely, aiming materials at harder to reach social groups (Williams and Windebank, 2001). These slight changes would enable LETS to quickly grow to a size at which sufficient goods and services were available to make groups viable.

In order for LETS to flourish in areas of high unemployment, it would be necessary for the government to assure potential members that their benefits would not be in jeopardy (Williams and Windebank, 2001). It would help greatly if LETS members were allowed to pass on unwanted items to each other in exchange for LETS currency, which the government currently sees as a form of tax evasion (see 0 below).

Unfortunately such changes seem unlikely to happen in the near future. In the late 90s, the UK government was keen to embrace LETS as a new tool to deal with social exclusion. Williams wrote at the time that 'hardly a government report on social exclusion passes without some mention of these local currency schemes' (Williams and Windebank, 2001:155). However, it turned out that policy makers had latched onto the idea that LETS would be a way of getting people back into full time employment. When it became clear that LETS tended to attract a certain type of person, and was not getting even these people back into work (although it was making them more employable, by increasing their confidence and skills base), interest waned (Williams and Windebank, 2001; Seyfang, 2002).

Since then, although LETS have tried hard to reinvent themselves as promoters of social cohesion, the UK government has stubbornly continued to view LETS in terms of its early history as a purely economic institution (North, 2000; Seyfang, 2004). Hence it has hindered the further expansion of LETS by refusing to promise unemployed LETS members that unemployment benefits will not be affected by membership, has stated that LETS earnings are taxable if a member carries out their regular profession for LETS currency, and threatens to view the exchange of goods between LETS members as a form of tax evasion.

According to Seyfang, the problem with LETS is that it 'falls between two stools: it suffers from trying to be an economic system which embodies many non-commercial, socially based (and therefore 'inefficient') values...to be more successful at tackling social exclusion, a community currency should concentrate either on providing an efficient trading mechanism, or on harnessing the social values-driven mutual support form of community exchange within a more appropriate framework for fragile and vulnerable populations' (Seyfang, 2001; 2002).

An alternative view of the situation is that LETS are simultaneously being attacked for being economically- rather than socially-motivated (because of their historical roots with Linton), *and* for failing to deliver in economic terms, and that this is unfair.

Perhaps the real reason for LETS being unpopular with policy-makers has more to do with the fact that the government finds it hard to know how to deal with organisations that have both social *and* economic remits. Policy-makers prefer to cling on to the view that social and economic spheres should and can be kept completely separate, as this means they can encourage people to build up supportive social networks (saving money that would otherwise have to be spent on public services), while continuing to suppress non-mainstream economic activities, in other words, the so-called 'grey' economy. Another feature of LETS which is likely to have put officials against them, is their typically non-hierarchical management approach, which means that no single individual can be held to account.

Having backed LETS in the UK for many years, in the 1990s the New Economics Foundation transferred its support to a different form of community currency system: the Time Bank. By

2000 there had already been some shrinkage of the LETS movement, at least in the UK (Williams, 2000). While Douthwaite (1996) believes that LETS only thrive when the national currency is (at least locally) scarce, this is more likely to be true for those few LETS whose focus is still on the involvement of businesses. The current decline in LETS seems more likely to be due to the proliferation of other types of alternative currency system, such as Time Banks, and those issuing physical currency (e.g. the Totnes Pound). These enjoy the media attention reserved for what is new, often combined with governmental support, in the form of funding and benefits disregards.

### **3. Time Banks**

#### **3.1 The origins of Time Banks**

Edgar Cahn is a U.S. lawyer who came up with the idea of Time Dollars in 1980, following a heart attack which forced him to reassess his life priorities. At the time, the government was making massive cuts to their spending on social services, and Cahn felt what was needed was a new kind of money which would value people's contributions to what he calls the 'core', or household, economy:

Market economics values what is scarce - not the real work of society  
which is caring, loving, being a citizen, a neighbour and a human being

(Cahn, 2009)

Time Dollars are a time-based currency: one hour of your time earns a member one Time Dollar, regardless of the task performed and his or her level of skill. Time Dollars are used to reward participation in several different kinds of projects, including Time Banks.

In a Time Bank, members help each other in many ways, but the kinds of skills exchanged are often those which require no formal training: errands, gardening, companionship, lifts etc. The fact that all these skills are valued equally drives home the message that everyone has something to offer, and that skills people may previously have taken for granted are in fact invaluable within the community.

Apart from this central concept that everyone's time is valued equally - which some LETS have also adopted in the past - the main difference between time banks and LETS is that in a time bank there is a broker (usually a paid member of staff) who sets up the majority of

transactions using a database. Various steps are taken to ensure the safety of both participants, including public liability insurance, and police-checks where appropriate.

A recent development in the U.S. is that many time banks now operate online. Members can search their time bank website for members offering the services they require, and then use email to set up a transaction for themselves, instead of having to go through a broker ([www.timebanks.org/neighbor-to-neighbor.html](http://www.timebanks.org/neighbor-to-neighbor.html), no date).

Cahn soon realised that while Time Dollars were a useful tool, what mattered more was how organisations treated the individuals on whose behalf they were supposed to be acting. Organisations which worked in collaboration with people to produce services, seeing their contributions as invaluable though unpaid, were much more likely to achieve their goals than organisations which saw clients as passive recipients, or who merely encouraged their participation. He called this way of working 'co-production' (Cahn, 2000), and the essence of the concept is 'that people who use services are hidden resources, not drains on the system, and that no service that ignores this resource can be efficient' (Boyle, 2009:11).

The term co-production had been used in a very similar sense by Elinor Ostrom in the 1970s, when there was a drive towards massive centralization of public services, in the name of efficiency. Instead, Ostrom argued for 'mutually reinforcing relations between governments and groups of engaged citizens', or what she described as 'state-society synergy' (Ostrom, 1996:1119). While Ostrom was here looking at the interface between the state and organisations, there are clear links with her earlier work on how scarce resources can be successfully managed by small-scale organisations, in which individuals 'repeatedly communicate and interact', and by so doing 'learn whom to trust, what effects their actions will have on each other and on the CPR [Common Pool Resource], and how to organise themselves to gain benefits and avoid harm' (Ostrom, 1990; in Panther, 2000:6).

For Cahn too, co-production is a concept that works at many different levels. At the level of society, co-production 'supplies a framework designed to bridge market and non-market' and 'elevates the function of the non-market system as an obligatory source of energy, vitality, knowledge, insight, and essential labour' (2000:32-4). He calls this non-market system, by which he means all of the unpaid work without which our society could not function, the 'core' economy. No less importantly, at the level of the individual, co-production is the idea that 'we all need to be needed and to be valued' (Cahn, 2000:34). Arguably, co-production must be practised at both levels, if it is to exist at either.

Cahn has attempted to embody co-production within the four core values of the Time Dollar movement, which are:

**Assets.** The real wealth of this society is its people. Every human being can be a builder and a contributor.

**Redefining work.** Work must be redefined to include whatever it takes to rear healthy children, preserve families, make neighbourhoods safe and vibrant, care for the frail and vulnerable, redress injustice and make democracy work.

**Reciprocity.** The impulse to give back is universal. Wherever, possible, we must replace one-way acts of largesse in whatever form with two-way transactions. “You need me” becomes “We need each other”.

**Social capital.** Humans require a social infrastructure as essential as roads, bridges and utility lines. Social networks require ongoing investments of social capital generated by trust, reciprocity, and civic engagement.

(Cahn, 2000:24)

Cahn’s experience is that where Time Dollars are used to support co-production, they will become integral to the organisation, and continue to be used indefinitely. However, if they are used as merely ‘a cute volunteer add-on’ (2000:x), they will disappear when the initial funding ran out.

In U.S. time banks, there is a tradition of rewarding time bank members with items of value from the market economy, e.g. cinema tickets, or refurbished computers, or giving them discounts on goods and services, e.g. Elderplan (a health care program) used to offer reduced rates to time bank members (Cahn, 1999). This practice is especially encouraging to members who found it easier to earn time dollars than to spend them, and who might otherwise leave the time bank with a large positive balance, taking their skills with them. In order to avoid a direct link between Time Dollar value and U.S. Dollar value time banks establish broad reward categories (e.g. one Time Dollar gets you a reward of an item of value one to twenty US Dollars), with any item acquired being seen as a reward for a member’s hard work, rather than as a sale involving a currency.

In addition, U.S. time bank members often sell things to each other for Time Dollars. Cahn warns (<http://www.timebanks.org/faqs.htm#keepingtrack>, no date) that members should ‘avoid any conversion that equates Time Dollars with the market value’ as this might lead to the IRS making Time Dollars taxable, but could feasibly ‘charge for the hours it takes to produce something in Time Dollars, and charge the cost of the materials in regular dollars’.

While Cahn stresses that ‘having a negative balance is not a big deal in a Time Dollar account. After all, people have to receive in order for others to give’, he adds that time banks do often set limits on how negative a member’s balance is allowed to become, with members who have earned many Time Dollars in the past being allowed to go more negative than others ([www.timebanks.org/faqs.htm#keepingtrack](http://www.timebanks.org/faqs.htm#keepingtrack), no date).

According to the Time Dollars website (<http://www.timebanks.org>, no date) there are Time Dollar systems, or Time Banks, in more than 22 countries on 6 continents, including 88 in the States, 92 in the UK, and 11 in Japan.

### **3.2 Time Banks in the UK**

The first UK time bank, Fair Shares, was opened in 1998 in Gloucester, following Cahn's visit to the UK in 1996, on the invitation of David Boyle of the New Economics Foundation. Then in 2000, time banking pioneers Fair Shares and the New Economics Foundation set up Time Banks UK, as a national umbrella charity to support time banking in the UK. This organisation later changed its name to Time Banking UK, to avoid confusion with the government-sponsored charity TimeBank, which fosters more traditional forms of volunteering.

The New Economics Foundation have always sought to distinguish Time Banks from LETS, making it clear that their purpose is social (rather than economic), and that their aim is to complement – rather than to attack or replace – the mainstream economy and state-run institutions. In this they have been supported by Edgar Cahn himself (Cahn, 2001). Thus they have attracted support and funding from the government's Active Community Unit (Seyfang, 2002), and have even obtained a Benefits Disregard, meaning that unemployed time bank members need not fear losing their benefits<sup>5</sup> as a result of their time bank activities.

Time banks are aimed at 'socially excluded groups of people who do not normally participate in volunteering, who are normally excluded from the formal labour market, and those who are often the passive recipients of services' (Seyfang, 2002:7). In 2002, Seyfang and Smith found that 72% of time bank members were not in formal employment, as compared with 62% of LETS members, and 51% of the general population (ONS, 2000; Seyfang and Smith, 2002; Williams, 2000; all as cited in Seyfang, 2002). In addition, 54% of time bank members were receiving either Income Support or Job Seekers Allowance (compared with only 19% of the UK population at that time). In terms of income, 58% of time bank members lived in households with an income under £10K per year, whereas in the country as a whole, only 38% had an income below £13K. Finally, Seyfang and Smith found that 42% of time bank members were retired (compared with 19% nationally) and 20% were disabled or had a long term illness (compared with 13% nationally) (Seyfang and Smith, 2002; ONS, 2000; both as cited in Seyfang, 2002). Whereas LETS have struggled for years to gain a foothold in areas of high social

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<sup>5</sup> Unfortunately, the situation is not so clear with regards to Incapacity Benefit.

deprivation, most time banks operate in such areas, and indeed obtain funding on the basis that they will be working with people in great need.

People often join time banks with primarily social objectives: a study of Rushey Green Time Bank revealed that 72% wanted 'to get more involved in the community' whereas 56% wanted 'to improve the neighbourhood', and 44% joined 'to meet people and make friends' (Seyfang, 2003:260). Only 17% of members said they had joined to earn time credits.

As stated earlier (p.23) unemployed and poor people often have very limited social networks to draw on for help. Only 50% of Rushey Green Time Bank members had received help from neighbours or friends in the last year (as compared with 74% nationally), and only 63% had given such help (again as compared with 74% nationally) (Davis-Smith, 1998; cited in Seyfang, 2003). Being in a time bank helps people to get to know other people living locally, often bridging gaps between different cultural groups, and different generations. One Rushey Green Time Bank member reported:

Having just moved to the country, time bank made it possible to meet and get to know people in the area, which can otherwise be difficult. It has increased my sense of belonging in the area. It has also enabled me to do things with people of different ages and backgrounds, and feel part of a group.

(Seyfang, 2003:260)

Unlike LETS, Time Banks are 'formal institutions' requiring on-going funding to maintain an office and paid staff (Seyfang, 2009:150). They are usually set up by organisations, rather than individuals, and managed with a top-down approach (Seyfang, 2002).

One of the main differences between time banks and LETS is that time banks employ a broker to set up transactions between members. While this can be very helpful for those who lack confidence or are newcomers to the area, in many UK time banks power is centred on the broker to such an extent that members are discouraged from setting up exchanges for themselves<sup>6</sup> even when they feel able to do so. This is often explained as a condition of the insurance time banks take out. For instance, members of the Fair Shares Time Bank in Gloucestershire are told '[e]ven if you know another member who can provide the help you need, please do not arrange an assignment directly as this will invalidate the Fair Shares insurance. Always ask your local office to make the necessary contact in the first place.' (<http://www.fairshares.org.uk>, no date). Sometimes the fear appears to be that otherwise members will pressure each other to give or receive services: 'Avoid pressuring another

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<sup>6</sup> Sarah Bird (Projects Manager, Timebanking UK) clarified this for me: in some time banks, long-standing members of the time bank who have carried out transactions of a certain type with each other before *are* allowed to set up further transactions of the same type, as long as they inform the office before they carry out the transaction, so as to be covered by the time bank's insurance policy (personal email, 2011).

member to either give or receive services against the person's will. All requests should be mediated via the Time bank Broker' (Rushey Green Time Bank, at <http://www.rgtb.org.uk>, no date). A more cynical view might be that Time Banking UK has recognised that the government is not going to support community currency systems unless these institutions are tightly controlled, with a clear chain of authority, and a paid professional who will take responsibility if things go wrong.

Another big difference between time banks and LETS is that in many (though not all) LETS members charge as many currency units as they like for services, and often carry out transactions involving goods. In time banks, an hour of any member's time is worth one time credit, and relatively few items change hands. In accordance with the government ruling that time credits 'cannot be exchanged for goods or services or converted into alternative currency' (Department of Works and Pensions 'Time Exchange' guidance bulletin, cited at <http://www.timebanking.org/faq.html>, no date) Time Banking UK describes the activities carried out by time bank members as 'the kind of support money can't buy' (<http://www.timebanking.org>, no date). It describes transactions involving things as 'equipment donations' (or similar), with the member making the so-called donation receiving a single time credit not in exchange for the item itself, but for the time taken to prepare and deliver the item.

Finally, while time banks keep records of members' balances, they do not publish members' balances as LETS do, and in many groups members only receive their own balances if they request them. There is often less emphasis on the need for accounts to balance over time than in LETS:

Participants can ask for a statement of their credits but we don't worry if people 'spend' more than they have earned – there is no debt in a time bank!

(Fair Shares time bank, at <http://www.fairshares.org.uk>, no date)

For some time banks, keeping track of credits is more to do with providing evidence of their activity to funding bodies, than it is about making sure members both give and take. Despite Cahn's emphasis on co-production, Timekeeper - the software issued by Time Banking UK and used by many time banks to record transactions - offers time bank staff a report listing the time bank's top earners of time credits, but makes no attempt to identify those members who both give and take in equal measure.

By 2005 there were 70 active time banks in the UK, and a further 70 in development (Time Banks UK, cited in Seyfang, 2009). In April 2011, the Time Banking UK website stated that there were 90 active time banks in the UK, and 15168 participants actively involved in time banking, while a further 129 time banks were in development (<http://www.timebanking.org>, no date).

### 3.3 Obstacles facing, and ways forward, for time banks in the UK

While LETS are run by their members, who are paid in community currency, time banks are usually run by paid staff out of a rented office, and thus rely upon large amounts of Sterling funding. Back in 2002, it cost about £27K to run a time bank for a year (Seyfang, 2002). At one point Steelwear Time Bank<sup>7</sup>, where I carried out my fieldwork, had an annual income of £116.5K which it used to rent an office, and to employ staff and sessional workers (ERS Report, 2008).

A time bank often takes a long time to become fully established. However, funding tends to be short-term (Seyfang, 2009), meaning that much of the staff's time has to be spent chasing further funding rather than brokering transactions between members. Whereas it is relatively easy to find funding for new time banks, it is much harder to find ongoing funding for existing, successful time banks: 'the consequence is that established projects close while new ones are begun elsewhere' (Seyfang, 2009). According to Julia Slay of NESTA, about 60% of time banks close when initial funding runs out (comment at first meeting of Time4Research network, Oct 2011).

There is an ongoing debate about whether time banks - like doctor's surgeries and other public services - should receive permanent funding, or whether - after a short period of start-up funding - time banks should become self-sustaining, with little or no on-going funding necessary. While the most appropriate approach is likely to depend on the area and population served, these are three of the possible ways forward:

#### i. Time banks to be built into the delivery of public services

Time banks have proved to be a cost-effective and people-centered way of delivering certain public services. For instance, Lehigh Hospital in Philadelphia uses a time bank to reward volunteers who help patients when they return home after a hospital stay. These patients in their turn become volunteers, helping future patients (Boyle, 2009). Another example is the US health insurance company Elderplan, which gave time bank members reduced premiums because they found their support for each other reduced the number of claims they made (New Economics Foundation, 2002).

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<sup>7</sup> This is a pseudonym for the time bank in which I carried out my fieldwork.

## **ii. Devolving power to members over time**

Where being tied to another organization in this way is not possible or desirable, another approach is to design time banks with the intention of devolving power to members over time, making on-going funding unnecessary.

Although many time banks are set up with the intention of devolving power in this way, in practice this has only been successful in a few cases (e.g. Fairshares Time Bank, which has been run by unpaid volunteers for more than 10 years now). There are many more examples of time banks which have continued to rely on paid staff, and as a result have come to an end when funding ran out (Seyfang, 2009; North, 2010).

## **iii. Building a time bank as a social enterprise**

Finally, it may be possible to design time banks as social enterprises, funded at least in part by annual subscriptions from wealthier members (much as the church has been funded for many thousands of years). This would give time banks a measure of economic, and thus ideological, independence. Members could use some of the income to hire a broker whose job would be to help less confident members to become fully involved in time bank activities. All such time banks would try to attract a mix of members. Hopefully such enterprises would attract some level of subsidy from local government, as the sense of community and self-help they created would mean less money needed to be spent on health and police services.

Aside from the problem of sustainability, time banks - like LETS - have to deal on an on-going basis with issues relating to their members' ideology and values. Time bank members - and sometimes time bank staff - often find it hard to relinquish ways of thinking and acting which they have acquired within the market economy. While some members find it hard to allow their accounts to become negative, others find it hard to accept that the skills they have are valuable and in demand by others in the group (Ozanne, 2010).

A further problem UK time banks have is that they are often understood to be a form of volunteering. Volunteering is something UK citizens and policy makers are familiar with, but until recently was in decline in the UK. Time banks have been found to encourage people who

would not otherwise volunteer to help others in their communities (Seyfang, 2002), and as such has been welcomed by government.

However, time banking is not in fact volunteering. At the heart of time banking is reciprocity, rather than giving to others perceived as less fortunate than ourselves. As stated earlier in this chapter, one of the central precepts of time banking is that ‘wherever possible, we must replace one-way acts of largesse...with two-way transactions. “You need me,” becomes “We need each other”’ (Cahn, 2000:24).

Unfortunately, most time banks have some members who have joined the time bank to help others, and are very reluctant to receive help themselves (Seyfang, 2009). A case-study of Rushey Green Time Bank revealed that 78% of members joined to help others, 44% joined in order to receive help themselves, and only 28% of members had both given *and* received services through the time bank (Seyfang, 2003).

At the heart of many of the above problems is the fact that time banking is being implemented by professionals and agencies who are used to non-co-productive ways of working, and find it hard to ‘let go’ (North, 2010:98). North adds that often such agencies have ‘to meet centrally set targets’ and are thus often ‘no more than the local delivery arms of central government’ (North:2010:98). Perhaps in order for staff from such agencies to allow time bank members some freedom, they first have to be empowered themselves.

At the policy level, the fact that the government sees time banking as a form of mutual volunteering means that it does not see any need to allow members to carry out transactions involving goods, nor for time banks to materially reward members. In the States, local businesses donate goods and services to time banks, and they are used to reward time bank members who would otherwise have difficulty spending their credits, especially young people who might otherwise not get involved. Encouraging this practice would greatly increase the benefits of time bank membership for poor people, however, the UK government insists that any such goods be treated as earned, and therefore taxable, income (Time Banks UK, 2006; cited in Seyfang, 2009).

Finally, although a benefits disregard has been agreed for those on unemployment benefit, this does not extend to incapacity benefits, which means – again – that some of the people most at risk of social exclusion are put off becoming actively involved in their local time bank (Seyfang, 2009).

Please see the table overleaf for a brief summary of the differences between LETS and Time Banks in the UK.

**Table 1: A brief comparison of LETS and Time Banks in the UK**

	<b>TIME BANKS</b>	<b>LETS</b>
<b>MEMBERS</b>	Funded to operate in areas of high deprivation.	Tend to attract middle-class individuals with 'green' leanings. Many have low incomes and limited social networks.
<b>CURRENCY</b>	Time-based currency. Each member's time valued equally. One hour is valued at one time credit.	Members decide how much they charge for goods and services. Some LETS have suggested hourly rate.
<b>MANAGEMENT</b>	Staff, including broker and often community-workers, paid in Sterling.	Core group of members paid in local currency to carry out essential administrative tasks.
<b>ATTITUDE TO RISK/TRUST</b>	Potential members are vetted, given CRB checks, group insurance.	Emphasis on individual responsibility and trust.
<b>TRANSACTIONS</b>	Broker arranges and records transactions between members, using telephone and database of members' skills.	Members arrange transactions, at social gatherings, or using list of members' phone numbers and directory of skills. Send system cheques to transaction recorder who enters details on computer.
<b>GOODS</b>	Time banks value any item at a single credit. This makes it clear credits have no relation to mainstream economy, and that transactions are not a form of tax evasion.	Transactions involving goods are often a central part of LETS gatherings. Members often decide on a mutually agreeable amount of local currency to exchange for the goods.
<b>MEETINGS</b>	As transactions set up by broker, social events not integral to group.	Social gatherings important for members to get to know each other, exchange goods, and set up transactions.
<b>PREMISES</b>	Local office, to which members can drop in to see the broker. Useful for members without phones.	LETS usually have no premises. Members contact each other by phone or at social gatherings.
<b>FUNDING</b>	Require large amounts of funding, usually on an on-going basis.	Most have very little funding, and many exist on small annual membership fees alone.
<b>STATE BENEFITS</b>	Unemployed members given Benefits Disregard, but those on incapacity benefit risk being declared fit to work as a result of their activities.	Government classes LETS activities as work, which puts many unemployed people off joining LETS, though rare for members to be active enough to lose benefits.
<b>TAX</b>	Activities not seen as work and are therefore not taxable.	Activities treated as 'personal favours' and therefore not taxable, unless a member carries out their normal line of work.

### Section III: THE FUTURE OF COMMUNITY CURRENCY SYSTEMS IN THE UK

The current government claims to be keen to devolve power to local communities, while recognizing the need to value the unpaid work which keeps these communities functioning.

Steve Moore, director of the government's Big Society network, puts it thus:

Everyday across the UK people, in huge numbers, give up time and money to contribute to their local communities and good causes in formal and informal ways. They are often 'small' acts of kindness. They usually go unheralded but, for me, the closer you get to them, the more you sense that these small examples, most of them trivial in themselves, are beginning to add up to something that, incrementally, could make a big difference. It is the fundamental purpose of the Big Society Network to create the conditions and provide the opportunities for more people to feel motivated, rewarded and stimulated by the chance to contribute in this way.

Moore (2011)

However, in the face of massive cuts to public spending, many see the concept of 'Big Society' as just so much rhetoric, used to cover up the reality of massive cuts in public services to save money in a perilous economic situation. The government is interested in incentivizing mutual aid at low cost, and thus this is a great opportunity for community currencies to proliferate. However, if the public comes to see community currency systems as a governmental ploy to produce public services on the cheap, this will make them unpopular.

The best way to encourage the growth of all types of community currency systems in the current economic climate would be simply to relax current restrictions with regards to benefits and taxes for all community currency system members. For many years 'Bring and Buy' sales have been a traditional part of British life, it seems strange that similar events - involving community currencies instead of Sterling - should be of concern to the tax man.

There remains the question of whether some types of community currency are inherently better than others. It appears that different types of system appeal to different groups of people for different reasons. North suggests that the way forward, therefore, is to embrace a plethora of different kinds of alternative and complementary currency systems (North, 2010). The problem with this idea is that individuals only have so much time and energy to invest in group membership. In addition, if a large pool of goods and services is necessary for a group to become self-sustaining, there may be a limit to how many different kinds of community currency system a particular geographical area can sustain. This area requires further exploration, it might be quite feasible for a currency facilitating the exchange of favours between members of a specific community to operate alongside a more impersonal and

widespread (perhaps token-based) currency aimed at businesses, because the latter would not require members to invest time in building and maintaining a social network.

Perhaps a more efficient way forward, however, would be to find a new model which integrates the best features of both LETS and Time Banks. As Seyfang warns, 'since the vast majority of time bank organisers have no experience or knowledge of LETS', if 'duplication of effort and reinventing the wheel' are to be avoided, 'there is a need for greater communication and new frameworks for constructive dialogue, learning and sharing experience between the two movements' (Seyfang, 2002:8 ).

It appears that funding is necessary if community currency systems are to be more inclusive, and yet funding brings issues around sustainability, hierarchy between paid and unpaid staff, and value drift (towards those of the funders).

Finally, if people are to contribute to their communities, whether through community currency membership or by other means, time spent in community needs to be valued more highly both by the government, and by society itself. Currently, many people in full employment have no time to contribute to their communities. At the same time, many others have no employment, and therefore have time, but often lack the confidence, skills or motivation to participate on an unpaid basis. Anna Coote of the New Economics Foundation [NEF] has suggested that a move to a shorter paid working week would mean that paid work could be distributed more equally (Coote, 2010). Perhaps in the future people will combine NEF's proposed 21 hour paid working week with voluntary work in their communities, measured and recorded using community currencies.

## CONCLUSIONS

Community currency systems are seen by some as complementary to the mainstream economic system, and by others as presenting an alternative to it. The two main types in the UK at present are LETS and Time Banks. Much has been made of the differences between these two movements, because originally LETS were designed to restore the local economy in the face of scarcity of national currency, whereas Time Banks have always set out to reward engagement in what Cahn calls the 'core economy': activities which sustain communities but which are traditionally unpaid. However, it has proved very hard to attract local businesses to LETS, and nowadays many LETS are more interested in community-building than in the possible economic implications of their activities. Arguably the greatest difference remaining between LETS and Time Banks is that LETS tend to be run in a bottom-up fashion, by members rewarded

solely with community currency, whereas Time Banks usually have a much more top-down organisational structure, which is dependent on long-term Sterling funding.

The current economic crisis has sparked new interest in community currencies. However, the government has the problem that it wishes to encourage people to get involved in their communities, while at the same time clamping down on the 'grey' economy. Consequently, it is keen to support community currency systems which claim to be purely social in their activities, especially when these activities are supervised by paid, and therefore accountable, staff members, under the guidance of a national organisation. However, it is questionable whether economic and social can really be held separate from each other in this way, and the danger is that the over-controlling and risk-averse approach employed by many time banks will severely limit the benefits of such systems to their members, while making it impossible for these groups to become self-sustaining.

## **Ch.2 CO-OPERATION IN COMMUNITY CURRENCY SYSTEMS: A MULTI-DIMENSIONAL APPROACH**

### **INTRODUCTION**

In this chapter, I introduce the various theoretical perspectives I will use to investigate co-operation and mutual aid in community currency systems. The chapter is divided into four parts, outlines of which are given below:

#### **PART I: SOCIAL CONNECTIONS, AND THEIR INFLUENCE ON WELL-BEING**

Community currency systems aim to create and/or sustain well-being through the creation and maintenance of social relationships among their members. While it is currently fashionable to use the term 'social capital' when evaluating the success or otherwise of such projects, there is little agreement about how 'social capital' should be defined, let alone measured. It is suggested that the time has come to replace the multifarious concept of social capital with two quite separate concepts: social cohesion and social reach, both of which can be measured using tools from social network analysis.

#### **PART II: RECIPROCITY, CO-OPERATION AND MUTUAL AID**

While expressions such as 'high social capital' or 'a dense social network' may be used to describe the state of a group of people at a particular moment in time, such a state evolves through dynamic processes involving interactions between individuals. This next section of the chapter seeks to describe these processes, examining competing game theoretical models of co-operation, before going on to suggest that community currency systems can be seen as a formalisation of mutual aid as practised in small-scale hunting and gathering, or peasant, communities.

### **PART III: COMMUNITY CURRENCY SYSTEMS: BETWEEN THE SPHERES?**

This section explores the concept of spheres of exchange: the idea that human societies tend to compartmentalize different kinds of transaction, apparently in order to control the relationship between access to power, and access to subsistence resources. While the concept of spheres of exchange has traditionally been used by anthropologists working in non-industrial societies, it can also be applied to industrialized societies as way of looking at the relationship between the market economy and the gift economy, and particularly as a way of understanding where community currency systems sit between the two. Finally, an attempt is made to relate the idea of overlapping spheres of exchange to concepts from game theory and social network analysis.

### **PART IV: BRINGING IT ALL TOGETHER**

In this last section of the chapter, the concepts from the three earlier parts are related to each other. A series of predictions are made, which are then tested - using data from Woolgone LETS - in Ch.7.

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## **PART I: SOCIAL CONNECTIONS, AND THEIR INFLUENCE ON WELL-BEING**

### **INTRODUCTION**

In this first part of the chapter I look at the influence of social connections on well-being, exploring and problematizing the term 'social capital' before moving on to suggest alternatives which are both conceptually clearer, and easier to measure using tools from social network analysis.

#### **Section I: WHY SOCIAL CONNECTIONS?**

In the last twenty years or so, there has been much interest in ways of measuring progress other than in terms of economic growth<sup>8</sup>. In 2006, the New Economics Foundation [nef] launched the Happy Planet Index (HPI), which ranked countries according to life satisfaction, life expectancy and ecological footprint. According to this index, Gross Domestic Product (GDP) and position on the HPI were not related. For instance, while the UK's GDP increased from the 1970s to 2000, its HPI score did not (Thomas and Evans, 2010).

In 2008 President Sarkozy of France commissioned Stiglitz, Sen, Fitoussi to carry out research into new ways of measuring progress. Their report suggested that it was time to 'shift emphasis from measuring economic production to measuring people's well-being', with much greater attention paid to sustainability (Stiglitz et al, 2009:12). It presents a multi-dimensional definition of well-being, identifying the following as the key objective indicators of well-being:

- i. Material living standards (income, consumption and wealth);
- ii. Health;
- iii. Education;
- iv. Personal activities including work
- v. Political voice and governance;
- vi. Social connections and relationships;
- vii. Environment (present and future conditions);
- viii. Insecurity, of an economic as well as a physical nature

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<sup>8</sup> This report started to be written shortly before the collapse of the economy. Some of the authors 'believe that one of the reasons why the crisis took many by surprise is that our measurement system failed us and/or market participants and government officials were not focusing on the right set of statistical indicators' (Stiglitz et al, 2009:8).

The report also emphasises the need to collect data about *subjective* well-being, and stresses the importance of social connections in this regard:

For no other class of variables (including strictly economic variables) is the evidence for causal effects on subjective well-being probably as strong as it is for social connections.

(Stiglitz et al, 2009:184)

It has been found that social connections significantly influence an individual's physical and mental health. Not only do social ties act as a buffer against mental illness (Jenkins et al, 2008; Brugha et al, 2005; both cited in Aked et al, 2008:5), social isolation is as likely as smoking to bring about premature death (Berkman and Glass, 2000; cited in Stiglitz et al, 2009:182).

The term 'social connections' is itself relatively transparent: it refers to relationships between people. The problem is that people have many different kinds of relationships, with different kinds of meanings and values for the individuals concerned, and for their wider social group.

In the next section I explore the concept of 'social capital', which is currently widely used to represent those relationships, and qualities of relationships, which improve an individual and/or group's life chances.

## **Section II: EXPLORING THE CONCEPT OF SOCIAL CAPITAL**

### **1. SOCIAL CAPITAL: GROUP- OR INDIVIDUAL-LEVEL CONCEPT?**

According to Woolcock and Narayan, 'the basic idea of "social capital" is that one's family, friends, and associates constitute an important asset, one that can be called upon in a crisis, enjoyed for its own sake, and/or leveraged for material gain' (Woolcock and Narayan, 2000:226). They go on to add, 'What is true for individuals, moreover, also holds for groups. Those communities endowed with a diverse stock of social networks and civic associations will be in a stronger position to confront poverty and vulnerability (Moser, 1996; Narayan, 1996), resolve disputes (Schafft,1998; Varshney, 1999), and/or take advantage of new opportunities (Isham, 1999)' (Woolcock and Narayan, 2000:226).

Woolcock and Narayan point out how policy-makers tend to see social capital and social exclusion as opposite sides of the same coin: 'the *absence* of social ties can have an equally important impact. Office workers, for example, fear being left "out of the loop" on important

decisions; ambitious professionals recognize that getting ahead in a new venture typically requires an active commitment to “networking.” A defining feature of being poor, moreover, is that one is not a member of—or is even actively excluded from—certain social networks and institutions, ones that could be used to secure good jobs and decent housing (Wilson 1987, 1996)’ (Woolcock and Narayan, 2000:226).

Fine, however, warns against the rapid adoption of the concept of social capital as ‘both analytical, empirical and policy panacea’ (Fine, 2001:189). He speaks of the ‘gargantuan appetite’ of social capital (Fine, 2001:190), arguing that it has been used to explain too many aspects of too many things, without due regard to context.

Certainly, it appears that the term ‘social capital’ has been used to mean quite different things by different people. Borgatti, Jones and Everett (1998) attempt to classify these uses, arguing that some theorists focus on the individual while others focus on the group as a whole, but that additionally some take one or the other focus and look outwards, while others look inwards.

According to Borgatti et al. (1998), theorists such as Bourdieu and Putnam view social capital as a quality of whole groups - either societies, or groups within societies - and look at things like the norms and values of individuals within these groups, how ties are arranged within them, and the benefits to individuals of belonging to such a group. In other words they start with the group and look inwards. Meanwhile, theorists such as Burt and Lin are more concerned with individuals, and how one individual *within* a particular group may have greater social capital than another, perhaps because they have a greater number of ties, and/or are in a more advantageous position within the group. In other words, they start with the individual and look outwards<sup>9</sup>.

Adding to the confusion, even when theorists see social capital as a collective phenomenon, when it comes to attempting to measure it using social surveys, the nature of these surveys means that ‘it is measured and analyzed as a property of an individual, although very often implicitly’ (Yang, 2007:19). Perhaps the underlying problem is that ‘few researchers have explicitly conceptualized individual social capital and its connection to the collective counterpart, i.e., ‘collective social capital’ (Yang, 2007:20).

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<sup>9</sup> It is also possible to start with the group, and to look outwards, to the ties individuals within the group have within the society or organization of which they form but a part. Borgatti et al (1998) give the example of Ancona’s work (1990), which looks at how some work teams are more successful than others because of the ties their members have within the wider organization.

In this thesis I am interested in social capital at the level of the group: *What benefits does the time bank confer upon its members? How are these related to its norms, values and practices, and to the nature and arrangement of the ties which build up between individual members?*

I am also interested in social capital at the level of the individual: *Why do some time bank members have more partners than others? Are all individuals equal in terms of what they put into, and get out of, time bank membership?*

Finally, I am interested in how social capital at the level of the group, and social capital at the level of the individual, might interact with each other: *How is the fact that some time bank members have many more partners than others related to the overall structure of the network, its stability and sustainability, and thus the benefits which individuals may draw from membership?*

## 2. 'BONDING' VERSUS 'BRIDGING' FORMS OF SOCIAL CAPITAL

Complicating matters further, theorists have distinguished between two types of social capital: 'bonding' and 'bridging':

### 2.1 'Bonding' social capital and homophily:

In network terms, the more densely connected a network is, the greater the 'closure' of the network, and the higher the 'bonding' social capital available to its members.

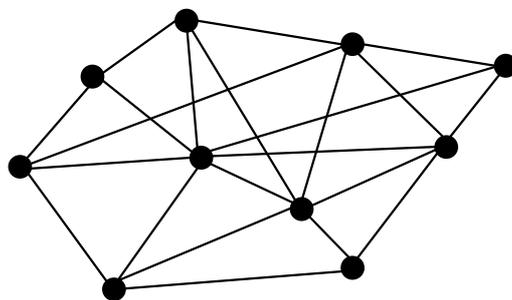


Figure 2: Network with high 'bonding' social capital

Bonding capital is thought to encourage the growth of trust: the fact that members are highly connected means they can easily share information about each other, which allows norms of behaviour to be established, and sanctions to be enforced (Coleman, 1988). High 'bonding'

social capital would provide ideal conditions for co-operation to occur if it evolves out of indirect reciprocity facilitated by image scoring, and is thus mediated by reputation, as Nowak and Sigmund (1988) suggest (see Ch.1 Section II;1).

Bonding capital is associated with the formation of ties between individuals who are similar in some way, or the strengthening of ties between people who already know each other (Coleman, 1988; Putnam, 1993). Thus it tends to be stronger in groups of individuals who have much in common with each other.

In social network theory, homophily refers to the tendency of similar individuals to cluster together, as in the adage 'birds of a feather flock together' (Goodreau et al, 2009). The idea is based upon social balance theory (Heider, 1946; as described in Wasserman and Faust, 1994 and Krackhardt, 1998) and the mechanism behind it is thought to be that friends choose friends who are similar to them, who then choose friends similar to them, and so on, resulting in a cluster of similar individuals.

An obvious problem with the idea of homophily is that people may be 'similar' in a myriad of different ways, and may have many different kinds of relations with each other. Working in the USA and using survey data collected as part of the 1985 General Social Survey (GSS)<sup>10</sup> Marsden found that ethnicity strongly influenced who associated with whom, with only 8% of individuals having a person of different ethnicity with whom they discussed important matters (Marsden, 1987; cited in McPherson et al, 2001:420). Marsden also found that age, gender, class and educational level had a considerable influence on cluster formation. For instance, among the people respondents confided in, educational diversity was about half that in the general population (Marsden, 1987; cited in McPherson et al, 2001:426).

Schaefer (2010) has suggested that homophily be viewed as a multidimensional construct, with some dimensions tending to be more salient in particular contexts than others. He analysed data from the General Social Survey carried out in 1985 in the USA, in which respondents were asked to give details (age, sex, race, education and religion) of the people with whom they discussed important matters. While for all types of relations (whether people were co-workers, marriage partners, or friends), race was a key dimension, for family groups, religion appeared to be significant, whereas friendships tended to involve individuals of similar age.

These findings should not be over-generalised: it seems likely that homophily is a stronger force in certain cultural and social contexts than in others and that the dimension(s) around which clustering takes place are also to some extent culturally determined.

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<sup>10</sup>In this study, individuals were asked to name all those people with whom they had discussed 'important matters' within the past six months, and then to say how close they felt to each of these people, giving details of the personal characteristics, e.g. age, sex, ethnicity of each of the people they had named.

Another problem with the concept of homophily is that it seems to ignore the fact that between any one pair of individuals, there may be many different kinds of relations, and thus different kinds of ties. In fact, 'social systems can be seen as a nonlinear superposition of a multitude of complex social networks, where nodes represent individuals and links capture a variety of different social relations', thus individuals have a 'tendency to play different roles in different networks' (Szell et al, 2010:1).

While bonding social capital is usually portrayed as a positive construct, it has also been found to have a dark side, being linked to 'exclusion of outsiders, excess claims on group members, restrictions on individual freedoms, and downward levelling norms' (Portes, 1998:15). Social ties can be a way of maintaining the status quo and stifling individual freedom, whether this be the freedom to adopt new working practices (Burt, 2005), or the freedom to stop crack dealing and aspire to joining the middle-classes (Bourgois, 1991; cited in Portes, 1998:17). At its most dangerous, it is bonding social capital which enables terrorist organisations and religious cults to incubate their strong, but dangerous, ideals.

## 2.2 'Bridging' social capital and heterogeneity:

In the diagram below, each of the four cliques has access to different resources. Focusing in on the central clique, the red nodes represent individuals with higher bridging social capital than their fellows. The weak ties these individuals have to other cliques benefit them individually, but also bring greater cohesion to the network as a whole, allowing the otherwise separate cliques to share information and resources with each other (Granovetter, 1973).

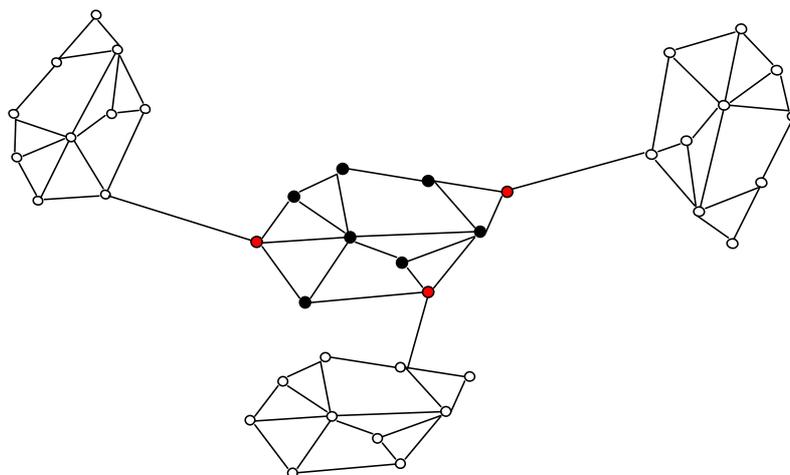


Figure 3: Diagram illustrating 'bridging' social capital

While 'bonding' social capital is all about people forming strong ties, and often brings together individuals who have important traits in common, 'bridging' social capital arises when individuals form weak ties (bridges) with others who are not like them, thus gaining access to resources not available within their own social circles (e.g. information about employment opportunities) (Granovetter, 1973; Burt, 2005).

While homophily favours the growth of bonding social capital, heterogeneity favours that of bridging social capital.

The problem with the idea of 'bridging' social capital, is that what it is in the interests of the group, is not always the same as what is in the interests of the individuals concerned. An individual may gain great power from being the only bridge to another network or clique, and may lose this power when, over time, the two once separate groups become more closely connected. Sometimes the term is used at the level of the group, and sometimes at the level of the individual, and sometimes it is not clear which level the term is being used at, or that a conflict of group and individual interests may be involved.

There is a tendency for those interested in social capital within groups to focus on bonding social capital, and those looking at social capital from the perspective of the individual to emphasize the importance of bridging capital. Below I outline work on social capital by each of the major theorists, identifying their approach as group-focused, individual-focused, or attempting to integrate the two.

### **3. A BRIEF HISTORY OF THE CONCEPT OF SOCIAL CAPITAL**

#### **3.1 Earliest uses of the concept of 'social capital':**

Ideas about what makes a healthy relationship between individuals and society have always preoccupied human beings. The roots of the present day concept of social capital reach back to figures such as Durkheim, indeed even further back to ancient Greek philosophers, particularly Aristotle (Brewer, 2003). However, the term 'social capital' was first used by Hanifan (state supervisor of rural schools in West Virginia) in 1916, to signify 'goodwill, fellowship, mutual sympathy and social intercourse among a group of individuals and families who make up a social unit' (Hanifan, 1916:130).

Hanifan used the word 'capital' because she was trying to draw an analogy between businesses and communities: businesses need economic capital, therefore communities need 'social capital'. For Hanifan, social capital was to be accumulated 'by means of public

entertainments, “sociables”, picnics and a variety of other community gatherings’, giving members of the community a chance to get to know each other and acquire a habit of getting together (1916:131). Once social capital had been accumulated, ‘by skilful leadership this social capital may easily be directed towards the general improvement of the community well-being’ (1916:131). In other words, Hanifan’s use of the term ‘social capital’ was focused at the level of the group; she was interested in what made a healthy, thriving community. The term was used in a similar sense by Jane Jacobs, in *The Death and Life of Great American Cities* (1972 (1961)).

### **3.2 Bourdieu - social capital as a disguised form of economic capital:**

Bourdieu used the term ‘social capital’ to refer to ‘contacts and group memberships which, through the accumulation of exchanges, obligations and shared identities, provide actual or potential support and access to valued resources’ (Bourdieu, 1993:143; in Morrow, 1999:755). Social capital is linked to symbolic capital: a person’s status and honour within a social group, and their ability to draw credit from the social network in the form of labour or favours (Bourdieu, 1987:4; cited in Fine, 2001:56)<sup>11</sup>. However, while symbolic capital has much to do with social class, social capital refers to the investment an individual has made in social relations.

For Bourdieu, economic capital is ‘at the root of all other types of capital’ (Bourdieu, 1986:252; cited in Morrow, 1999:755). However, as capital is a social relation its value is not fixed, instead it is context-dependent and constantly being negotiated (Bourdieu, 1984:113). Relations of domination can only be perpetuated because they are disguised by the detail of culturally- and historically-situated practices.

These practices ‘never cease to comply with economic logic’, however it would be wrong to attempt to reduce them to concepts from (capitalist) economics, as ‘socially constituted subjectivity [itself]... belongs to objective reality’ (Bourdieu, 1990 (1980):122). For example, delayed reciprocity is *not* just two individuals swapping goods at the same moment, it matters how the act is seen by the individuals concerned, what it means in their culture.

The practices themselves are important, because they are the ‘only way of setting up durable relations of reciprocity - and domination’ (Bourdieu, 1990 (1980):112) – or indeed equality. Thus ‘any capital “investment”...must be understood in the dual sense of economic investment – which it objectively always is, though unrecognized – *and* [my italics]...in the

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<sup>11</sup> Symbolic capital is also described more generally as ‘the form the different types of capital take once they are perceived and recognized as legitimate’ (1987:4; in Fine, p.56).

sense of *illusio*, belief, an involvement in the game which produces the game' (Bourdieu, 1984:86).

In short, for Bourdieu social (and symbolic) capital are disguised forms of economic capital, with social class strongly influencing how much capital (of all types) an individual has access to. Learned ways of behaving (*habitus*) tend to reproduce existing power relations, ensuring that change only happens gradually, if at all. His focus is at the level of the group - more specifically, social class - rather than on how particular individuals may have a greater or lesser chance of escaping the fate their class and accompanying *habitus* bestow upon them.

### **3.3 Coleman: social capital as a neutral resource at family/community level:**

Coleman's area of research is relations between adolescents and their families and wider communities. He investigated drop-out rates for teenagers at high school in the USA and found that children who had only one parent or a larger number of siblings were more likely to drop out (Coleman, 1961; cited in Coleman, 1988). He explained this in terms of reduced social capital (in the form of adult attention) meaning reduced access to human capital (as held by the parents). In this study he also used the concept of closure: a social network has closure if A knows B and C, and B and C also know each other (for instance if children at school have parents who also know each other). Closure is necessary if norms and sanctions are to be effective (Coleman, 1988:23), and thus for a trustworthy social environment to exist, in which people feel happy to create obligations to each other, knowing these will be respected (Coleman, 1988:25).

In a later study, Coleman found that children who attended religious schools were less likely to drop out than those who did not (Hoffer, 1986; Coleman and Hoffer, 1987; both cited in Coleman, 1988). He explained this in terms of families whose children attended religious schools having 'intergenerational closure that is based on a multiplex relation'. In other words, adults are both 'members of the same religious body and parents of children in the same school' (Coleman, 1988:31).

Coleman's theoretical approach represents an attempt to synthesize approaches from sociology and economics. While sociologists have tended to emphasize how structures – 'norms, rules and obligations' (Coleman, 1988:13) - determine individual behaviour, economists have tended to see the actor 'as having goals independently arrived at, as acting independently, and as wholly self-interested' (Coleman, 1988:13). Rational action theory (a branch of economics) takes this further, holding that: 'each actor has control over certain resources and interests in certain resources and events' (Coleman, 1988:16).

Coleman's definition of social capital is strictly functional (1988:16), and gives the impression that his approach to the concept is at the level of the group, looking inwards:

Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of the individuals who are within the structure" (1990:302). This functional approach is purposely vague, and allows 'social capital' to be used of delayed reciprocity between individuals, the exchange of information for its own sake, and the existence of effective norms and sanctions.

(Coleman, 1988:20-23)

However, on the same page Coleman also states that social capital 'constitutes a particular kind of resource available to an actor' (1988:16), which suggests a focus at the level of the individual, looking outwards.

It turns out that he attempts to assimilate both approaches, recognising that social capital at one level necessarily influences social capital at the other. He recognises that the 'principle of rational or purposive action...in conjunction with particular social contexts, can account not only for the actions of individuals...*but also for the development of social organisation* [my italics]' (Coleman, 1988:14). Thus his work has been described as providing 'a conceptual link between the attributes of individual actors and their immediate social contexts', and - in doing so - linking 'the overly narrow purview of psychology and the overly broad purview of sociology' (Furstenberg and Hughes, 1995; cited in Morrow, 1999:748).

Coleman found the concept of social capital of particular interest because – unlike physical or human capital – its benefits are not restricted to the individual who invests in the capital, but extend throughout that individual's social network (Coleman, 1988:34); in other words, it is a public (not merely a private) good (1988:35). The fact that 'the benefits of actions that bring social capital into being are largely experienced by persons other than the actor' (1998:35) makes it particularly vulnerable: it is often not in an individual's interest to expend resources bringing social capital into being, and 'most forms of social capital are created or destroyed as by-products of other activities' (1988:35).

On a theoretical level, Fine finds Coleman's work to have fundamental flaws. He points out that 'what may be true for individuals may not be true for society as a whole' (Fine, 2001:102). He also derides Coleman's 'rational choice pre-occupation', stating that 'the leap from micro- to macro- functioning is illegitimate' and that greater attention needs to be paid to the 'causal mechanisms and processes by which the social is reproduced or... transformed' (Fine, 2001:102).

### 3.4 Putnam: the popular face of social capital:

Putnam is the popular face of social capital, widely seen as the creator of the concept (though in fact Bourdieu, Coleman and others had used it before him). He was a little-known academic until his study *Bowling Alone* (2000), which described and attempted to explain a continuing decline in social capital in the USA in terms of the declining membership of community organisations (eg. the bowling clubs referred to in the title). This work captured the imagination of the nation and made Putnam into a famous figure appearing on talk-shows etc.

Putnam discovered that the number of Americans who reported that they had attended a public meeting fell by more than a third from 1973 to 1994, and that similar declines applied to rates of attending a political rally or speech, serving on a committee of some local organization, and working for a political party:

By almost every measure, Americans' direct engagement in politics and government has fallen steadily and sharply over the last generation, despite the fact that average levels of education--the best individual-level predictor of political participation--have risen sharply throughout this period. Every year over the last decade or two, millions more have withdrawn from the affairs of their communities'

(Putnam, 2000:68)

For Putnam, both economic success *and* good democratic government rely heavily on the existence of a culture of co-operation and trust: 'strong society, strong economy; strong society, strong state' (1993:176), which itself is sustained by high levels of civic engagement, as evidenced by flourishing local organisations.

In *Making Democracy Work* Putnam compares North and South Italy and finds that 'civic regions have grown faster than regions with fewer associations and more hierarchy'<sup>12</sup> (1993:176). He explains differences in economic progress in terms of social capital, holding that the Protestant north had a long tradition of civic life and horizontal linkages which increased trust and encouraged trade, while the Catholic South was known for hierarchical institutions like the church and the Mafia and was locked into a culture of distrust which stood in the way of economic progress (1993). He describes how, in the North of Italy, 'social trust has long been a key ingredient in the ethos that has sustained economic dynamism and government performance'. This is because 'co-operation is often required - between legislature and executive, between workers and managers, among political parties, between the government and private groups, among small firms, and so on', and 'explicit "contracting" and "monitoring" in such cases [*i.e. by a third party*] is often costly or impossible' (1993:170).

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<sup>12</sup> He controlled for their level of development in 1970 (1993:176).

For Putnam, social capital is clearly a group level concept, closely allied to trust and reciprocity, and always with a positive impact:

The central premise of social capital is that social networks have value. Social capital refers to the collective value of all 'social networks' [who people know] and the inclinations that arise from these networks to do things for each other ['norms of reciprocity].

(Putnam, no date, [www.bowlingalone.com/socialcapital](http://www.bowlingalone.com/socialcapital))

Strongly influenced by game theory (see Ch.2ii), Putnam is particularly interested in trying to understand how people can - and do - work together co-operatively, avoiding the tragedy of the commons. He points out the costs and problems associated with third-party-enforced co-operation (1993:165), and is interested in how some communities successfully create and maintain a culture of voluntary co-operation by setting up norms of delayed reciprocity and sanctioning free-riding (after Ostrom, 1990).

He argues that in real life, however, the cultural context determines what behaviour can be described as 'rational' for an individual. Referring to Sugden's "mutual-aid" game (Sugden, 1986; cited in Putnam, 1993:178) which has two stable equilibria: "never cooperate" and "brave reciprocity" (co-operate with people who co-operate with you, or people like you), he suggests that which equilibrium a community gravitates towards may be determined by the existing level of social capital: 'connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them' (Putnam, 2000:19).

If there is a high level of social capital, there is good communication between individuals, and they can share information about each other's trustworthiness, raising the potential cost of any free-riding behaviour to the would-be defector. The resulting high level of trust between individuals means it is rational for them to use the "brave reciprocity" strategy (Putnam, 1993:178).

Putnam differentiates between 'bonding' social capital and 'bridging' social capital (see p.50). However, while he acknowledges that the strong ties that exist between kin and close friends can be very important in the early stages of building up social capital, for Putnam it is the weaker ties that are more important in holding communities together:

Family firms and close-knit ethnic minorities (Jews in Europe, overseas Chinese in Asia, and so on) have been important in the early stages of the commercial revolution. However, networks of civic engagement are more likely to encompass broad segments of society and thus undergird collaboration at the community level.

(Putnam, 1993:175)

Cultural patterns can be self-reinforcing, setting up vicious cycles of decreasing social capital (or conversely virtuous cycles of increasing social capital):

Stocks of social capital, such as trust, norms, and networks, tend to be self-reinforcing and cumulative. Virtuous circles result in social equilibria with high levels of co-operation, trust, reciprocity, civic engagement, and collective well-being... Conversely, the absence of these traits is also self-reinforcing. Defection, distrust, shirking, exploitation, isolation, disorder, and stagnation intensify one another in a suffocating miasma of vicious circles. This argument suggests that there may be at least two broad equilibria toward which all societies...tend to evolve and which, once attained, tend to be self-reinforcing.

(Putnam, 1993:177)

Historical background is important too. If a community has an existing tradition of co-operation it is much easier for them to maintain this than it is for a community to change its ways and establish norms of co-operation for the first time. In northern Italy, there exists 'a historical repertoire of forms of collaboration that, having proved their worth in the past, are available to citizens for addressing new problems of collective action. Mutual aid societies were built on the razed foundations of the old guilds, and cooperatives and mass political parties then drew on the experience of the mutual aid societies' (Putnam, 1993:174).

Depending on the historical path which a community has taken, some equilibria may be available but not others. This is termed "path dependence", which Putnam explains as 'where you can get to depends on where you're coming from, and some destinations you simply cannot get to from here' (Putnam, 1993:179). As 'it is almost always easier for an individual agent to adapt to the existing rules of the game than to seek to change them', social patterns – once established – may be difficult or even impossible to escape from. This phenomenon 'can produce durable differences in performance between two societies, even when the formal institutions, resources, relative prices, and individual preferences in the two are similar' (Putnam, 1993:179).

In short, for Putnam social capital is about the evolution of trust, co-operation and civic engagement within a particular cultural and historical context. Social capital forms the base upon which a healthy economy and good governance depend. However, once a society has acquired norms and values antithetical to social capital, it is hard to bring about change.

### 3.5 Granovetter: the strength of weak ties

The theorists described so far all tended to look at social capital as a group-level phenomenon, and to focus on 'bonding' social capital - associating more ties, and stronger ties, between the individual members of a group with higher social capital in the group as a whole.

In 1970, it became clear that reality was a lot more complicated, when a PhD student called Granovetter, carrying out research into how professional Bostonians found new jobs, made the startling discovery that individuals were more likely to obtain useful leads from contacts they had weak ties with, than from their closest contacts. This was because people they knew well moved in the same circles and had access to the same information, but people they only knew a little moved in very different social circles.

According to Granovetter, weak ties not only benefit the individuals who have them, they also lead to greater social cohesion in the group as a whole, connecting together cliques. Thus they both allow ideas and information to spread, and at the same time encourage a sense of community (Granovetter, 1973). Hence a community may consist of highly cohesive clusters, but if these clusters are not communicating *with each other* via weak ties, the community will not be able to activate itself as a whole in order to be able to respond to threats. For example, one working-class community (Charlestown) in Boston was able to fight off plans to 'renew' it by tearing it down, while another (the West End) was not able to do this. Granovetter suggested that this was because Charlestown had local community organisations, plus residents who worked locally, both of which encouraged the growth of weak ties (Granovetter, 1973; based on studies of these communities by Gans, 1962 and Keyes, 1969 as cited in Granovetter, 1973).

### 3.6 Burt: putting it all together

In his earlier work, Burt was much influenced by Granovetter, and focused on social capital at the level of the individual, and on the importance of 'bridging' capital. He argued that within many organisations there were structural holes, and that individuals who were able to bridge these gaps ended up with more social capital than those others who depended upon them to act as brokers (Burt, 1979; 1998; both as cited in Burt, 2005).

More recently, Burt has suggested that really healthy organizations have a combination of bonding *and* bridging capital (Burt, 2005). While it is bridging capital between certain individual members of the group and outsiders which allows for innovation and change, bonding capital is

also necessary, to develop trust and with it stability. In other words, brokerage and closure complement each other.

In order to achieve a healthy balance between the two, thus nurturing both trust and diversity, an organisation must tread a delicate line between allowing individuals with much in common to cluster together, attracting similar types from roundabout (a natural tendency, which efficiently builds the size of the group while engendering trust), while at the same time preventing a monoculture from developing (which would be in no one's interest) by weaving in individuals from other subgroups of society.

To provide my own analogy, this work is perhaps comparable to that of the gardener, who tries to work with natural forces, but must sometimes intervene to prevent dominant species taking over.

#### **4. PROBLEMS WITH THE CONCEPT OF 'SOCIAL CAPITAL'**

Apart from the fact that scholars cannot agree whether social capital is best seen as a group or individual level concept, the concept of social capital is beset by a number of other problems:

##### **1) Implication that social relationships are just another form of capital:**

In Hanifan's hands, the juxtaposition of 'social' and 'capital' was an oxymoron, intended to grab the attention of the reader. Unfortunately, the term is now in such wide usage that it no longer excites the imagination, but instead quietly and insidiously asserts, with all the false power of quasi-scientific language, that social relationships are - at some level - equivalent to money (economic capital). How much better it would be to have a term to describe people's position in a social network which was not value-laden in this way.

##### **2) Vague and circular definition, not sufficiently embedded in context:**

The concept of 'social capital' is merely a construct used to explain why one community appears to be healthier than another in terms based upon the assumption that this has something to do with social ties in the two groups. It is a dangerous concept because it gives the illusion of a singular, concrete and measurable entity which can be divorced from cultural and political context, while the reality is that the concept is so vaguely defined that every theorist can invent their own definition of it, to suit their immediate needs (Fine, 2001).

### **3) Use for political ends:**

For Fine, the term 'social capital' represents an attempt by economists to squeeze society into their models as a measurable variable, while in fact continuing to ignore important issues relating to conflict and power (Fine, 2001:123). Put more bluntly, policy makers may use the concept of social capital to blame individuals' poor quality of life on their own behavioural choices, arguing that people don't need more money or power, but simply to connect with each other more.

Seyfang points out that 'exhortations to build social capital' are often found within 'individualistic, liberal discourse because it both ameliorates harsh economic conditions, and provides alternative fora of inclusion, outside the economic sphere'. Thus the concept of social capital is often used as 'a palliative for social exclusion and effective removal of social rights exacerbated by fiscal austerity' (Seyfang, 2004:53).

### **4) Social capital not always a force for good:**

While social capital is usually portrayed as a positive construct, 'bonding' social capital has also been found to have a dark side, being linked to 'exclusion of outsiders, excess claims on group members, restrictions on individual freedoms, and downward levelling norms' (Portes, 1998:15). Social ties can be a way of maintaining the status quo and stifling individual freedom, whether this be the freedom to adopt new working practices (Burt, 2005), or the freedom to stop crack dealing and aspire to joining the middle-classes (Bourgois, 1991; cited in Portes, 1998:17). At its most dangerous, it is bonding social capital which enables terrorist organisations and religious cults to incubate their strong, but dangerous, ideals (Portes and Landolt, 1996).

### **5) How to measure social capital?:**

There is considerable disagreement about how to measure social capital. Some have suggested using a single indicator (e.g. Fukuyama, 1995), while others insist that multiple indicators are the only way to go (e.g. Paxton, 1999). While recognizing the significance of social connections for well-being and health, the Stiglitz report finds that 'the analysis of the effects of social connections on subjective well-being is in its infancy', being based largely on unreliable proxy measures, cross-sectional data, and unofficial sources (Stiglitz et al, 2009:183). The report adds

that a failure to reach a consensus about how to measure the related term ‘social capital’ has meant that this important dimension of well-being has not been included in the UNECE/OECD/Eurostat dashboard (Stiglitz et al, 2009:268). The authors’ recommendation is that ‘substantial effort should be devoted to developing and implementing robust, reliable measures of social connections’ (Stiglitz et al, 2009:15).

### **Section III: MOVING ON FROM SOCIAL CAPITAL**

In this section I suggest that the time has come to speak of ‘social cohesion’ and ‘social reach’, instead of ‘social capital’, and go on to discuss ways of measuring these concepts using tools from social network analysis.

#### **1. Introducing two distinct concepts in place of social capital: ‘social cohesion’ and ‘social reach’**

As already described, there is much confusion about whether the concept of ‘social capital’ is to be used at the level of individuals or of groups, about whether it refers to strong ties or weak ties between individuals, and about whether it is in anyway comparable to economic capital. I propose getting rid of the term ‘social capital’ altogether and instead referring to two quite distinct concepts: ‘social cohesion’ and ‘social reach’:

##### **1.1 Social cohesion: a group-level concept**

‘Social cohesion’ - which can be considered a replacement term for ‘bonding social capital’ - is about looking within a group at the ties between members, and recognizing that the number, type and strength of ties between individuals, as well as how these ties are arranged, all influence the promulgation and maintenance of group values and norms.

While social cohesion itself is a group-level concept, individuals will clearly be influenced by whether social cohesion is high or low in the group(s) they are part of. Whether this influence is positive will depend on the particular values and norms of the group, as well as on the individual’s position within the network. High levels of social cohesion within a particular group or clique may lead to feelings of antagonism against those perceived to be outside the community, and thus to increased levels of conflict.

Social cohesion is associated with homophily (see p.50) and transitivity (see p.220), as there is a tendency for individuals with certain traits in common to cluster together (Goodreau et al. 2009).

## **1.2 Social reach: an individual-level concept:**

‘Social reach’ can be considered a replacement term for ‘bridging social capital’. An individual has high social reach when they have a high number, or particularly strong<sup>13</sup>, links to other individuals with different intellectual, physical or other resources to those in their immediate social circle(s). While social cohesion involves looking within a group, social reach involves looking outwards, usually from the viewpoint of the individual, but also potentially from the viewpoint of a small group<sup>14</sup> within a larger structure.

Social reach is unevenly distributed: there can only be a few individuals who act as bridges to other cliques in a network (or to other networks outside the home network). If all were equally connected, the networks, or cliques, would no longer be separate.

While social reach is an individual-level concept, the presence of individuals with high social reach will often benefit the network as a whole, as these individuals will often share the resources they have access to with their immediate social circle.

At the same time, the social reach of individuals is influenced by characteristics of the network as a whole. Some societies are much less open to new people and ideas than others. They can be described as inward-looking, or socially-bounded<sup>15</sup>. This tendency to look inwards may be passive (eg. lack of curiosity about outsiders) or alternatively much more aggressive (eg. racial abuse, physical barriers, punishment of community members who try to make contacts in the outside world). In terms of social structure, certain arrangements of ties make it much easier for information to flow through a network than others (see p.67).

Unlike bridging social capital, social reach is always clearly focused at the level of the individual. It does not make sense to use the concept of social reach at the level of the

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<sup>13</sup> Looking back to Granovetter, these ties will necessarily be much weaker than ties within an individual’s own social circles, but some of them will be weaker than others.

<sup>14</sup> I stick to the idea of social reach as an individual level concept, because in this latter case the small group can be treated as an individual whole, and the focus is still on looking outside, rather than within, the group.

<sup>15</sup> ‘Socially-bounded’ is here used to indicate that a community has clear boundaries (sometimes even expressed in physical form) which make it difficult for members to take on new ideas, or for individuals who are different in some way to become accepted.

community, because different individuals within a community will have very different levels of social reach.

## 2. HOW DO SOCIAL COHESION AND SOCIAL REACH<sup>16</sup> RELATE TO EACH OTHER?

While Putnam (1993) focuses on how local organizations (e.g. bowling clubs) help nurture ties between individuals, and thus the growth of social cohesion, Granovetter (1973) argues that such organizations help individuals to develop *weak* ties, and thus increase social reach.

It seems likely that these organizations may potentially develop *both* cohesion and the reach of their members, but that the degree to which each is developed will depend on the nature of the organization in question. For instance, organizations which rely on word of mouth to attract members (as many community currency systems do), and/or have exclusive entry requirements (e.g. a sports club which has a dress code and requires you to bring your own expensive equipment), seem likely to attract a fairly homogenous bunch of people, and thus more likely to develop cohesion. On the other hand, organizations which try very hard to appeal to all members of society and to avoid clique formation may achieve a greater diversity in their membership, and thus afford greater opportunities for individual members to increase their social reach, but may find it much harder to establish social cohesion - in the form of strong ties and trust - between these disparate individuals.

Where theorists do attempt to include both cohesion and reach in their models, there is a tendency to associate high social cohesion with low social reach (eg. Portes and Landolt, 1996). Woolcock and Narayan (2001) go further and suggest that too much cohesion can actually hinder the economic development of a community, and that a shift from 'getting by' to 'getting ahead' relies upon a shift from bonding towards bridging ties.

Whilst tightly-bonded communities which are also inward-looking and hostile to perceived outsiders and new ideas do exist, this does not mean it is impossible for a community to be both cohesive *and* open to new ideas and people.

A reminder of the importance of culture in all this comes from Leonard and Bellamy's study of social capital amongst different Christian denominations in Australia (2010). They found that belonging to a religious group increased both social cohesion and the social reach of individuals, but that certain denominational groups (eg. Traditionalists) had more effect on the social reach of their members (which they called 'bridging capital'), whereas others (eg.

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<sup>16</sup> In this section, I use 'social reach' and 'social cohesion' in place of the terms 'bridging capital' and 'bonding social capital' as used by the authors of the papers mentioned.

Pentecostals) produced a greater increase in social cohesion (what they called 'bonding capital').

People trying to nurture the growth of healthy communities might do well to attempt to increase *both* social cohesion and social reach, while recognizing the need to keep some kind of balance between the two. The nature of this balance is likely to differ for different communities, with what is fitting being affected by a community's cultural history as well as their immediate political, economic and physical environment.

The concepts of social cohesion and social reach are applied to Steelwear time bank and Woolgone LETS in Ch.5.

## **Section IV: MEASURING SOCIAL COHESION AND REACH USING TOOLS FROM SOCIAL NETWORK ANALYSIS**

A number of different theorists have recognised the need to move on from measurements of social capital based solely upon traditional social surveys, to measurements incorporating features of the social networks within which individuals are situated (e.g. Yang, 2007). In this section I introduce the network measures I have found most useful, pointing out that these cannot be tested using standard statistical methods, and must be used with caution, in the context of qualitative data collected about the same issues.

### **1. RELEVANT CONCEPTS FROM SOCIAL NETWORK THEORY**

#### **1.1 Density of a social network as a measure of social cohesion**

Perhaps the most intuitively appealing measure of social cohesion is the density of a network: the proportion of possible ties that are actually present. More highly connected networks are likely to have greater social cohesion as individuals are able to interact with each other, sharing information about norms and values. Another way of looking at this is that individuals with similar norms and values are likely to cluster together (Goodreau et al, 2009; see p.50), thus forming a highly connected network.

Unfortunately, as a comparative measure density must be used with caution, as it is greatly affected by network size, tending to decrease as a network becomes larger: 'the number of possible lines increases rapidly with the number of vertices, whereas the number of ties which

each person can maintain is limited' (de Nooy et al, 2005:63). Thus it is only meaningful to directly compare the densities of networks of similar sizes.

## 1.2 Normalised average degree centrality: a local measure of density

An alternative measure of cohesion is normalized average degree centrality: the average number of partners for any individual in the network. This measure can be thought of as a way of capturing the density of a network at a local level. It removes any effect of network size, while lessening the effect of outliers (de Nooy, 2005:64).

Whilst a highly connected network may favour social cohesion, having many local connections may be at the expense of social reach (Burt, 1983; cited in Borgatti et al, 1998), as individuals have limited time and energy to invest in relationship formation (Dunbar, 1995).

## 1.3 'Small-world' features as a measure of social reach and cohesion

Certain network structures enable information to flow much more efficiently than others. The most efficient networks are large, sparse and yet highly clustered, with a few links between clusters making it possible to get from one node to any other in just a small number of steps. These networks have come to be known as 'small-world' networks (Watts, 1999):

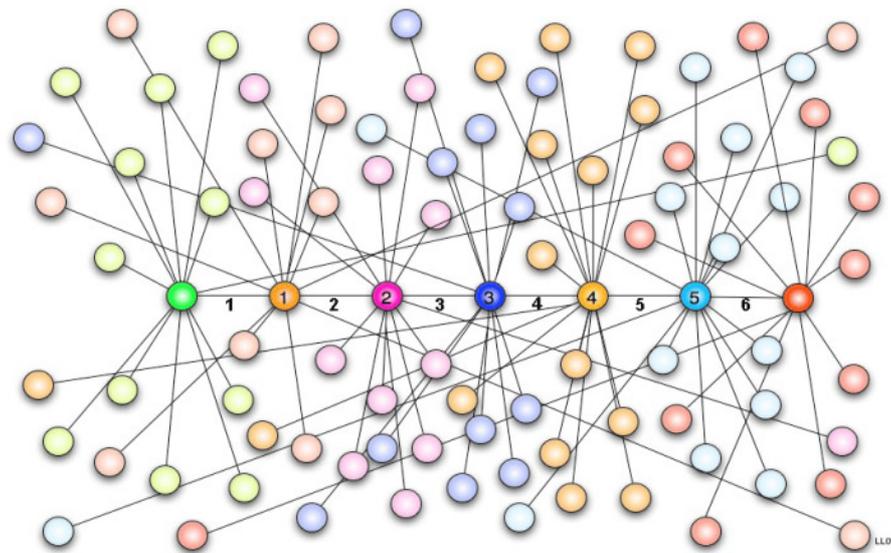


Figure 4: Example of 'small-world' structure (Watts, 1999)

In the preceding diagram, each coloured node belongs to its own cluster of similarly coloured nodes. However, it takes just six steps to get from the green node on the left to the red node on the right, because there are ties linking each cluster to the next.

While Borgatti et al. (1998) suggest the use of average graph-theoretic distance between pairs of network members as a measure of social capital (after Harary, 1969; cited in Watts, 1998), there appears to have been only one study specifically linking social capital and ‘small-world’ network structure. Prell (2009) suggests that a mixture of bridging and bonding ties at the level of the individual translates into a ‘small-world’ structure at the global level, and backs this up with an analysis of Florentine business ties.

This rings true, as one might expect that in an organisation with a ‘small-world’ network structure (i.e. highly clustered with short average path length), information of all sorts – including gossip about the behaviour of other system members, and news about job opportunities - will quickly and efficiently permeate. Thus, having a ‘small-world’-type structure seems likely foster *both* social cohesion (by helping an organisation achieve a sense of group identity) *and* social reach (by facilitating the exchange of information about resources and opportunities between different clusters).

It is important to emphasize that this approach does not deny the importance of dense ties between network members, but merely adds that it is also important how these ties are arranged.

#### **1.4 The significance of highly right-skewed degree distributions, and core/periphery network structure, for the evolution of co-operation**

Most ‘small-world’ networks have a highly right-skewed<sup>17</sup> degree distribution. In other words, the majority of network members have very few partners, but a few have a large number of partners. It appears that ‘small world’ networks which are highly right-skewed in this way have much shorter average path lengths than those which are not<sup>18</sup> (Puniyani, 2001).

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<sup>17</sup> There is currently a fashion for referring to such degree distributions as being ‘scale-free’ or ‘power law’. However, as Borgatti points out, ‘with networks of typical size (say, just a few hundred nodes), it is virtually impossible to distinguish a scale-free network from any other kind of network that has a skewed degree distribution’. Borgatti goes on to add that ‘most of the "benefits" ascribed to scale-free networks, such as searchability, are also characteristic of all other networks with high degree variance – it is having a few very well connected nodes that yields the interesting properties, not the power-law distribution’ (Borgatti, 2005). Thus in Ch.4, instead of using curve-fitting to attempt to find out if the degree distributions of my networks are truly power law, I have decided simply to refer to such distributions as being highly right-skewed (see p.150).

<sup>18</sup> According to Puniyani, ‘small world’ networks which are also highly right-skewed have much shorter average path lengths than those which are not. When a network is both highly right-skewed and ‘small

For Barabási, a highly right-skewed degree distribution (which he describes as 'power law') is characteristic of a self-organizing system: it is 'nature's unmistakable sign that chaos is departing in favour of order' (Barabási, 2002:77). Certainly, it appears that having such a degree distribution makes a network more robust. Compared to a randomly connected network, a network with a 'small-world' structure and a highly right-skewed degree distribution can lose a much higher proportion of nodes before it fragments (Albert, Jeong and Barabási, 2000; cited in Buchanan, 2002). However, this is only true if the nodes are removed at random. Targeted removal of several hub nodes (those with many partners) will quickly cause such a network to disintegrate (Albert et al. 2000; cited in Buchanan, 2002).

Barabási explains the evolution of a highly right-skewed degree distribution in terms of competition between nodes for partners: a network is always in a state of flux, and new nodes joining the network prefer to attach themselves to those existing nodes which have the greatest number of partners: thus 'the rich get richer' (1999).

Bentley points out that Barabási's idea makes no reference to evolutionary theory, and does not explain *why* such a preference for more connected nodes should exist (Bentley, Ormerod and Batty, 2011). He suggests that a more parsimonious explanation for the existence of hubs is the theory of random genetic drift: 'a population of individuals copy variants from each other, except for a small fraction in each time step who invent a new variant' (Bentley and Shennan, 2005:877). Random copying would result in an apparent 'rich get richer' phenomenon, because 'the more popular a variant is, the more likely it will be copied again' (Bentley and Shennan, 2005:877). It would also deal with problems Barabási's preferential attachment model has with explaining how sometimes nodes that are new to the network rapidly become hubs, and how the degree distribution of a network can quickly change (Bentley and Shennan, 2005).

It seems surprising that neither of these proposed explanatory mechanisms attach much significance to the characteristics of individual nodes, such as social or other skills, or to the different behavioural strategies that individuals might follow, although Barabási does concede that individual 'fitness' might have some influence on preferential attachment (Barabási, 2002).

While studies based upon social networks in which all members have a similar degree have found that co-operation as a strategy only survives if the benefit/cost ratio is high (e.g. Ohtsuki et al., 2006), Santos and Pacheco (2006) have found that in networks which - like many real life ones - have a highly right-skewed degree distribution, co-operation dominates even if the benefit/cost ratio is close to one.

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world', as its size increases, the average path length only grows logarithmically. In other words, if such a network increases massively in size, the average path length only increases by a small amount.

Recently, it has been found that the overall structure of a network strongly influences whether cooperation will evolve or not. Over time, the fact that members are able to change their ties allows co-operators to cluster together at the centre of the network while defectors are left at the periphery (unpublished work, Ahn, Choi and Sohn, 2011). It appears that such a core-periphery structure is very important if cooperation is to stabilize.

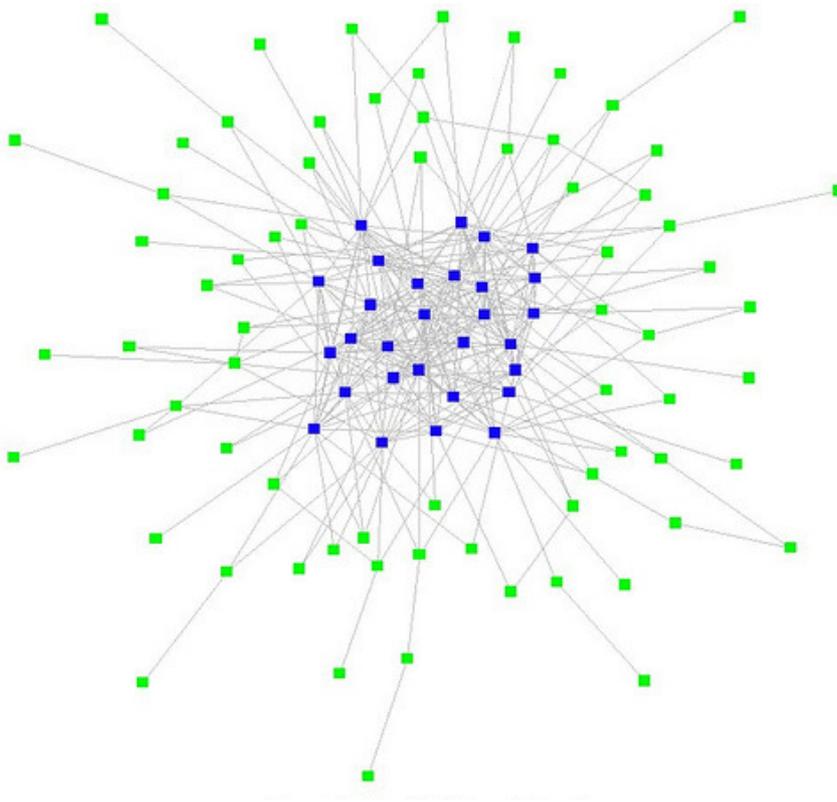


Figure 5: Core-periphery network structure (from Krebs and Holley, 2002)

Returning to social cohesion and reach in the real world, the tendency for ‘small-world’ networks to have highly skewed degree distributions raises the question of whether development professionals should be seeking to equalise social capital across a network (eg. by working to increase the degree of individuals with low social capital), or to increase the general level of social capital, while retaining the inequality between individuals, and thus the overall (more uneven, but apparently more robust) network structure.

In the worst case scenario, well-meaning attempts to equalize cohesion and reach might destabilize a community, leading to reduced social cohesion for all and upsetting important links between individuals/communities and other individuals/communities.

The effects of inequity are likely to be much influenced by the nature of the society in question. Among the Big Men of Papua New Guinea, access to subsistence resources is not influenced by how many social ties one has, or how strong these are (Sillitoe, 2006). However, in many so-called 'developed' cultures those without a social support network are much less fortunate (Komter, 2005). Perhaps the answer is to seek to ensure minimum levels of cohesion and reach for all, while recognizing that a certain degree of inequity is inevitable, and that it is not possible for all individuals to be hubs all the time!

## 2. USING STATISTICS WITH SOCIAL NETWORKS

Unfortunately, it is not possible to use standard inferential statistics (e.g. ANCOVA) with network data, as Hanneman explains:

Most of the standard formulas for calculating estimated standard errors, computing test statistics, and assessing the probability of null hypotheses that we learned in basic statistics don't work with network data... This is because the "observations" or scores in network data are not "independent" samplings from populations... The standard formulas for computing standard errors and inferential tests on attributes generally assume independent observations. Applying them when the observations are not independent can be very misleading.

(Hanneman, 2005)

It is possible to use a process called 'boot-strapping' to 'calculate sampling distributions of statistics directly from the observed networks by using random assignment across hundreds or thousands of trials under the assumption that null hypotheses are true' (Hanneman, 2005).

However, when it comes to comparing networks of different size, matters are further complicated by the fact that many network features - including density - are greatly influenced by network size (Faust, 2010). With different network topologies the effect of size differs, and in real life situations the exact topology of a network is usually not known (van Wijk, Stam and Daffertshofer, 2010).

As Hanneman (2005) points out, 'the application of statistical modelling to network data is one of the "leading edges" of the field of social (and other) network analyses', and 'it is likely that this interface will be one of the areas of most rapid development in the field of social network methods in the coming years'.

### **3. THE IMPORTANCE OF USING QUANTITATIVE MEASURES CAUTIOUSLY**

One would expect a group with high social cohesion to have a clear set of shared values and norms of behaviour. However, it is possible that a society composed of two warring cliques, each highly connected, achieves the same score on a network-based measure of cohesion as a society in which ties are much more evenly distributed. While a visual representation of ties within networks will often help one interpret test scores, even network diagrams can easily be misinterpreted. Hence the quantitative measures outlined here should never be taken at face value, but should instead be used as a way of checking out suspicions that have arisen during fieldwork, and bringing to light apparent anomalies which one can then return to the field with to explore further.

## **PART II: RECIPROCITY, CO-OPERATION AND MUTUAL AID**

### **INTRODUCTION**

In this second part of Ch.2, I give a brief introduction to different ways of looking at reciprocity, co-operation and mutual aid, beginning with the functionalists who saw gift exchange as the central mechanism behind both social structure and social change, moving on to competing ideas about the role of reciprocity in relation to co-operation from the evolutionary theory of games, and ending with an interpretation of the exchange of favours within a community currency system in terms of these previous ideas.

#### **Section I: GIFT-EXCHANGE AS THE STRUCTURING FORCE BEHIND SOCIETY**

According to Mauss (1954 [1923]), every gift is both a material and a spiritual act, taking with it part of the giver themselves, a part which must necessarily return to that giver, in the form of a reciprocal gift. In other words, gifts (unlike items which are sold to others) create a social bond which ties giver and receiver together until the gift is reciprocated.

Mauss then goes on to suggest that whole societies have been structured and sustained through gift-giving. For instance, among the Haida of the West coast of North America, the rituals of the potlatch serve to define people's social roles and relations.

Blau (1964) builds on Mauss' ideas, pointing out that social exchanges can be distinguished from purely economic exchanges in important ways. In social exchange, no expectation of reciprocity may be expressed by the giver, any gift given in return must be of roughly equal value to the original gift, and lastly, the act of reciprocation occurs not immediately but after a delay. For instance, if someone gave you a bottle of wine, and you immediately gave them one back, this would be taken as a sign that you did not want to enter into a relationship based upon trust and friendship. Giving them a bottle of wine several weeks later, however, would be quite acceptable, and would indeed help to further cement your friendship.

According to Blau, while some forms of social exchange establish or maintain bonds of friendship (eg. the Trobrianders' Kula ring), others are intended to establish dominance over others (eg. the Haida's potlatch ceremonies).

Blau posits three basic types of social exchange:

- 1) An individual reciprocates a gift after a delay, with a return gift of roughly equal value. This creates or cements a social bond.
- 2) A person gives a gift to someone who is unable to reciprocate, with the result that the recipient will lose social status.
- 3) The recipient is able to reciprocate, but refuses to do so. In this case it is the giver who will lose face.

(adapted from Blau, 1964)

Thus unreciprocated exchanges (of both types) lead to the differentiation of power, while reciprocated ones have an equalising effect.

For Blau there is always a tension between an individual or group's desire to maintain balance, and their desire to achieve superiority, thus between stability and change: 'Individuals and groups are interested in... maintaining a balance between inputs and outputs and staying out of debt in their social transactions; hence the strain towards reciprocity. Their aspirations, however, are to achieve a balance in their favour and accumulate credit that makes their status superior to that of others; hence the strain towards imbalance' (Blau, 1964:26).

I discuss these ideas further later in this chapter, and then again in Ch.6.

## **Section II: ATTEMPTING TO EXPLAIN CO-OPERATION IN TERMS OF THE EVOLUTIONARY THEORY OF GAMES**

### **1. Direct, or indirect, reciprocity as the basis for co-operation?**

Game theory is commonly seen as an explanation of human behaviour in terms of competition and self-interest, rather than co-operation. Indeed, as I have explained in my MA thesis (Panther, 2000) when von Neumann and Morgenstern's 'Prisoner's Dilemma' game<sup>19</sup> is played once, individuals acting 'rationally' in their own best interests defect, thus achieving a less beneficial outcome for both parties than if they had co-operated (von Neumann and

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<sup>19</sup> As described in my MA thesis (Panther, 2000), the 'Prisoner's Dilemma' game is a thought experiment involving two individuals who committed a crime together and are now imprisoned in separate cells, unable to communicate with each other. The two must decide how to behave, bearing in mind the possible outcomes: 1) if both prisoners co-operate with each other, telling the guards that the other prisoner was not involved in the crime, they will both be released; 2) if both defect, telling the guards that the other prisoner was involved, they will both be in prison for a moderately long period of time; 3) if only one prisoner defects, he will be released and will receive a reward for helping the police, but the other prisoner will get a long sentence. If the game is played once, it makes sense for each of the prisoners to defect: if you defect and your fellow prisoner co-operates you will be released, while if the other prisoner defects as well at least your sentence will be reduced for having told on him. Unfortunately for the two prisoners, if both defect they will both remain in prison, while if they had both co-operated, they would both have been freed.

Morgenstern, 1944; cited in Axelrod and Hamilton, 1981). From this one could conclude that 'it is impossible for rational creatures to co-operate' (Campbell, 1985:3) and that therefore scarce resources must be either privatized or externally governed if a 'tragedy of the commons' type situation (Hardin, 1968) is to be averted.

The problem with this argument is that there is plenty of evidence to show that in real life people *do* co-operate. It was Sahlins who first coined the term 'generalized' reciprocity to describe how hunters and gatherers took turns to provide meat, with improved survival chances for all members of the band (Sahlins, 1972):

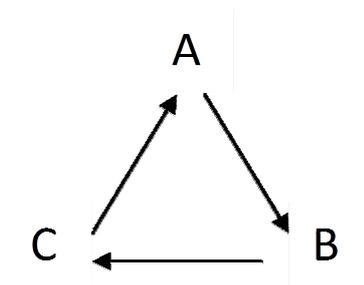


Figure 6: Simplified diagram of 'generalised' reciprocity, showing how an individual may receive from one person, yet give to another.

While 'generalised' reciprocity was later confirmed as a reliable *description* of hunter-gatherer behaviour (e.g. Lee, 1979), as an *explanation* of such behaviour it appeared to have serious flaws.

How could group members engaging in generalized reciprocity adequately monitor other members' behaviour to ensure there was no free-riding? Furthermore, given that 'punishment almost invariably is costly to the punisher, while the benefits of punishing are diffusely distributed over the members' (Elster, 1989:41), why would any individual choose to bear the cost of punishing free-riders?

These problems encouraged approaches based upon direct reciprocity:

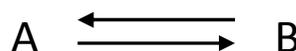


Figure 7: Diagram of direct reciprocity: A helps B, and later B helps A.

In the attempt to explain co-operation in terms of direct reciprocity, various adaptations of the 'Prisoner's Dilemma' game have been invented. Trivers (1985:389-90) was the first to point out that when the game is played repeatedly, the optimum strategy is for individuals to co-operate, even if they are unrelated and have never met before. According to Axelrod and Hamilton (1981), when the game is played repeatedly, the optimum strategy is 'Tit for Tat'. Following this strategy, an individual first co-operates, then copies their partner's behaviour by either co-operating or defecting (Axelrod and Hamilton, 1981). Thus Axelrod and Hamilton's model suggests that co-operation may arise from group members trading widely to begin with, but quickly narrowing down to a few partners they have learned they can trust, and with whom they carry out directly reciprocal transactions.

Despite their success in limited experimental contexts, theoretical models based upon direct reciprocity have not been able to explain how co-operation persists in large hunter-gatherer bands (typically around thirty band members<sup>20</sup>), nor the fact that in such bands meat is shared out widely (as described in Winterhalder, 1996a). More recently, characteristic features of advanced social beings - including language, social learning, and cultural values and norms - have all been used in attempts to explain how co-operation may become a stable strategy in a large group of unrelated human beings.

A major breakthrough came when Nowak and Sigmund (1998) modelled co-operation on the basis of indirect reciprocity, using the concept of reputation after an idea by Alexander (Alexander, 1987; cited in Nowak and Sigmund, 1998). In this model, discriminating altruists only help others who *themselves* have been helpful in the previous round. As a result co-operation is able to evolve and then to persist for a long time. However, when non-discriminating altruists are introduced, defectors quickly invade and undermine altruism.

Panchanathan and Boyd (2003) have found that a model based upon standing - in which individuals take not only the behaviour but also the intent of others into account - works even better, being more resilient to errors. Such a model places high cognitive demands on the individuals involved: they must be able to communicate effectively and to store large amounts of information about other members. Whether or not co-operation can become an evolutionarily stable strategy is thus largely determined by the amount of information individuals have about each other (Panchanathan and Boyd, 2003:120), itself a product of both group size and interaction patterns<sup>21</sup>. Unlike Axelrod's model, this model predicts that group members will continue to transact widely so as to advertise their generosity.

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<sup>20</sup> For instance, Boyd & Richerson (1998) predict that co-operation is unlikely to evolve if group size > 10.

<sup>21</sup> Although surprisingly, Boyd and Panchanathan found 'the number of interactions does not appear to have a strong effect' (2003:121), at least in determining whether co-operative strategies are able to invade when rare.

## 2. Evolutionary grounds for a system of morals?

In terms of underlying motivation, there is some disagreement as to whether individuals are more concerned with their own standing or that of potential recipients. According to Leimar and Hammerstein (2001) 'a rational individual...should use a strategy that takes his or own [standing] score into account, but ignores the [standing] score of a potential recipient'. Van Vugt, Roberts and Hardy (2007) suggest that if increasing one's own reputation/standing accounts for the underlying drive towards co-operation, one might expect to observe individuals acting altruistically to others who do not actually need help, and potential recipients who *could* use some help refusing it because of the consequences for their own social standing (see also Blau, 1964).

Conversely, Panchanathan and Boyd suggest that 'it is not crucial that individuals attend to their own standing when deciding upon a course of action', what is important is that individuals can discriminate between potential recipients who do not offer help because *their* potential recipient is a defector, and those who do not offer help because they themselves are defectors (Panchanathan and Boyd, 2003:123). They found that a strategy in which individuals did not help those who had themselves helped defectors outcompeted one in which individuals helped anyone who had helped anybody in the previous round.

In other words – rather paradoxically - a strategy based upon an underlying system of morals carries more selfish advantages than one in which individuals are only concerned with improving their own standing in the group. So although at one level individuals co-operate because it makes it more likely that they themselves will receive help in the future, at another level those individuals will do better if they are motivated by a wish to maintain fair play than if they are purely out to benefit themselves.

While those who help are more likely to receive help in the future, there are other possible benefits to being seen to be helpful. Perceived altruists are more likely to be chosen to join coalitions, membership of which will increase an individual's chances of surviving within a large, conflict-ridden group (Roberts, 1998).

Alternatively, displays of altruism may be an opportunity for individuals to publicise their skills (Henrich and Gil-White, 2001). For instance, by sharing out his kill, a hunter is advertising his hunting ability. Those whose skills people aspire to copy will gain prestige as a result (2001:180). According to Zahavi (1975), males who make lavish displays of generosity may be asserting their superiority over their rivals, thus improving their chances of winning sexual partners.

There remains the problem of punishment. If reputation is key, the role of punishment is presumably much diminished. In a simulation, Rockenbach and Milinski found that ‘indirect reciprocity reduced punishment behaviour to almost a third’ (2006:722).

And yet punishment – or at least the threat of it – is commonly observed as a feature of co-operation amongst human groups (Ostrom, 1990). ‘Punishment and reputation do not seem to be substitutes that may easily replace each other, but omnipresent interacting mechanisms’ (Rockenbach and Milinski, 2006:722). Henrich and Boyd argue both that ‘the threat of punishment plays an important role in the maintenance of co-operation in many human societies’, and that ‘the evolution of co-operation and punishment are plausibly a side-effect of a tendency to adopt common behaviours during enculturation’ (2001:80).

### **3. The importance of culture, norms and self-governance**

While game theory can offer various predictions about how individuals will behave in particular circumstances, its models tend to be highly artificial constructs involving completely rational strangers interacting within a cultural and temporal vacuum.

There is much ethnographic research to indicate that when repeated interactions take place between culturally-situated human beings, values and norms tend to evolve, leading to perhaps “irrational” but certainly mutually beneficial solutions (e.g. Ostrom, 1990).

In recent years, even game theorists have accepted the importance of cultural values, finding that individuals from certain cultures are more likely both to share and to punish non-sharers when they play the Ultimatum Game (Mace, 2000; Henrich, McElreath and Barr, 2006).

According to Ostrom, those self-governing groups which are the most successful at sharing scarce resources are those which have the powers to continuously refine the norms and rules which govern their members’ behaviour in order to keep the system running smoothly (Ostrom, 1990:101).

Once one admits the importance of shared culture and norms, one is onto hotly contested territory, as this invites the question of whether selection can take place at group-level. Wilson and Sober (1994) do not deny the importance of selection operating at the level of genes, but they do point out that in certain situations groups may thrive or fail as a consequence of their group-level characteristics. Should groups come into conflict, those that are run on a basis of co-operation are likely to out-compete divided and thus unstable groups (Henrich and Boyd, 2001). It remains unclear how important such group selection effects could be, and how exactly they might interact with selection at the level of individuals.

#### 4. The importance of the co-existence of different strategies

So far the discussion has revolved around the question of how co-operation might evolve, and what motivation might lead individuals to behave in an altruistic manner. But this is an oversimplification of the issues. In any realistic situation, a *variety* of behavioural strategies are likely to be in play. The character and frequency of these competing strategies will determine whether or not co-operation is a stable strategy.

In Nowak and Sigmund's image-scoring simulation (1998) mentioned earlier (see p.74) there were unconditional co-operators (who would help anyone), defectors (who would not help anyone), and also discriminators (conditional co-operators who would only help if someone's image score was sufficiently high).

When simulated mutation was added to the program so that 'offspring' did not always have the same strategy as their 'parent', Nowak and Sigmund found that instead of the system converging on a single stable state of either co-operation or defection, it often showed oscillations between unconditional co-operation, conditional co-operation, and defection. Defectors would be invaded by conditional co-operators, who would in turn be invaded by unconditional co-operators, who would be invaded by defectors again, and so on. Winterhalder (1996a:50) predicts a similar oscillation between strategies, with scroungers doing best when there are few of them in a population.

These dramatic switches can be prevented by altering the mix of individuals involved. Nowak and Sigmund (1998) found that removing the unconditional co-operators meant co-operation remained the dominant strategy for much longer.

There is ethnographic evidence to support the idea that co-operation can form part of a cultural idiom which is structured by the existence of polar opposites. For instance, in his work on mutual aid in rural France, Layton has related three archetypal character types: 'gentil', 'fou' and 'fier'<sup>22</sup>, to Blau's three possible outcomes from social exchange (as described on p.73): 'the person who reciprocates is gentil, the person who is incapable of doing so is fou, the person who wilfully refuses to do so is fier' (Layton, 2000:193; Blau, 1964).

It seems likely that a different mix of types of transaction will characterize each of these behavioural strategies. For instance, while a unconditional co-operator is likely to engage in a mixture of generalized and direct reciprocity with a large number of partners, a conditional co-operator will only be able to keep track of a smaller number of partners, and carry out some indirect reciprocity (of the downstream variety) and some direct reciprocity with trusted partners. A defector, meanwhile, may have a tendency to carry out one-off transactions,

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<sup>22</sup> These terms can be very roughly translated as 'nice', 'mad' and 'proud'.

thereby limiting the spread of information about his or her unwillingness to reciprocate (Panther, MA 2000).

## 5. Does co-operation rely upon the continued existence of defectors?

Where there is co-operation, there is often a degree of 'tolerated theft' (eg. Winterhalder, 1996b). Monitoring and punishment come at a cost, and will only be carried out to the extent that that cost is tolerable for the individuals concerned. Whether co-operation evolves out of tolerated theft is then determined by whether this tolerable level of policing is enough to sustain indirect reciprocity against invading free-riders.

However, Lotem, Fishman and Stone (1999) go further than this. They postulate that the existence of 'phenotypic defectors' – individuals who are unable to help because they lack the resources to do so (for instance because they are too young, old or sick) – actually *helps* maintain a steady state of co-operation, by guarding against drifts towards unconditional altruism, and consequent invasions of defectors. According to Lotem et al., how defectors are treated will depend on the cost of co-operation, with discrimination against defectors only occurring when the cost of co-operation is high (Lotem et al., 1999:3).

## 6. Advances in network analysis bring theoretical models closer to reality

Real life is, of course, much more complex than the computer models game-theorists design to mimic it, and real networks tend to be much more highly connected than theoretical ones (Santos and Pacheco and Lenaerts, 2006). Another important difference is that, up until recently, theoretical models allowed individuals to change strategies, but not social ties (Santos, Pacheco, and Lenaerts, 2006). In real, highly connected and constantly growing networks, individuals are constantly and rapidly changing their social ties, but the rate at which individuals change their ties (leading to *structural evolution*) is not necessarily the same as the rate at which they change their strategies (*strategy evolution*), and the ratio [W] between these two rates appears to strongly influence whether a co-operative equilibrium can be established (Pacheco, Nowak, Traulsen, 2006; Santos, Pacheco and Lenaerts, 2006).

Furthermore, certain norms relating to how social ties are constructed appear to make the evolution of cooperation more likely. For instance, Kun, Boza and Scheuring (2010) have found that norms like "Get rid of defectors" and "The friend of my friend is my friend" (the norm associated with transitivity, see p.220) make it more likely that co-operation overcomes defection.

While much work on social networks has been based upon the study of static networks, there are now more and more studies looking at how networks change over time. FehI, Post and Semman (2011) find higher levels of cooperation in dynamic than in static networks. They explain this in terms of individuals being able to affect their social environment by choosing which ties to make and break, and in turn being affected by that changing social environment. Over time this recursive process leads to the development of a self-organized network consisting of clusters of co-operators.

Fowler and Christakis also look at change over time, describing how co-operative (or uncooperative) behaviour can cascade through a network, rather like a contagious illness, with each individual's behaviour influencing the behaviour of others at several removes from them. They conclude that 'elaborate social ties in the form of social networks...may allow humans to benefit from the actions of widely-distributed others and...may allow humans to spread beneficial strategies widely enough to benefit others on whom they depend' (Fowler and Christakis, 2010:5337).

## **7. Community currency systems: formalisation of mutual aid?**

It can be argued that interactions within community currency systems represent a formalised version of mutual aid as practised in small-scale peasant, or hunting and gathering, communities, rather than as a localised version of the mainstream Sterling economy.

As described earlier (see p.21), in small-scale peasant, or hunting and gathering, communities individuals help each other at times of need, perhaps by giving food or helping with the harvesting of crops. At a later point they themselves receive help, but not necessarily from those they helped in the first place (Layton, 2000; Panter-Brick, 1993; Erasmus, 1965).

If a favour is immediately reciprocated there is no need for the individuals involved to trust each other, and it is unlikely that a personal relationship will be either created or maintained by the transaction. Such transactions are characteristic of the market economy. For instance, if a person buys something from a shop in a large city, or barter two chickens for a piece of cloth, there is unlikely to be any kind of ongoing relationship between the two people involved.

If, however, there is a delay between gift and reciprocation of the gift, a relationship between the participants continues to exist until the act of giving has been reciprocated, and often beyond. Such transactions are typical of the close-knit interdependent social networks one finds in peasant or hunter-gatherer communities.

Because reciprocity as practised in these small-scale groups is both delayed and indirect, there is an ever-present risk of free-riding, and members monitor each other's contributions carefully - although they always deny doing so! (Layton, 2000:193). Hence, it is important that

members know each other well, and are able to observe most of the transactions taking place within the group (Ostrom, 1990).

When one community currency system member carries out a favour for another, they are rewarded with community currency. However, unlike Sterling currency, every note of which promises the bearer its equivalent in gold from the bank, community currency is a mere token, of no value unless fellow members of the system continue to provide social favours in return for the currency. Whereas Sterling can be spent upon an almost unlimited pool of goods and services, most community currency systems offer quite a limited selection of goods and services, and spending opportunities are further limited by the fact that members' time is often already highly committed within the Sterling economy. Thus it is quite possible for a member with skills in demand from other members to earn more community currency than they can easily spend.

For a community currency system to continue to function, therefore, there must be both a big enough pool of goods and services, and a core of members who trust in each other's ability and commitment to return favours<sup>23</sup>.

It is necessary for mutual aid to be formalised with a LETS or Time Bank because such groups are often relatively large and their members widely distributed, making it hard for individuals to monitor each other informally. Instead, social favours are measured in terms of a virtual currency, and recorded centrally. In addition, many such systems publish members' balances regularly.

Community currency systems provide an unusually transparent - and yet real-life - context within which to study reciprocity and co-operation. Looking back to Mauss and Blau's ideas of the role of gift exchange in creating both social stability and social change (see p.73), where individual members are taking it in turns to give and receive favours, one might expect each individual balance to oscillate around zero. This behaviour at the level of the individual would lead to balance and stability in the system as a whole, as indicated by all members' balances being of roughly similar size. Alternatively, if some members start to either carry out favours much more often than they receive them (or vice-versa), this would lead some balances to become increasingly positive, while others became increasingly negative. Such a system might rapidly spiral out of control, with members with large positive balances no longer finding anything to spend their community currency on, and perhaps leaving the system as a result.

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<sup>23</sup> There may also be some members who feel that the social benefits of belonging to a community currency system more than outweigh any difficulties they may have in spending the community currency they have earned.

## CONCLUSIONS

Competing models place direct or indirect reciprocity as the underlying mechanism behind co-operation. Models based upon direct reciprocity suggest that individuals trade widely at first and then narrow down to a few trusted partners, but struggle to explain how co-operation evolves in large groups. Models based upon indirect reciprocity rely upon the idea of reputation, and predict that individuals will trade widely to publicise their reputations rather than forming trusting partnerships.

Community currency systems can be seen as a formalisation of mutual aid as it occurs in small-scale societies. According to game theory, and to Ostrom's work with real communities, groups (including community currency systems) which successfully self-manage are likely to contain a mixture of personalities and behavioural strategies, but also to have a shared set of group norms and values keeping individuals' behaviour in check. In such a group, individuals are likely to interact with each other frequently and/or to have ways of keeping track of each other's behaviour (e.g. the publishing of members' balances in a community currency system).

## **PART III: COMMUNITY CURRENCY SYSTEMS: BETWEEN THE SPHERES?**

### **INTRODUCTION**

The concept of 'spheres of exchange' refers to the idea that exchanges - whether of objects, favours or labour - are socially circumscribed. Keynes, in his research into the practices of the Ancient Greeks, was one of the first to describe a society in which only certain types of exchange were socially acceptable (Keynes, 1982:259; cited in Sillitoe, 2006). The concept has since tended to be used in relation to non-industrialised societies, perhaps the best known example being the Bohannans' study of the Tiv, a peasant people living in Nigeria (Bohannan and Bohannan, 1968).

In this third part of chapter two I describe some classic studies of spheres of exchange in non-industrial societies. I then go on to look at theories as to why spheres of exchange exist in certain societies and not in others. Next I look at how the concept of spheres of exchange can be applied to industrialised societies. I ask whether commoditisation of activities formerly in the social economy (e.g. caring for the elderly and very young) means that the spheres have failed us. Finally, I discuss where community currency systems might fit into a model of Western society based upon spheres of exchange.

### **Section I: SPHERES OF EXCHANGE IN NON-INDUSTRIALISED SOCIETIES**

#### **1. Spheres of exchange in Tiv society:**

According to the Bohannans (1968), the Tiv traditionally differentiated between three separate spheres of exchange, arranged in a hierarchy. In the lowest sphere were the goods required for subsistence: commonly eaten foods, tools required for their preparation, and small livestock. All of these could be exchanged for each other at markets. Although Bohannan describes 'the morality' of this sphere as being that of 'the free and uncontrolled market' (1963: 249), such exchanges were in fact a form of barter, thus quite unlike the market economy of the West, in which goods are exchanged for money, the value of which is determined by a great many factors, few of which are locally-determined. More prestigious items, such as slaves, cattle, medicines and magical items, were exchanged in a quite separate sphere, for each other or for brass rods, or for a special kind of cloth called tugudu. Such exchanges could only be made at

special ceremonial occasions. Finally, there was the highest sphere, that of marriage exchange, in which different lineages provided wives for each other's men.

Normally items from one sphere could only be exchanged for other items from the same sphere. In other words, it was not possible to exchange food-stuff for a slave, nor slaves for a wife. In exceptional circumstances an individual might be forced to, or might find a clever way to, exchange items from one sphere with items from another, but they would either lose or gain social prestige in the process (depending on whether the exchange was from a higher sphere to a lower one, or vice-versa). Such exchanges from one sphere to another were the exception rather than the norm, and were socially significant precisely because the spheres were normally kept apart.

Bohannan and Bohannan point out that among the Tiv, not only are different types of objects exchanged in each sphere, but in each there is a different set of rules governing behaviour: 'Each sphere is a different universe of objects. A different set of moral values and different behaviour are to be found in each sphere' (Bohannan and Bohannan, 1968:228).

It is noticeable that in the Bohannans' study of the Tiv interactions taking place in what is commonly called the gift economy are not considered. This is presumably because gifts are not (by definition) exchanged immediately for money or other goods, and are thus seen as part of social, rather than economic life. However, such a rigid distinction between economic and social appears unhelpful when investigating the phenomenon of insulated spheres of exchange. While the exchange of gifts is often bound by very different rules than those pertaining to so-called economic transactions, the very existence of these different rules can be taken as evidence that gift exchange should be considered to occupy its own sphere, separated from other spheres of exchange, but not in a different dimension altogether.

## **2. Reciprocity and gift exchange amongst the Tikopia:**

According to Firth (1939), amongst the Tikopia a system of spheres of exchange exists in which small objects and services are exchanged for food in the lowest sphere. In the next sphere up, timber, bowls and stools, and specialist skills are exchanged for bark-cloth and sinnet cord. In the third and highest sphere, fish hooks, cylinders of turmeric and canoes are presented at occasions 'charged with emotional significance', for instance at the funeral of a chief (Firth, 1939:344). Firth describes how many of the transactions between Tikopians involve the gifting of items. Such gifts lead to return gifts, which themselves lead to further gifts, all from the one sphere. Thus the economy as a whole appears to be based upon reciprocity, and to resemble that of the household more closely than that of the market (Firth, 1939:351).

### 3. A separate sphere of gift exchange among the Mountain Fur:

A study which appears to reveal the existence of separate spheres of market exchange and reciprocal exchange is that of the Mountain Fur of Dafur carried out by Barth (1967). When Barth studied them, the Fur were peasant farmers who took their surplus crops to market, using the cash raised to purchase items made by local craftspeople (eg. pottery, metalwork), or imported into the area by Arab pedlars (eg. cloth, tools and sugar). They also raised cash crops for the same purpose. However, when a Fur family required the help of other villagers - for instance when a house was to be built - no monetary payments would be involved, indeed it was considered shameful to receive cash payments for such work. Instead, a great party would be held, relatives and friends invited, and anyone who turned up to help would be rewarded with copious amounts of home-brewed millet beer.

Barth saw the Fur way of life as based upon two separate spheres: one based upon the exchange of material goods for cash (and ultimately other goods), and the other based on the exchange of labour for beer. He insisted that during house-building (and similar tasks requiring neighbourly assistance) villagers laboured for the beer itself, rather than out of a wish to participate in a mutual aid network, in which their assistance might be returned at a future date: 'labour is seen as adequately compensated for in beer...there is no restriction that each person's input of work and of beer into the system should be equivalent' (Barth, 1967:155). He considered the fact that 'when the beer is finished, the work party disperses' (1967:155) sufficient proof of this.

However, given that in many other societies such tasks carry with them the expectation that help will be returned to the helpers in their hour of need, it seems unlikely that in this case beer is truly being used as a form of currency, with no sense of social obligation attached. Indeed Barth himself admits that the tasks have 'a communal and reciprocal character' (Barth, 1967:155). Despite Barth's claims, presumably it is rare for houses to be left unfinished simply because the beer has run out, and generally speaking the Fur manage to coordinate their house building and beer making so that their toiling neighbours are kept in good spirits, but not too drunk to complete the work.

## Section II: WHY SPHERES OF EXCHANGE?

In this section I look at the different ideas people have had about why spheres of exchange exist in some societies and not others, and why societies should have a certain number of spheres of exchange and not more or fewer.

### 1. Spheres as the result of the absence of general purpose money

It is an interesting fact that the majority of ethnographies describing (either explicitly or implicitly) the concept of spheres of exchange refer to non-industrialized societies with little or no division of labour, and a relatively egalitarian social structure.

For a long time there was thought to be an evolutionary trajectory leading from barter, to forms of money which could only be used for particular types of items, to modern money which can buy almost anything. Early economic anthropologists tended to portray non-monetary economic systems as both primitive and 'other'. Adam Smith saw barter in pre-capitalist societies as a precursor to money, first allowing the division of labour and later being made redundant by it (1950 [1776]). For Mauss, gift exchange was a stage on an evolutionary path from the total prestations of potlatch - with all their associated social and religious connotations - to the impersonal transactions commonly associated with the market economy (Mauss, 1954 [1923]).

From this evolutionary perspective (in the sense of things improving over time), such non-industrialized societies are seen as primitive, and the prevalence of spheres of exchange in them as due to the fact that such societies are less likely to have developed, or been exposed to, a form of general-purpose money: 'in economies which lack a currency that can provide a universal medium of exchange separate spheres of exchange can be maintained much more easily' (Layton, 1997:102).

It has been suggested that the introduction of general purpose money usually destroys any system based upon spheres of exchange (Sillitoe, 2006). For instance, some believe that it was the introduction of money by colonial authorities, some years before Bohannan's fieldwork, which led the Tiv to begin to make exchanges between one sphere and another despite the taboos attached to doing so (Bloch and Parry, 1989:12-16; Hart, 2005:164; both cited in Sillitoe, 2006), and that this is evidence that the spheres system was beginning to break down.

However, there are societies which appear to have maintained spheres of exchange despite a long tradition of using general purpose money (see the example of the Mountain Fur described on the previous page). Besides this ethnographic evidence that spheres can continue to exist in the presence of money, there is a philosophical problem with the idea that

it is the introduction of money which destroys any arrangement based upon spheres. This idea is predicated upon the assumption that there is a one-way process in which a culture is driven by its inventions. The reality is that groups of people will often invent or adopt concepts and tools to deal with problems or opportunities presented to them by their natural and social environments. The result is a two-way relationship between culture and innovation, with each influencing the other, within a wider context of change in the cultural, economic - and indeed physical - environment within which a society is situated.

In other words, general purpose money (which may or may not involve the dissolution of sphere-based systems) is so widely used today neither because it merely happens to have been introduced, nor because it is in some way inherently superior to other media of exchange, but because changes in the environment – and especially the globalization of trade - make it advantageous for many cultural groups to use it. A society for which a general purpose money would be advantageous (at least in the short term) is likely to design such a system, while a society which continues to find benefits from separating spheres of exchange will do all it can to retain that system, regardless of whether or not a general purpose money is readily available to it.

## **2. Spheres as an adaptive mechanism to protect social life from commoditisation**

Mary Douglas (1967) was one of the first to argue that limiting particular types of money to particular purposes could be seen as an adaptive mechanism, rather than as a form of primitivism. She suggested that controlling the flow of particular forms of money by limiting their use to certain types of items was a way of dealing with conditions in which certain resources were scarce, while at the same time protecting important facets of social life from the potentially damaging impact of a free market (Douglas, 1967:126-7).

In a similar vein, Sillitoe (2006) explains the purpose of spheres of exchange as being to ensure that individuals' access to subsistence resources is not governed by social prestige or status, and neither are people tempted to acquire or produce more subsistence resources than they need in order to improve their social status.

According to his argument, spheres of exchange tend to be more prevalent (or perhaps more apparent) in small-scale egalitarian societies in which there is little division of labour because in such societies, individual households have enough resources and labour-power at their disposal to be self-sufficient, at least in normal circumstances. This is significant because it means that it is not possible for any individual or subgroup to obtain a position of power by limiting others' access to scarce resources. In these same societies, however, 'wealth' objects (objects not essential for everyday life) are commonly used to negotiate sociopolitical power.

These are by definition scarce. Thus separate spheres of exchange exist so that 'politically ambitious persons cannot seek to control wealth production, either indirectly by stepping up output of subsistence goods to exchange for valuables, or directly by controlling manufacture of valuables' (Sillitoe, 2006:2).

In other words, insulating the spheres from each other prevents those with greater political power from having greater access to subsistence resources, thus maintaining the egalitarian social structure of the group.

An important prediction arising from this view of the purpose of spheres of exchange is that they will be hierarchically ordered, with exchanges involving people (eg. bridewealth, slaves) being considered above those involving so-called 'wealth' objects (eg. fish hooks), and objects requiring some skill to make being more prestigious than those available to everyone, regardless of skill level. This is what makes it shameful (rather than prestigious) to attempt to use people and relationships to obtain power and wealth.

A counter-example is provided, once again, by Barth (1967). Amongst the Fur it was considered shameful to work for fellow villagers for money, which would seem to suggest that the sphere of beer-labour exchange was the higher one. However, Barth points out that both bridewealth and prestigious items (such as swords) are purchased with cash, and takes this as evidence that the spheres are not in fact hierarchically ordered (Barth, 1967:156). I would argue that the fact that these transactions involve cash may have more to do with practical difficulties than with there being a hierarchy among the spheres (or not). Perhaps there was once a tradition of different lineages providing each other with brides, but this has had to stop because of conflict in the area. The alternative - exchanging brides for beer or millet - seems a most unlikely proposition. Without a historical view of how the situation at the time Barth studied it had developed over time and in response to changes, it is hard to explore this issue any further.

### **3. Spheres: the result of a struggle between culture and commoditisation?**

Kopytoff has attempted to explain the phenomenon of spheres of exchange in terms of economics. While it is possible to compare the value of material objects such as yams and pots according to the amount of work that has gone into creating them (i.e. according to the labor theory of value), 'no such common standard is available in comparing yams to ritual offices or pots to wives and offspring' (Kopytoff, 1988:71). For Kopytoff, the differentiation of spheres is 'a feat of simplification of what is naturally an unmanageable mass of singular items' (1988:72). He speaks of 'a drive inherent in every exchange system towards optimum commoditization – the drive to extend the fundamentally seductive idea of exchange to as many items as the

existing exchange technology will comfortably allow' (1988:72). Simultaneous to this drive is a 'counterdrive', that of culture. Culture resists commoditization: 'in every society, there are things that are publicly precluded from being commoditized' (1988:73).

However, there are problems with this interpretation, the first arising from the fact that in many societies the same things are used in different spheres of exchange, with different values attached. As Sillitoe points out, amongst the New Guinea Highlanders, pigs are used in ceremonial exchanges as 'wealth' objects by men, but are reared by their wives. Before a man can use a pig in a ceremonial exchange, he must make a payment to his wife, which she will pass on to a male relative. This payment effectively transforms the pig from the domestic sphere of production to the exchange sphere, where its value will be measured quite differently (Sillitoe, 2003; cited in Sillitoe, 2006).

#### 4. How many spheres of exchange?

Why should a particular society have a certain number of spheres of exchange, no more and no less? Kopytoff's theory about this is that the number of spheres in existence in a particular society reflects limitations in the exchange technology available. For instance, he suggests that amongst the Tiv (who have three spheres of exchange as described earlier): 'commoditization seems to be pushed to the limits permitted by the Tiv exchange technology, which lacked a common denominator of value more convenient than brass rods' (Kopytoff, 1988:72). Kopytoff does not seem to have considered the possibility that the Tiv could easily invent other types of currency, were it in their interests to do so.

Sillitoe prefers to speak of spheres of production rather than of exchange, and then – after Waddell - to classify all spheres as belonging to one of two types: subsistence activities, and transactions involving 'wealth' (or high status) objects (Waddell, 1972; cited in Sillitoe, 2006).

He adds that 'it is possible to interpret further spheres as either transition zones between these, such as Salisbury's "luxury commodities" among the Siane [Salisbury, 1962], or divisions within one or other of the two greater spheres, such as when Bohannan and Bohannan (1968) distinguish the exchange of women in marriage from transactions involving wealth items' (Sillitoe, 2006:6).

While this simplification can be useful as a starting point, it leaves unanswered the question as to why certain groups have more than two spheres of exchange, and perhaps overemphasises economic over social aspects of exchange. When motivation is primarily about creating 'social glue' (rather than either subsistence or prestige), where does the two sphere model leave us? For example, which of the two spheres would watering houseplants for a neighbour on holiday fit into, according to this system?

## Section III: SPHERES OF EXCHANGE IN INDUSTRIALIZED SOCIETIES

### 1. How can the concept be applied to industrialized societies?

The concept of spheres of exchange is not often applied to industrialized societies. Instead, we speak of the market economy (the exchange of goods and services using national currency), in contrast to what is variously known as the informal, social or household economy: the essential but unpaid work which goes into bringing up children, looking after the elderly and infirm, and helping neighbours. Cahn (2000) has described this latter as the 'core' economy, as without it the market economy, and indeed society as a whole, could not function.

Many types of goods and services<sup>24</sup> are exchanged within both the market and the core economy. To give but a couple of examples: allotment holders often gift excess produce to each other, but at the same time vegetables are available in the shops; some parents look after their young children themselves, other parents pay for them to be looked after by others. If one defines spheres of exchange as spheres within which *different types of goods and services* are exchanged, one will find little evidence for the continued existence of spheres in the West<sup>25</sup>, and might even assume that leakage between the spheres has led to their eventual destruction.

It is when spheres of exchange are conceived of as arenas in which *different cultural norms and patterns of behaviour* prevail that the concept is most easily transferred to the study of modern day industrial societies. As Carrier puts it, although the spread of capitalism has led to 'the spread of alienated relations and objects', it 'has not done away with people's need to have their objects be possessions, nor...the need to transact possessions in personal relationships...in some ways...[it] has made that need more urgent' (Carrier, 1995:11). Individuals continue to present each other with gifts to mark special occasions such as birthdays and religious festivals, and to form networks within which they carry out unpaid favours for kin, friends and neighbours.

As described earlier (see p.73), there are even particular ways of behaving which are designed to mark particular exchanges as being outside the sphere of market (Blau, 1964). For instance, it is considered inappropriate to disclose or enquire about the monetary value of a

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<sup>24</sup> I am driven to the use of the terms 'goods' and 'services' despite, rather than because of, their traditional use in relation to the market economy. The reader may substitute 'things' and 'activities' for a more neutral but more awkward rendition.

<sup>25</sup> Perhaps one should not overstate this case. Even in modern Western societies, where general-purpose money is so prevalent, there are a few very important things that money cannot buy, and others which can be bought, but at the cost of high social disapproval: 'we keep certain things out of the market economy. Husbands, wives and children are not bought and sold, nor should political offices be available for money' (Layton, 1997:102). However, these may be viewed as significant exceptions.

gift, thus gift-givers are careful to remove price-tags. The idea that different behaviour is appropriate for the market and for the gift economy is encapsulated by the saying 'Don't look a gift horse in the mouth' (i.e. don't treat a gift as if it were a monetary transaction).

## **2. Have spheres of exchange failed us in the West?**

Despite our technical sophistication, general purpose money, and relative abundance of resources (even among the poor), the gift economy is still very important within Western economies. Komter (2005) explains this continuing importance of the gift in terms of our use of the exchange of objects to establish and maintain social ties, and ultimately solidarity. Giving gifts to people at once includes certain individuals in our social group, while excluding others. Thus gift giving can be a way of increasing one's social status, and access to resources.

The continuing importance of gift giving is, however, according to Komter a 'two-edged sword': people who are unemployed tend to spend very little on gifts, and to have very limited social networks (Komter, 2005:136-8). It has even been said that 'reciprocity in itself is a principle of exclusion' (Douglas and Isherwood, 1979:152; cited in Komter, 2005:141) because often those who need help most are those least likely to receive it, because they find it hard to give to others. A vicious circle can develop, whereby 'people whose social circumstances are deteriorating, for instance, by becoming unemployed and dependent on state benefits...often face diminishing life chances, shrinking social networks and increasing isolation. In turn, growing social isolation means less participation in gift exchange and diminishing opportunities to develop the feelings of 'faithfulness and gratitude', as Simmel called them, that are essential in bringing about the wish to return a gift' (Komter, 2005:141).

While money is necessary to purchase gifts and thus to fully participate in the gift economy, at the same time, increasing commoditization means many activities traditionally carried out within the sphere of the household or the gift economy are finding their way into the market economy. For instance, nowadays society is set up so that most older people are looked after by paid strangers rather than their relatives. While this has become the cultural norm, some people are not able to afford good quality care for their elderly relatives. The further this process goes, the further those without a strong position within the sphere of the market economy will be excluded from parts of social life which surely we should all be able to take for granted.

In short, while the spheres of market exchange and gift exchange continue to assert a strong influence on the way we live in our industrialized society, increasing leakage between the spheres seems to have created an uneasy and often unhealthy relationship between them. Where, then, do community currency systems fit into this picture?

### **3. Where community currency systems might fit into a model of UK society based upon spheres of exchange**

De Blanc attempts to categorize types of community currency system in terms of ‘three institutionalized principles of behaviours characterized by specific social relations and institutional patterns’: exchange (associated with the market), redistribution (associated with the state), and reciprocity (associated with community) (De Blanc, 2011:5-6). He holds that there are three ideal types of currency schemes: 1) local currencies [territorial projects] 2) community currencies [community projects], and 3) complementary currencies [economic projects] (De Blanc, 2011:6). According to this logic, it would appear that community currency systems belong within the sphere of gift exchange, whereas complementary and local currency systems belong within the sphere of market exchange.

However, this approach is overly simplistic, relying too heavily on the expressed intentions of those operating currency systems (rather than the reality of how they are used by their members), and thus over-stressing the distinction between economically and socially-motivated currency systems.

In reality, forms of local currency have to be chameleon-like, changing their colours to suit the ever-changing economic and political environment, and the stated values and regulations of an organisation will often have been adapted to suit a particular political and economic climate. Thus, what organisers and members say about their goals and practices will often be at variance with actual practices within a group. For instance, an organisation seeking to place its activities within the sphere of gift exchange might stress that all members’ work is to be valued equally, but members might respond by failing to offer skills which are highly valued within the mainstream economy, or by rewarding members whose skills are in greater demand by giving them gifts in addition to local currency. While some local currency systems (time banks) claim to be purely social and others (LETS) have been branded as economic, in reality there is no hard and fast separation between the two. Cultures across the globe and through time have combined social events with the redistribution of goods, and according to Belshaw (1965), even transactions within the market economy (both traditional markets and more modern forms of exchange) have an important social dimension. De Blanc himself acknowledges ‘the impurity of actual systems’, and describes real life systems which combine aspects of the ideal types he envisages (De Blanc, 2011:6-7).

#### 4. Community currency systems: between the spheres?

Instead of focusing on the purported differences between different types of complementary/alternative currency system, it is perhaps more useful to look at what they all have in common. Although there are many different types of community currency system, and many different ideas about the role of a community currency system within UK society, all such groups face the same issue: how to first create, and then sustain, themselves in the midst of the prevailing culture. Perhaps the only safe generalisation that can be made about community currency systems is that they exist somewhere *between* the sphere of the market economy and that of gift exchange.

Groups operating community currency systems have different cultures and traditions, tending to position their activities nearer to one sphere or the other. At the same time, within each individual organisation there will be moments at which activities veer closer to one sphere or the other, as a result of a variety of factors, including characteristics and motivations of individual members, the nature and context of individual transactions, and changes in the economic and social environment within which the organisation is based (see diagram overleaf).

Individuals come to a community currency system with different needs and different experiences. Even in systems where a core set of values are expressed clearly and frequently, some members will take on these values more wholeheartedly than others. New members often find it hard to stop seeing community currency as just like Sterling, and worry about going into debt. One individual may see membership as a way to kick start a business, while another has joined looking for companionship. Sometimes, where one member treats transactions as if they were taking place in the market economy sphere, and another treats them as if they were taking place in the gift exchange sphere, this may lead to conflict. However, it is also possible that in certain circumstances individual differences lead to a system becoming more stable than it would be otherwise. Game theoretical models suggest that systems which are used to dealing with frequent challenges to their norms are more resilient in the face of future threats (see p.80).

In terms of the transactions themselves, some more closely resemble activities within the gift economy, while others more closely resemble those within the market economy.

Arguably transactions in which members take turns to carry out favours for each other belong within the sphere of the gift economy (see area 3 in diagram on p.96). In Woolgone LETS, such transactions often occurred in directly reciprocal pairs, or even in longer sequences in which members took turns to carry out favours for each other. They often took place

between monthly meetings, between friends and people who saw each other regularly, perhaps because they lived near each other.

Meanwhile, transactions in which one member purchases an item from another member for community currency usually appear to belong within the sphere of the market economy (area 1 on diagram opposite). Often such transactions were one-off (there were no further transactions between the two members concerned), and one-way (they were not directly reciprocated). In Woolgone LETS, such transactions tended to take place at the monthly Trading and Social Gatherings. This is not to say that these monthly meetings did not serve a vital social function: that of bringing together members who might otherwise never meet.

However, to stop here would be to over-simplify the picture: in the hands of particular individuals, superficially similar transactions may fall into different spheres. For instance, in Woolgone LETS, one member might happily pass on a second-hand wardrobe to a friend in exchange for a single Curlie (thus making a social favour out of the transaction). Meanwhile another member might ask for forty Curlies for their old bedframe, because it had cost them £40 originally (thus making the transaction into a market transaction).

It is even possible for the same transaction to be seen in quite different ways by the two members involved, which may occasionally lead to conflict. For instance, in Steelwear Time Bank, a member came to put up some shelves for another member. Seeing this as just like work paid in Sterling, they clearly wanted to be left alone to get on with the job. The owner of the house, however, who saw the putting up of the shelves as a neighbourly act, and felt cheated of an opportunity to socialize.

In short, many transactions fall somewhere between the two spheres (area 2 in the diagram), and the spirit in which community currency system transactions are carried out is important (bringing to mind the words of the popular song, 'It Ain't What You Do (It's The Way That You Do It'<sup>26</sup>). To minimize conflict, it is important that members have opportunities to socialize, and thus to establish a shared understanding of the meaning of their interactions with each other, which is likely to vary from group to group.

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<sup>26</sup>Written by Oliver and Young, and recorded in 1939 by Ella Fitzgerald.

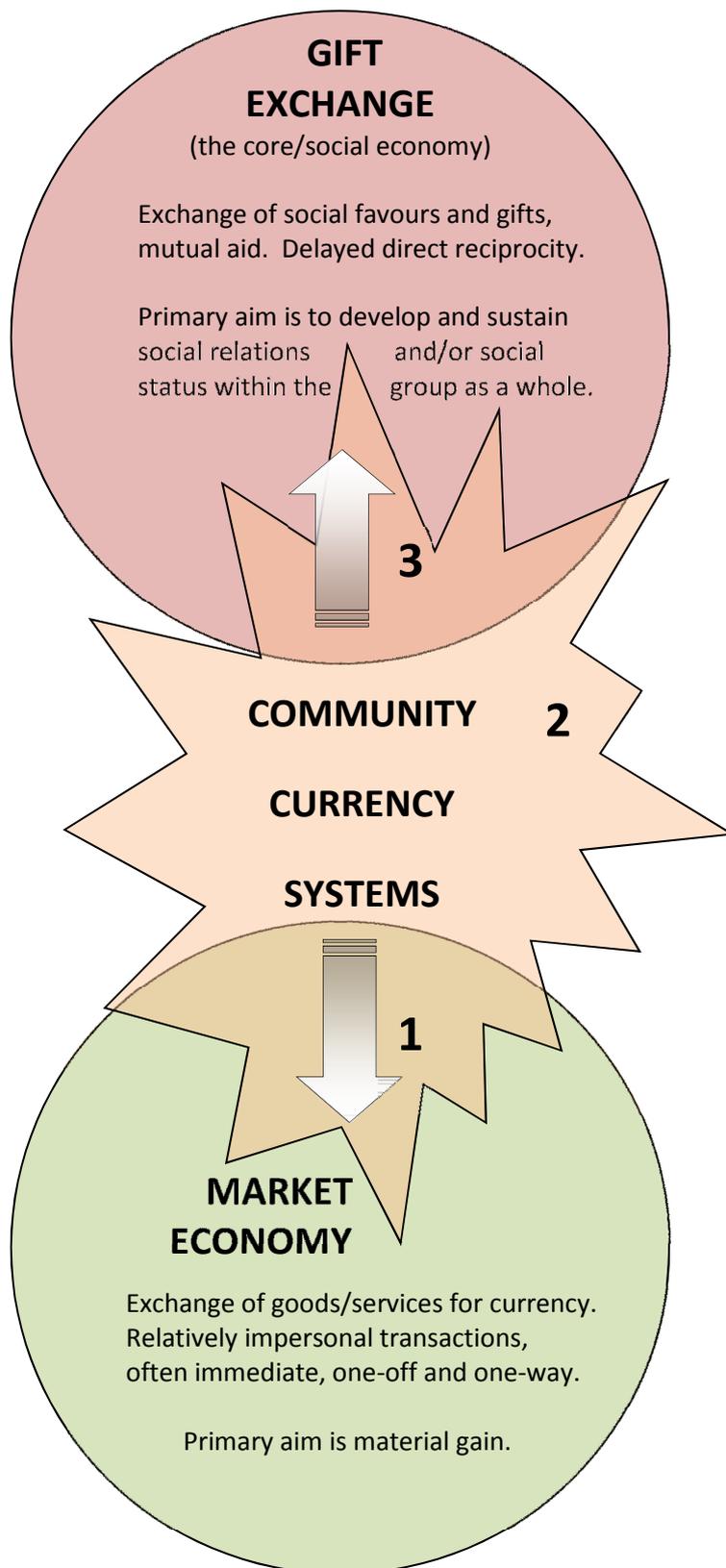


Figure 8: Community currency systems: between the spheres?

## **5. Constant danger of being swallowed up by either sphere:**

A community currency system may risk being swallowed up by the market economy if members begin to treat transactions involving community currency as if they were dealing with Sterling. A member who is greedy and puts personal profit above co-operation with others risks not only his or her own status within the system (in that other members may refuse to trade with them), but also may cause other members to become confused about system values, adopting similar attitudes themselves or leaving the system in disgust. In Woolgong LETS, members whose behaviour appeared to be too self-interested were often jokingly put in their place by other members (Panther, 2000:45).

At the other end of the spectrum, where two or more members take turns carrying out favours for each other, over time a friendship may develop. While this is obviously a positive thing to result from community currency system membership, the danger is that as friends the individuals concerned may no longer feel it is important to record their transactions, or indeed to attend group meetings. Over time the group may disintegrate into a number of separate cliques, and finally fail to operate altogether (see Panther, 2000:66). In effect the group has contributed to the social economy of the area, but has eventually been absorbed by it.

Community currency members do appear to carry a model of the spheres around in their heads. In Durham Exchange, I have noticed that there appears to be a taboo about acquiring items for community currency (e.g. children's clothes), and later selling them on for Sterling (but not vice-versa). Likewise, if a friend who also happens to be a member of the Exchange helps you out, they are likely to be offended if you offer them community currency for what they saw as a gesture of friendship. All of this suggests that for Durham Exchange members the spheres are ordered hierarchically, with the market economy sphere at the bottom, the community currency sphere next, and the social economy sphere at the top. It also reveals that members recognise the need to constantly renegotiate the boundaries of the spheres, in order for their activities within the community currency system not to be subsumed by either of them.

## **6. Community currencies: bridging the spheres?**

Community currencies allow social favours, and transactions involving goods, to be measured and recorded in the same units as each other. Thus a member is able to earn currency by helping his neighbours, but then to spend it on acquiring a piece of furniture. This is important, because while in theory it is a member's ability and willingness to contribute to the system

which determines how many resources they can draw back from it (not their supply of capital), in real life, a member may be limited in how much they can contribute to a community currency system by the amount of time they have available, or by a real or perceived lack of skills or resources to offer fellow members.

When a system has both members who are time-poor and other members who are resource-poor, community currency systems can be seen as performing a balancing function, providing an opportunity for those with time but no money, and those with money but no time, to exchange with each other. For instance, use of a community currency might allow an unemployed member who is time-rich to do some gardening on an occasional basis for an elderly neighbour, and then to use the currency he or she has earned to obtain a much needed bigger bed for a growing child from a family over the road who are wealthy, but time-poor. They, in turn, are able to use the currency *they* receive (in exchange for the bed) to reward the elderly neighbour (the one who had the gardening done) for letting their dog out into the garden on a daily basis. In terms of the bigger picture, community currency systems bring time-poor and money-poor together, providing them with a common currency which is not limited in supply and – temporarily at least - allows the spheres to be transcended.

## CONCLUSIONS

In conclusion, when looking at community currency systems in terms of spheres of exchange it is important to go beyond ideal types, and to take a more historical and particularist approach: why have a certain group of people decided to adopt a local currency, and how have their aims and practices developed over time, in response to changes in economic climate and governmental policies? In doing so it is useful to remember that professed values, however sincerely expressed, may differ from practices, and that it is often the articulation between the two (complete with contradictions) which gives the most complete picture of what is going on.

Community currency systems may be usefully seen as operating 'between the spheres', veering closer to one or the other sphere as a result of a multitude of factors, including the prevailing culture and norms of the group, the motivation and perceptions of the individuals concerned, the characteristics and history of individual transactions, and the immediate and larger contexts within which transactions take place.

As discussed in Ch.1, the combination of a relatively stable economy and restrictive laws have meant that up until now community currencies in the UK have had little economic impact, and have tended to attract people who are keen to distance themselves and their activities

from the market economy. Therefore, it is important not to over-emphasize the economic nature of transactions carried out using community currency.

Alternatively, perhaps it is time to start to develop a distinction between 'economic' and 'belonging to the market economy as it currently exists in the UK'. What many community currency members seek to do is to find a way of exchanging goods and services with each other in a way which prioritizes human beings, relationships and trust over today's market values. Perhaps the current global economic crisis will provide an opportunity for community currency systems both to become more economically significant, and to promulgate new ways of carrying out economic activities which recognise the importance of community and co-operation.

## **PART IV: BRINGING IT ALL TOGETHER**

Here an attempt is made to relate spheres of exchange to the earlier themes covered in this chapter, making a series of predictions which are then tested - using data from Woolgong LETS - in Ch.7.

### **1. Spheres of exchange and models of co-operation**

As described in Part II Section II of this chapter, attempts to explain co-operation in terms of evolutionary theory currently fall into two camps: those which see direct reciprocity as the underlying mechanism, and those which are based upon indirect reciprocity.

If cooperation between members of a community currency system is based upon direct reciprocity, it seems likely that they will begin by trading widely but then narrow down to a small number of trusted partners. Thus one might expect an individual to begin his or her career as a community currency system member by carrying out transactions in the sphere of market exchange: carrying out transactions with individuals they have not met before, which are primarily motivated by the desire to obtain useful goods or services. Over time, individuals are likely to start to develop friendships with some of the other members they encounter through these transactions, and to engage in directly reciprocal transactions with them. Such transactions are likely to have features more characteristic of the gift economy: members will not haggle over prices, will not expect any immediate return for the favours they perform, and their primary focus will often be their relationships with others, rather than the goods or services themselves.

If instead cooperation is based upon indirect reciprocity, members of a community currency are likely to continue to trade widely so as to establish, and then publicize, their co-operative nature. It will be important for them to observe interactions between other members, and also to engage in gossip about transactions that take place out of public view. While they may sometimes engage in direct reciprocity, this will occur by chance (because each member has goods or services that the other desires), rather than because members are choosing to engage with certain individuals rather than with others. According to this model, individuals are

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concerned not with building trusting relationships but with maintaining their public reputation, thus transactions between them seem most likely to take place in the sphere of the market economy.

### **The significance of context**

In real life, it seems likely that several different forms of reciprocity co-exist, with individuals engaging in a variety of behavioural strategies. The strategy adopted at any particular time is likely to be influenced both by an individual's past experiences, by the prevailing group culture, and by the present context.

In many community currency systems, there are regular social events to enable members to get to know one another. Members are often encouraged to bring goods to trade to such events, and may first get to know another member through trading with them at such an event. Between these gatherings, members use a contact list and directory, or the services of a broker, to arrange to carry out favours for other members, or receive favours from them. Such transactions usually take place at the house of one of the members, and are thus out of the public eye.

Transactions within (or closer to) the sphere of market exchange are more likely to take place either at market-like social gatherings, or as a direct result of them<sup>27</sup>. They are more likely to be one-off, and one-way, than transactions occurring between such meetings.

Transactions within (or closer to) the sphere of gift exchange are more likely to happen *between* market-like social gatherings. Between these gatherings, members are likely to interact more with people they know already, who may live close by, and/or frequent the same social circles. Such transactions are likely to be repeated and/or directly reciprocal, rather than one-off, and will often involve an element of turn-taking (in which members take turns to help each other out over a period of time). Turn-taking suggests that individuals are interacting so as to develop or maintain a friendship, rather than purely to obtain particular goods or services.

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<sup>27</sup> At such gatherings in Woolgong LETS, members have the opportunity to make offers and requests to the group as a whole, which may bring them into contact with individuals they haven't previously met and lead to their interacting after the meeting itself. For instance, a member might ask for help with their garden, and a member previously unknown to them may offer to provide this help on a future date.

In my study of Woolgone LETS I was able to collect data both at and between monthly trading meetings, and thus to test out some of the predictions made above.

### **Spheres of exchange and social cohesion**

Transactions taking place at market-like social events are likely to increase a member's social reach as the goods or services on offer at meetings bring individuals into contact with other individuals who they have never met before, and who may live some distance away.

Meanwhile, transactions taking place between social events are likely to foster social cohesion (the 'bonding' variety of social capital), rather than social reach, as the exchange of favours will often lead to the formation of friendships, leading to further favours between the individuals concerned, and thus the deepening of those friendships.

### **Spheres of exchange as an emergent feature of reciprocal altruism**

The question remains as to whether spheres of exchange are an emergent feature of reciprocal altruism, or whether instead these spheres act as institutional structures, limiting the interactions of the individuals who move within and between them.

As described earlier (see p.79), for co-operation to persist, it appears that a number of different behavioural strategies must co-exist, and it seems likely that each such strategy will be characterized by a particular mixture of transactional types. For instance, a conditional reciprocator might show a predominance of direct reciprocity, while an unconditional reciprocator might tend to engage in generalised reciprocity, with a few directly reciprocal and a few one-off transactions.

As different types of transaction are likely to predominate in different interactional contexts (see p.101), it may be that the evolution of co-operation has come about through the co-evolution of strategies, characteristic behaviour types, and suitable contexts. Over time, these have accreted into the spheres of exchange we distinguish between - however unconsciously - today.

This is not to deny that in their turn these spheres help form and limit the behaviours which take place within them. Within each sphere there are powerful taboos forbidding certain sorts of behaviour and governing whether or not goods and services can be taken from one sphere into another (see p.84 and 97).

In a community currency system, differences between the cultural norms of the group, and the contexts within which members are encouraged to interact, will push a particular community currency group more towards the sphere of market exchange, or that of gift exchange, and this shift towards one sphere or the other is likely to influence the type of transactions which predominate between members. For instance, Steelwear Time Bank portrays itself as operating within the sphere of the market, enabling its members to save money by carrying out favours for each other (see p.118). In the interests of safety, members are dissuaded from contacting each other directly, or from carrying out favours-in-return which have not been set up by the broker. This limits both members' overall activity, and the number of directly reciprocal transactions they carry out.

Where these limits are too restrictive, members will often find ways of acting outside the rules of their system, or reinterpreting these rules. For instance, in Steelwear Time Bank, members sometimes gave a bag of vegetables to a member whose help was particularly valuable to them. Although this favour-in-exchange could not be officially recorded (as it had not been set up by the broker), it directly reciprocated the original favour, and in doing so cemented a relationship between the members involved. In Woolgone LETS, a subgroup of members started to exchange with each other without using the community currency at all. Living within a small hamlet where they met each other on a daily basis, they felt able to trust each other without the need for a currency to measure and record their interactions.

In short, there is likely to be a continuous process of flux whereby the strategies of individual members of a group (which may well change over time), the types of behaviour they engage in (which are likely to vary from individual to individual), the popularity of different contexts within which they are able to interact, and the cultural norms members' behaviour is limited by, all interact. This interplay between norms and behaviour, with each influencing the other, is what Ostrom (1990) describes in her study of how groups can succeed in cooperatively managing scarce resources.

While certain regions of this flux may be usefully demarcated as belonging to one sphere or another, this is in fact an oversimplification. As revealed by the fact the same transaction may be viewed by one participant as taking place in one sphere, while another participant views it as taking place in a different sphere (see p.94), spheres of exchange are merely cultural constructs, heuristic devices whereby individuals may better understand and deal with the real world. They have fuzzy boundaries, and it is not always easy to classify certain transactions as belonging within one sphere or another.

### **The way forward for community currency systems**

It appears that in order to maintain co-operation a community currency system should facilitate a variety of different forms of interaction between members, by providing a range of different contexts in which they are able to interact. Founders would do well to accept that some transactions will come closer to the sphere of gift exchange and others closer to that of the market, and that this may have more to do with the surrounding economic and political climate in combination with our evolutionary biology than with their original aims and dreams. This is not to say that group culture does not matter, or that particular cultural norms cannot be nurtured (or indeed stifled) by group leaders, but rather that what is possible will be largely dictated by the social and economic context of a particular system.

## Ch.3 METHODOLOGY OF STEELWEAR TIME BANK CASE-STUDY

### INTRODUCTION

I spent 18 months carrying out fieldwork in Steelwear Time Bank, from February 2008 until the end of July 2009, and have continued to be in touch with the group on an occasional basis ever since. In this chapter, I describe the experience of getting to know the time bank staff and members, how I carried out the various stages of my research, the problems I encountered and how I dealt with them.

#### 1. FIELDWORK

##### 1.1 Early fieldwork experiences

When I first approached Steelwear Time Bank asking if I could carry out research with them, I hoped to become a member of the time bank and to carry out transactions with other members, as I had done previously in my study of Woolgone LETS (Panther, 2000). Unfortunately, this was not possible, as only people who lived or worked in or near Steelwear were allowed to join the time bank.

This meant that for the first few months my fieldwork consisted mostly of hanging around the time bank office, chatting to the time bank staff and to any time bank members who happened to drop in. The time bank staff also arranged for me to carry out a few interviews with members in the backroom of the office. This was far from ideal as time bank staff had to walk through the room to get to the kitchen, and I felt members were not able to say anything less than positive about the time bank in such circumstances, especially when they had not yet got to know me.

In addition, I was allowed to join other members and staff in helping with food preparation at the once-weekly Time Bank Café night, and to carry out informal interviews with members who had come to eat in the cafe.

I also administered a questionnaire to all time bank members, in the hope of reaching those members who rarely visited either the office or the café (see p.122).

## **1.2 Becoming a member of the time bank**

In 2002 I set up a community currency system, a hybrid LETS/Time Bank called Durham Exchange, which I have been helping to operate ever since. When I started my fieldwork at Steelwear Time Bank, one of the staff suggested that I turn Durham Exchange into a time bank, because then as a member of this time bank I would also be able to carry out transactions with Steelwear Time Bank members.

I was not prepared to make this change in my own interests alone, but after discussions with other Durham Exchange members, we decided that becoming a time bank would also be in the interests of our members, especially those who were on benefits, who would thus obtain an official benefits disregard.

Durham Exchange became a time bank, and in August 2008 I was finally allowed to start participating in transactions with Steelwear Time Bank members, earning credits for doing so. In effect, I became a member of the time bank.

## **1.3 Fieldwork as a time bank member**

As a white, middle-class, university-educated woman running her own time bank, the obvious niche for me was amongst the staff in the time bank office. I was wary of this, as I wanted to be seen as a regular member by the other time bank members and I felt associating closely with the staff might make members careful about what they said to me.

Like many other new time bank members, I started by joining in with group activities. I joined the weekly gardening group, which involved litter-picking and weeding in local street planters, and carried on helping in the Time Bank café on a Wednesday night. This gave the time bank staff a chance to get to know me, and gave me the opportunity to chat with other time bank members while we worked.

During this time I also experienced what it felt like to be new to the area. Although Steelwear is less than an hour's drive away from where I live, I still had to learn how to behave there. A refugee who had only lived in the country for a couple of years patiently explained that I must leave my car glove-box open to show would-be criminals there was nothing worth breaking my window for. I learned not to travel home late at night on the bus – just getting to the bus-stop meant avoiding various street-corner gangs. Perhaps if I had adjusted my appearance and body language I would have got home safely each night, but as there did not seem to be any other women out on their own at night, I decided to bring the car.

Once it had been established that I was trustworthy and reliable, the time bank staff arranged for me to carry out some favours for other members. On several occasions I helped a couple of fellow members with their English, assisted a member's daughter with her homework, and did some decorating for a member with chronic health issues. I also helped a couple of people on a one-off basis, helping a lady with a broken ankle to sort out her yard, and a disabled member with her filing. Seeing the same members more than once gave me a chance to get to know the individuals concerned, and some of these members were to become key informants.

It proved harder to find ways to spend the time credits I earned, though this may have been partly because I lived out of the area. Several times I spent credits on meals in the time bank café, and a couple of times I received a very pleasant Indian Head Massage. I was surprised to find that some members expected credits merely for talking to me in connection with my research. On one occasion, I spent an hour decorating for someone, then twenty minutes chatting with them over a cup of tea, and found I had both earned and spent one credit in the process<sup>28</sup>. If I had lived locally, I imagine I would have used my credits in exchange for occasional lifts and deliveries, a weekly curry delivery from the café, occasional IT support, and holiday pet-care. I would have been keen to get help weeding my allotment, but the gardening team might not have had time for me. Unfortunately, I would not have been able to get any childcare as this isn't offered on the time bank.

#### **1.4 Problems observing other time bank members**

While I learned a lot from carrying out transactions with other members, I was aware that I had certain expectations about behaviour which other members might not share (for instance, that a transaction was an opportunity to socialise), and so I was keen to observe members interacting amongst themselves.

This proved surprisingly difficult to arrange. There were few regular group gatherings, apart from the weekly gardening group, which only ran in the summer months, and the café, which was only attended by a small subgroup of individuals.

I asked the staff whether there was any way I could be present while one member was carrying out a favour for another, but Tamsin<sup>29</sup>, the project manager felt this would be inappropriate. She explained that sometimes members had very little time, and it was really hard to persuade them to carry out a task. If they additionally had to put up with me hanging

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<sup>28</sup> Up to one hour is charged at one time credit.

<sup>29</sup> I have used pseudonyms throughout.

around, asking questions, they might refuse to carry out the favour at all. In addition, some members would see it as an intrusion into their personal lives, especially as my role would not be clear to them. Finally, she made it clear that in her opinion there would be little or no social interaction for me to observe, as members were expected to behave as professionals, concentrating on the job in hand (see p.246). For example, she gave the example that a member would arrive, go into the room where the faulty computer was, fix it and leave.

At this point I tried approaching individuals directly, asking if they would mind if I was present while they were carrying out transactions. Typically, they would seem quite open to the idea at first, but then suggest that I arrange it with the office staff. When they heard that the staff were not keen on the idea, instead of questioning this they simply accepted that, for some reason unknown to them and myself, it was not a good idea. For some members, it seemed to be an issue of loyalty towards the broker as an individual with whom they had built up a trusting relationship, even a friendship. For others, it appeared that more was at stake. Although the time bank staff were not directly connected with the asylum process and did everything they could to support members who were asylum seekers, these members were often very much in awe of them as figures of authority. They were unwilling to do anything the time bank staff were not in favour of, in case they were sent back to their country.

Near the end of my fieldwork I realised that by acting as photographer on behalf of the time bank, I could be present at exchanges in a role that was acceptable to both staff and members. The downside of this approach was that I was only asked to be present at transactions which the time bank staff wanted to publicize. An additional problem was that the members involved clearly expected me to take a photo and then leave. This was a very different experience from working with Woolgong LETS members, who would have happily shared cups of tea and talked about their experiences all day, given the opportunity!

## **1.5 Relationships with time bank staff and community workers**

Apart from the issues mentioned above, throughout my fieldwork the time bank staff were very accommodating. Although they were always very busy chasing funding and dealing with members, they went out of their way to arrange interviews and other research opportunities for me.

While early on I had had misgivings about associating too closely with the staff, over time, I spent more and more time in the time bank office. I shared similar interests with the staff, and soon they began to confide in me. I was allowed to work at one of the computers, and found

this was a good way of becoming 'part of the furniture', and meant I often heard things that other members were not privy to. Eventually, I was allowed to be present at board meetings, and even to offer ideas about how the time bank might be run, despite not being a board member.

While I continued to seek out the views of the time bank members, the co-ordinator herself soon became my key informant. In the early days, I had worried about how I was getting to know individual members, but felt I had no sense of the organisation as a whole. Over time, I realised that this was not my fault as a researcher, but because the organisation was indeed very fragmented and most members had little sense of belonging to a community with a particular identity. The broker was perhaps the only person who had a sense of the organisation as a whole, and although her view was much coloured by her necessary obsession with funding issues, it was the only holistic view available to me and I was very relieved to be able to benefit from her rather privileged viewpoint, as well as from her in-depth knowledge of the history of the organisation, and of the histories of individual members.

I much appreciated the staff's support and trust, but with it came a sense of rather awful responsibility. I wanted to give back to the group by preparing some kind of report, and yet I was concerned that some of my more negative findings might either damage the group itself, or the individuals who had helped me.

While the office staff were friendly and helpful to me, the community workers who were under their supervision were much more ambivalent. Early on in my research one of them told me in an angry email that he had found me out: I was not really there to help the community, just to use them for my own purposes. I was shocked by his vehemence - he had known all along that I was here as an anthropologist carrying out research, I had never pretended to be anything else. But it struck an uncomfortable chord - after all, it was true that I was in the field primarily to gather data for my PhD. I resolved to feed back the results of my research to the staff and members of Steelwear Time Bank so that they could benefit from my work.

## **2. THE QUESTIONNAIRE:**

### **2.1 Why I used a questionnaire:**

In my MA fieldwork with Woolgone LETS I relied upon participant observation and informal interviews to obtain qualitative data. I did not use a questionnaire because I felt that they leave too much space for misinterpretation, both by the respondees (who may not understand

the questions as the researcher intends them), and by the researcher (who may misunderstand responses to his or her questions).

Originally, I wanted to use the same methods in my time bank fieldwork. I felt that misunderstandings were much more likely to occur in an ethnically and linguistically diverse area like Steelwear. Furthermore, I feared that the use of a formal survey tool of this type might alienate those for whom English was not their first language, as well as those whose literacy skills were poor. Finally, and perhaps most significantly, I felt that it was likely that a questionnaire would be seen as an 'official' document of some sort, and that as a result, members might be hesitant about expressing any views which might bring them, or indeed the time bank itself, into jeopardy.

Despite these misgivings, in the long period while I waited to be allowed to start carrying out transactions with members, I decided that a questionnaire might be my only way of gaining some kind of information from those members who did not often drop into the time bank office or cafés, and whom therefore I had little contact with.

## **2.2 Administration of the questionnaire:**

In writing and administering the questionnaire I tried to minimize the problems I had foreseen in various ways.

First of all, I tried my questionnaire out on three members, sitting nearby as they filled it in and answering any queries they had. The purpose of this was to remove as many potential misunderstandings as possible.

Secondly, the staff (some of whom spoke several Asian languages) agreed to help any members who needed support to fill in the questionnaire because of language-related problems. I realised this might not be an ideal solution in terms of members feeling free to express their ideas, but I could not see another practical way round the problem. In the event, staff members only helped two members, and I myself helped another two.

Finally, in an attempt to encourage members to express themselves freely I promised them (in a blurb at the beginning of the questionnaire) that I would keep their data securely and confidentially, and that in any reports, I would ensure it was not possible for others to identify them personally. I also put the University of Durham logo on the questionnaire to make it clear that the questionnaire was not the work of the time bank staff.

Once my questionnaire had been passed by the university ethics committee, it was distributed to all the members on the time bank's books (including several members who had not carried out transactions for some time). It was sent out along with the time bank

newsletter, which included a short piece<sup>30</sup> explaining that participation in my research was optional, but that filling in the questionnaire would help the time bank to improve, as well as helping me with my research into community currency systems. As a further incentive towards participation, the time bank staff were kind enough to agree to awarding each member who filled in the questionnaire a time credit from the system account.

Members were given the choice of posting their completed questionnaire directly to me, or returning it to the time bank office in the envelope provided. All members chose the latter option, though two returned their questionnaires anonymously. Questionnaires were left in a tray in the office for me to collect whenever I dropped by. When I collected the questionnaires they were without envelopes, and I presumed that this was because members were not bothering to use the envelopes I had provided. Near the end of the process I found out that staff members had been opening the envelopes and looking at the questionnaires before passing them on to me. As most of the questionnaires had been collected in by this stage, I felt it would do more harm than good to challenge the staff about members' rights to the confidentiality I had promised them. The staff obviously felt quite differently about this issue, even offering to tell me who had provided the three anonymous questionnaires handed in, by examining the handwriting!

Questionnaires were completed by 49 individual members<sup>31</sup>, including 46 of the 113 individual members who had been active in Oct 2007-8 (the period for which I was also analysing transaction data).

This high response rate (41%) was probably largely due to the fact that at the time the questionnaire was administered, the time bank was under imminent threat of closure. Many members were concerned about the future, and used the questionnaire to express their support for the time bank staff, and their wish that the time bank would receive ongoing funding so as to continue and indeed widen its services. Filling in the questionnaire was also seen as a relatively easy way to earn a credit, although some members found it took a lot longer (which I promised would only take 20 minutes, although it took most members a lot longer),

Seven of the questionnaire respondents were time bank board members or had at some time been involved with running the time bank. Eight had been time bank members since the time bank had first started, eight years earlier. Three respondents were former members of the informal, LETS-like organisation out of which the time bank had developed.

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<sup>30</sup> This piece replaced the Project Information Sheet which I had promised members at the start of the questionnaire.

<sup>31</sup> Most of the questions were not really applicable to organisational members, and only two of them responded, leaving much of the questionnaire blank.

### 2.3 Limitations of questionnaire data:

The responses to the questionnaire need to be taken in context. The time bank, like many other time banks, is continuously fighting to obtain the funding it needs to survive. Members are fully aware of this, and understand that if they want their time bank to continue they must give funders, researchers and the media the impression that it is wonderful in every way. This makes them very unwilling to make any critical comments about the time bank, and especially to put those comments in written form. The responses to my questionnaire were especially likely to be very supportive of the time bank because just a few weeks after I had administered the questionnaire the time bank was forced to close<sup>32</sup> through lack of funds. This threat was very much 'in the air' at the time the members were filling in their questionnaires.

A vivid example of the unreliability of taking the questionnaire data at face value was presented to me by an asylum seeker who was to become one of my key informants. In the questionnaire, she ticked a box saying that she had made many friends through the time bank. Many weeks later, she commented to me that she felt the Steelwear Time Bank staff were her friends, and she really valued their support, but that she did not feel she had really got to know the other members, and had made no friends among them. In fact, when she came to visit me one weekend, she said how much it meant to her because it was the first time a white British person had invited her into their house.

I was always acutely aware that data collected using a questionnaire would only present me with one version of reality and made every effort to find other sources of data which would either confirm or shed suspicion upon my questionnaire results. At certain points I was able to compare questionnaire results with data collected by Steelwear Time Bank staff, and/or to national survey data relating to Steelwear, or to the city of Fortismouth of which Steelwear is a ward<sup>33</sup>. Steelwear Time Bank keeps computer records of all transactions involving community currency, and sometimes these transaction records<sup>34</sup> were a useful alternative source of information. At all times I endeavoured to interpret the questionnaire results in the context provided by data collected during participant observation and informal interviews.

It would have been very interesting to administer the questionnaire to both Steelwear Time Bank and Woolgone LETS members, and to compare the results. Unfortunately, this was not possible as my work with Woolgone LETS took place some ten years ago, over which time it has changed considerably.

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<sup>32</sup> It turned out that this closure was to be temporary, but nobody knew this at the time.

<sup>33</sup> Both Fortismouth and Steelwear are pseudonyms.

<sup>34</sup> The transaction records analysed here were from the year Oct 2007 to Oct 2008.

### **3. USE OF TRANSACTION RECORDS:**

#### **3.1 What are transaction records and why are they kept?:**

Community currency systems keep records of all transactions between members<sup>35</sup>. In many groups, the main purpose of this is to be able to keep track of members' balances, and members are informed of their balances on a regular basis. In funded organisations, having a record of how much currency has changed hands can be used as evidence of the group's success to present to funders, much like the Sterling turnover of a conventional business.

#### **3.2 What the analysis of transaction records added to my research:**

Transaction records alone would have told me very little about the time bank. I would not have learned about how members trusted and depended upon the staff, or how they viewed each other, or the transactions they carried out.

However, as a record of how active members were, who interacted with whom, and what kinds of favours they carried out for each other, transaction records were invaluable. They also provided both a means of verifying questionnaire responses, and a way of comparing Steelwear Time Bank objectively with Woolgone LETS.

While my fieldwork influenced how I interpreted transaction records, beginning to carry out analysis of transaction records whilst still in the field meant my analysis of transaction records simultaneously influenced my fieldwork, throwing up new leads to follow.

Finally, being able to represent transaction patterns visually using social network analysis meant I could even use anonymized network diagrams as a starting point for discussions with individual members and staff. For instance, I found that there were relatively few directly reciprocal relationships in the time bank, and was able to show the project manager visual evidence of this, ask whether she was aware of it, and what she thought about it.

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<sup>35</sup> Of course there are likely to be interactions between members which are not officially recorded. While these are important, and were explored in the course of my fieldwork, by my definition they are not transactions as such as they were not measured and recorded in a currency.

#### 4. RESEARCH AS A CYCLICAL AND COLLABORATIVE PROCESS:

At times the staff would share problems with me, such as how to involve a member with severe disabilities, or how to make the café more popular. I was also asked to read funding bids and allowed to participate in a board meeting. At other times, the staff would offer solutions to problems they felt my own organisation, Durham Exchange, had. Sometimes their advice gave insights into their own practices. For instance, they often exhorted me to try hard to obtain funding, although our group has run successfully without funding for the last ten years. Once when I mentioned that a friend wanted to borrow equipment from me without going through Durham Exchange, it was suggested that I should take currency from our Community Pool account without my friend's knowledge, so as to ensure that the favour was recorded in currency. This latter exchange revealed how transparent our organisational practices were in comparison to those of the time bank, and how closely linked transparency is to power.

To some extent the research became a positive feedback cycle, with different types of data and analysis constantly feeding into each other, leading to new ideas which could be bounced off staff and members and modified (or thrown out), before returning to the melting pot for further brewing.

The most intense experience of this sort came when Meseret (see case-studies, p.137), a member of the time bank who I had befriended, came along to a Durham Exchange meeting with me and my family. Meseret really liked the way members got together informally once a month, and how at one point we went round the room, with members taking turns to say if they needed help with some task (e.g. gardening), or had some item to pass on to other members (e.g. a few left over pavers).

That evening Meseret brought up the subject of how different the two organisations were. Something I have tried to bear in mind throughout my research was the point she made that the two groups were very different, but that this did not mean one was better than the other. She supposed that the time bank did not hold social gatherings because it had a broker to set up transactions between members.

I happened to be present when a few days later Meseret dropped into the time bank office and asked Tamsin the Project Manager if it might be possible to set up a weekly art group so that time bank members could get to know each other better. Tamsin replied that they would be happy to advertise the group in the newsletter, and to let the group use one of the back rooms, but that the staff could not organise regular social events, as they did not directly generate credits. This was one of many occasions when I felt that the interests of time bank members were in conflict with the staff's necessary focus on the goal of meeting funders' targets.

## **Ch.4            A CASE-STUDY OF STEELWEAR TIME BANK AND ITS MEMBERS**

### **INTRODUCTION**

In this chapter I present a case-study of Steelwear<sup>36</sup> Time Bank and its members, drawing together data collected in the different ways described in Ch.3. Wherever possible, comparisons are made with my study of Woolgone LETS (Panther, 2000). Although neither community currency system can be taken as representative of all other systems of its type, it was very helpful to be able to compare groups with such different membership and organisational practices, as it made it easier not to take anything about either group for granted. *Data referring to Woolgone LETS is presented in italics to make it easier to pick out.*

Information pertaining to specific topics of interest has been separated out and is presented in subsequent chapters thus: social capital (or rather social cohesion and reach) in Ch.5; reciprocity and co-operation in Ch.6; currency flows, the role of organisational members, and spheres of exchange in Ch.7.

### **Section I: STEELWEAR AND ITS TIME BANK**

#### **1.        Steelwear: a deprived inner city district of Fortismouth**

Fortismouth is a city in the North of England, formerly a centre for heavy industry, but now plagued by high levels of unemployment. While Fortismouth has affluent areas, Steelwear is one of its more deprived districts, and from 2000 to 2010 there were determined attempts to make improvements to the lives of residents under the government's New Deal for Communities programme. This included funding for community groups of all descriptions, including Steelwear Time Bank.

Steelwear itself is situated at the top of a hill leading down into the city proper. It is mainly residential, with row after row of two-up two-down terraced houses, most of which have been converted into privately rented flats. There are also some blocks of flats, some of which provide sheltered housing for the elderly and those with mental health issues.

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<sup>36</sup> Steelwear, Steelwear Time Bank, Elsenot and Fortismouth are all pseudonyms.

Steelwear is bordered at one edge by a busy shopping street, where kebab shops jostle with discount computer outlets, and travel agents offering pilgrimages (or 'haj'), but at the opposite edge by a large expanse of common. Thus - although the whole area comes across as very urban – out of the windows of some of the flats one looks out, rather incongruously, onto cows grazing.

Steelwear Time Bank members told me that Steelwear has long been considered a desirable place to live. The cheap flats for rent and Steelwear's friendly, vibrant neighbourhood appeals to young single people, but that couples starting families are often forced to move further afield as there are few houses to rent in Steelwear itself. In the old days, the rich used to live up on the hill in Steelwear to avoid the smog. Thus going down the hill towards the city, you get poorer and poorer housing.

While certain streets have become popular with hippies and students, and others with the Asian community, there still remain families in Steelwear who have lived in the area for generations, and remember times when there was plenty of hard work for everyone. Sadly, it is often members of these families who nowadays face life on the dole, with little education and low aspirations. Those who can escape, do, leaving behind family members who are unable to, often because of ill health, advancing age, or disability.

The busy Westerley Rd which divides Steelwear from Elsenot was perceived by some members as being not just a physical barrier but also a psychological one. One member commented that the Westerley Rd used to be the old county boundary, and still feels like a dividing line. There seems to be something in these perceptions, as the crime statistics are very different on the two sides of Westerley Rd. In 2009, the crime rate<sup>37</sup> was 6.8 in the ward of Steelwear, but 11.3 on the other side of the road in Elsenot. Meanwhile, down the hill towards the city the crime rate soared to 64.4 in Westerley ward (police data, from [www.maps.police.uk](http://www.maps.police.uk), accessed in 2009).

I have already written about my first impressions of Steelwear (see p.15). Once I had become accustomed to certain things about the place - in particular the level of litter and the fact that it did not feel safe to walk about alone after dark - I began to be able to appreciate the many positive aspects of the area which time bank members told me about.

One time bank member told me how she had experienced racist abuse when living in other areas of Fortismouth, but the high levels of ethnic diversity in Steelwear meant she felt much safer. Another member remained in the area after he graduated because he really enjoyed the buzz of living among people from all over the world. His friends travelled from miles around to buy their ethnic groceries in Steelwear. When I got lost, as I frequently did when wandering

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<sup>37</sup> The crime rate is defined as the number of crimes per month per 1000 people, averaged over 3 months.

around trying to locate teams of time bank gardeners, the people I asked for directions were always friendly and helpful, even if I couldn't actually understand what they were saying (being an expert neither in the local dialect, nor in any of the many Asian languages spoken locally). To celebrate the installation of new street furniture and sculptures in the main street there was a vibrant and colourful street festival, the high turnout to which demonstrated residents' pride in the area, and in its cosmopolitan identity.

My overall impression was of a place where people from many different ethnic and also class backgrounds had learned to muddle along together, whilst largely maintaining distinct cultural identities. There were many positive things about the diversity in the area, and the high proportion of extended families whose members supported each other gave a feeling of village life in the middle of the city.

Less positively, a sense of overall cohesion appeared to be lacking (see p.176). There was no clear group of community elders, and there were no widely accepted norms of behaviour. Thus a prime example of the 'tragedy of the commons' (Hardin, 1968) had developed: the shared resource of the local environment was not being looked after, because there was no mechanism to reward those who looked after it, or punish those who did not. As each ethnic group tended to blame another for problems, it was hard to achieve community-wide initiatives (such as reducing the level of litter in the streets). The result was a certain level of apathy: as one time bank member explained, there was no point picking up litter because it would simply reappear again the next day.

*By contrast, Woolgone LETS was situated in Woolgone, a picturesque and relatively prosperous market-town in a rural area. Formerly, Woolgoneshire was a centre for the woollen industry, but now income comes from a range of sources, including tourism and agriculture (Panther MA, 2000).*

## **2. The residents of Steelwear**

According to the 2001 Census (ONS, 2001), only 46% of Steelwear residents were employed (compared with 61% nationally), 34% were long term unemployed, and 19% of the unemployed had never worked (ONS, 2001). In terms of income, only 47% of residents had the use of a car, and only 38% had their own homes, the remainder living in rented accommodation.

What these statistics do not reveal is how diverse Steelwear's population is, in more ways than one. Steelwear has long been an ethnically diverse area, with 20% of the resident

population coming from Pakistan, and a further 5% from other minority ethnic groups (ONS, 2001). There are also a number of asylum seekers living in the area. This diversity extends to social class: 19% of residents belong to the AB social grade<sup>38</sup> (ONS, 2001).

Steelwear has been identified as an area of particularly high transience: '35.1% of people are educated, young, single people living in areas of transient populations' according to Rowntree (2010). There are also a high number of students living in the area: 20% compared with only 7% nationally (ONS, 2001). Partly as a result of this, 43% of residents are single (compared with 30% nationally) (ONS, 2001).

*The percentage of AB social grade individuals living in Woolgoneshire at the time of the 2001 Census was 22%, only slightly higher than the 19% recorded for Steelwear ward at that time (ONS, 2001). However, the overall level of unemployment in Woolgoneshire was low (only 2.4%), and the population of Woolgoneshire was much less diverse: 97% of residents classified themselves as White British (ONS, 2001).*

### **3. Aims of Steelwear Time Bank**

On its website, Steelwear Time Bank describes itself as 'a community based time banking initiative and drop-in centre' which enables local residents to 'exchange time and skills with each other'. It adds that 'members voluntarily carry out work for each other and earn 'time credits'... [which] can be exchanged for other member services'. No attempt is made to explain why such an exchange of time/skills/services is desirable, or what advantage(s) the use of time credits is thought to provide.

In the leaflet used to advertise the time bank to potential members, it is suggested that joining the time bank will save members money:

*Why pay when you can exchange your time and skills with other people in your area? Membership is free and for every hour you help another member you earn a credit to spend on jobs that you want done!*

This emphasis on the economic potential of time banking is surprising, given the history of time banking in the UK (see 0). Nor is this emphasis merely a way of persuading local people to join up; indeed, it seemed to be at the very core of this time bank's philosophy. Time bank staff

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<sup>38</sup> AB social grade means having a job which could be classed as Higher and Intermediate managerial, administrative or professional (ONS, 2001 Census).

often spoke of the need for time bank members to behave in a professional manner with each other (as if engaging in paid work) (see p.246). Furthermore, a funding application in 2008 described the time bank as 'a means of relieving poverty, advancing education, relieving unemployment and promoting vocational training for the benefit of the public in the area'. Again the emphasis is on the supposed economic benefits of the time bank. The closest the application comes to the idea of community is where it mentions 'developing the capacity and skills of the members of the community in such a way that they are better able to identify and meet their needs and to enable them to participate more fully in society'. But even here, the emphasis seems to be on empowering the individual rather than on building community cohesion.

It is important to distinguish at this point between the expressed aims of the time bank, and the actual influence it has. While it chooses to portray itself as primarily economic, its members join in order to contribute to their local community, and - having joined - feel that it adds to their sense of belonging to this community (see p.143). In addition, many of the projects it runs are designed to deliver benefits to the community as a whole, rather than merely to relieve the poverty of time bank members (see p.119). This is not to deny that membership of the time bank improves the material well-being of at least some of its members (see p.143).

*According to its publicity leaflet, Woolgone LETS aimed to 'encourage local awareness and self-reliance', 'develop new social networks' and 'identify unexpected and under-used community resources', while stimulating the local economy. By encouraging local self-sufficiency, and thus reducing the need for transport of goods into and out of the area, it hoped to reduce damage to the environment. Finally, individuals were promised 'the chance to develop new skills', an opportunity 'to boost the prosperity of our area', 'an opportunity to make new friends', and also 'lots of fun' (Panther, 2000:31). In short, it had both social and economic aims, and saw these as necessarily intertwined.*

#### **4. History, development and funding of Steelwear Time Bank**

Steelwear Time Bank started out as a group of friends carrying out favours for each other using a local currency. In other words, it was a form of LETS.

In 2000, the time bank became a registered charity, with a board, paid staff and an office. It also took on housing advisory work from an existing community organisation. These

developments were funded by a grant from the Government's New Deal for Communities, with additional funding from the Neighbourhood Renewal Fund and the European Regional Development Fund. In 2004, the time bank had an annual income of £116.5K from these sources (ERS, 2008). By 2008 when I carried out my fieldwork the time bank's budget had reduced to £48K (from a number of sources including the city council), leading to a reduction in the number of staff and sessional workers employed.

In order to obtain funding, the time bank had to change a lot from its informal beginnings. It had to become much more inclusive in terms of its membership, and it also had to prove to funders that it was benefiting the community *as a whole* (rather than just the time bank members themselves). While the time bank staff have continued to set up transactions between members, in response to funders' demands the focus has gradually shifted towards setting up and running a variety of community projects, many of which are aimed at improving the local physical environment, e.g. by caring for council planters and pieces of waste ground.

According to Tamsin the project manager, funding bodies tended to be set up to support particular groups of people, rather than to support the building of a healthy community, through the bringing together of people from different backgrounds, and with different needs. This was unfortunate, as bringing together people from *different* groups (including from different ethnic backgrounds) was one of the time bank's greatest strengths (see p.182).

*By contrast, Woolgone LETS received small start-up grants from the Council and the Woolgoneshire Small Projects Fund when it first started in 1994, but from then on survived on membership renewal fees alone. Members paid 10 Curlies per year, and from £1 to £5 per year (at the member's discretion). This led to a total Sterling income of at most £750 per year. The Sterling running costs of the system were low. LETS members who contributed to the running of the system were paid in Curlies rather than Sterling for their time, and there was no rented office. The Sterling raised through membership fees was used to post newsletters and account information to members, and occasionally to purchase equipment (e.g. a carpet-cleaner) which members could then hire from the system for Curlies. In 1997 Woolgone Council became an official member of Woolgone LETS. The Council allowed Woolgone LETS to hire halls and carry out photocopying for Curlies, which it then spent on rewarding volunteers for their work with people with learning and other disabilities, through a local church group, St Claire's.*

## 5. Projects carried out by Steelwear Time Bank

- 1) **Drop-in housing and legal advice office:** The time bank inherited the funding and case-load of the community organisation who used their building before them, and time bank staff spend much of their time helping members and non-members with housing issues. In addition, time bank members often drop in with other support needs, e.g. a member might need help with a CV, or with homework. The time bank staff also do all they can to assist those seeking asylum.
- 2) **The two Cafés:** Next door to the time bank office is the Community Café, funded by an ecumenical charity. Volunteers run the café, and those who are time bank members earn time credits for doing so. Meals, however, can only be purchased for Sterling. On Wednesday evenings, the time bank takes over the Community Café's premises to run the Time Bank Café. Here members earn credits for helping staff to buy, prepare and cook the food, under the supervision of Mat the community development worker. Members can also purchase a meal from the café for one time credit (or £1.50), while non-members pay £3.
- 3) **Gardening/litter-picking:** Time bank members are able to earn credits from the system account for going out in a gang to sort out street planters, removing rubbish and caring for the plants themselves. There are also opportunities to grow on seedlings for the annual hanging-basket event.
- 4) **Training:** At different times, I found time bank staff helping members to write CVs, helping them to fill in important official forms, helping younger members with their homework, and taking members swimming. They also supervised decorating and gardening teams, and members who wanted to help out in the café.
- 5) **Creative workshops:** Every year, members get together to make Xmas cards for everyone in the time bank. Occasionally, funding is obtained for special projects, e.g. artists helped members to design banners for a community parade.
- 6) **Food co-operative:** The Time Bank Food Co-op enables members to buy food in bulk at wholesale prices from the worker's co-operative, SUMA. The co-op pre-dates the time bank, and is run by a time member rather than the staff. Members who assist in sorting out and delivering the orders earn a credit for doing so, while members receiving deliveries pay a credit. The goods themselves are paid for in Sterling.

*Woolgong LETS has links with a local church group for individuals with mental or physical disabilities (see p.119). Like the time bank, Woolgong LETS has a food co-op run by a member.*

## **6. Social events set up by Steelwear Time Bank**

While there were annual Xmas card making sessions and hanging basket days<sup>39</sup>, the only regular time bank social event was the Time Bank Café on a Wednesday night. Although 38% of questionnaire respondents had attended the café at some point, over the years attendance had dropped and this was something the staff were understandably concerned about. In 2008, only 35 individual members (31% of all active individual members) attended the café, and only 18 individuals (16%) came to the café frequently (5 or more times in the year).

When I spoke to time bank members about why they did not attend the Time Bank Café, many described the café clientele as 'cliquey', saying that you would always find the same group of people there. There seemed to be some truth in this: three individuals attended the café more than 40 times in the year, and several of those who attended quite frequently were friends or relatives of these three. In addition, members had very different tastes in food, and the necessarily limited menu each week meant that either the curry-aficionados or the traditional English food enthusiasts were bound to be disappointed.

While the café was an important time bank resource in that it enabled members to spend their credits (see p.258), I got the impression that it did not provide the ideal opportunity for members to mingle and get to know each other. New members who did not know anyone were likely to feel intimidated by the idea of eating a meal in public on their own, while members who did already know each other were likely to sit together, rather than using the opportunity to get to know people they had not met before. Only 9 time bank members attended the café on a regular basis, and these individuals (several of whom were related) formed a clique, which discouraged some other members from attending the café. It is interesting that several members chose to pick up a take-away from the café, rather than to take the opportunity to sit in and get to know other members.

When I asked the staff about the lack of social events, they explained that in the past there had been annual time bank Christmas parties and sometimes a summer barbecue. However, such events were expensive to run, partly because health and safety regulations meant that time bank members could not simply bring along food to share (which is the practice in many

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<sup>39</sup> A couple of times a year members had the opportunity to purchase a filled hanging basket for a credit or a small amount of Sterling. The plants were bought in as plug-plants, and grown on by the community workers with occasional help from members.

LETS, including Woolgone). The staff felt some time bank members saw these events as a kind of free-for-all, using the opportunity to grab as much food as they could and leave. As funding became short, it was decided that such events did not directly generate time credits, and therefore were not really an appropriate use of funders' money.

35% of questionnaire respondents felt that it would improve the time bank if more social events were arranged. However, the fact that 29% of respondents said they had never attended any of the existing social events suggests that what is needed is not only more, but different, social events.

Some members appeared to be caught in a vicious cycle where they didn't go to social events because they wouldn't know other members, and thus never got to know other members<sup>40</sup>. Asked why they did not attend social events, they responded:

*Sometimes it's difficult to go alone. If I'm not feeling 100% I can feel a bit swamped.*

*Know very few people.*

*Hardly know anyone.*

For some members who were elderly or infirm, getting to events was a problem. One member suggested more day time events, and another suggested 'a taxi service from members' homes, especially in the winter and dark nights'. Although it would be too time-consuming for the staff to arrange for members to give each other lifts to social events in exchange for time credits, this is something members could arrange for themselves if they were allowed to contact each other directly (see following Woolgone LETS entry).

Some members felt time bank social events did not really meet their needs, perhaps because they were trying to be all things to all people:

*I think it is hard to find a suitable venue that suits everyone as we have such a diverse membership.*

*I haven't really found that I have much in common with many people when I have been.*

One member felt an activity-based approach would work better than simply putting people in a room together and expecting them to socialize:

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<sup>40</sup> One of these members suggested that simply providing name badges would help members get to know each other at social events.

*I'd like to see more activities together, so the focus is less on socializing, more on team-building/networking.*

In a similar vein, one member suggested a wide variety of events was the way to go: '[more] street parties, summer fetes, community events, jumble sales, craft making days etc'. A couple of members suggested that more outdoor trips would interest them, and one was even brave enough to suggest a time bank camping trip!

In short, there seemed to be considerable enthusiasm for the idea of social events, but the fact that everything had to be set up by the staff and then had to generate time credits seemed to be limiting what could take place.

*Woolgone LETS held Trading and Social Gatherings every month. These were held at different village halls around the county, to make it easy for all members to attend at least occasionally. Members often gave each other lifts to these events in exchange for Curlies.*

*The meetings were lively and well-attended, often with as many as 50 members present. Members brought food to share and there was a party-like atmosphere, sometimes with live music provided by members, and always with a lot of opportunities to chat.*

*Members brought along items to trade, ranging from children's outgrown clothes/toys, second-hand books and videos/DVDs to home-grown produce, homemade bread and cakes. Bringing goods provided an extra incentive for members to attend, and to earn and spend currency, in the process of getting to know each other.*

*Near the end of the meeting, members form a circle and take turns to state any offers and requests. For instance, one member might mention that they have a freezer at home which they do not need any more, while another asks if anyone is willing to help him with his garden in exchange for community currency. After the circle has disbanded, members can approach those who have made offers or requests that they are interested in.*

*Woolgone LETS also held Task Force events at which members congregated to tackle a fellow member's problem, which might be an overgrown garden, or even building an annex out of straw-bales. Members were invited to these events in the newsletter. They were a good opportunity to get to know fellow members. Again, people brought food to share, and the whole thing was an enjoyable experience, for which in addition*

members earned currency from the member for whom the work was being carried out (Panther, 2000).

Members commented that LETS 'gave them the opportunity to mix with people from many different walks of life, on an equal basis, and in the safe and non-judgmental environment of LETS meetings' (Panther, 2000:40). There was very little ethnic diversity in the area where Woolgone LETS was based, but people living in town enjoyed the opportunity to help other members with farm work, while people from isolated rural hamlets enjoyed meeting people from much further afield than they would normally have access to.

In order to give something of an impression of what it is like to be a member of each of the two community currency systems, below I present narrative accounts<sup>41</sup> of some of the social events I attended in the course of my fieldwork.

## **NARRATIVE ACCOUNTS OF SOCIAL EVENTS IN THE TWO SYSTEMS:**

### **1) REGULAR SOCIAL EVENTS:**

#### **Steelwear Time Bank: the weekly café session**

It's a Wednesday night, and Tamsin (project manager), and Mat (community worker) are busy in the kitchen preparing food for the time bank's weekly café night. As usual, they've got a couple of members helping them with specific tasks like chopping vegetables and washing up. I'm a bit too late to help with the chopping today, but Mat asks me to take members' orders. It soon gets quite busy, and Mat gets rather short with me. Why haven't I crossed out that soup now it's gone out, and why haven't I written that that one's a take-away?? I point out that I've never done this before (I'm beginning to feel like I'm never going to do this again though...)

Members can buy a meal (including pudding) for a time credit, or for £1.50 if they prefer. For non-members, prices have now gone up to £3 a meal. Still amazing value for a freshly cooked soup, main course and a pud! As a result they've had to introduce a new rule, that members can only buy a meal for themselves, not for their whole family/street...

As usual, there's little clique of elderly people sharing a table near the window, some of whom are time bank members. They live close by, and like to sit at the same table every week

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<sup>41</sup> Necessarily, these accounts are coloured by the fact that I was present in my role as a researcher. While most participants were comfortable with this idea, Mat (a community worker in the time bank) found my presence quite threatening.

and chat to their friends. Harry ate at Alice's tonight, so he just wants a cup of tea, but Alice decides she can't resist the rice pudding. Fred, who normally sits with them, has just popped in to order a take-away tonight.

Mat is annoyed that I've ordered a mince and dumplings for Fred, but he did ask for it and how was I supposed to know he was vegetarian and it wasn't?

Stephanie and Barbara in to chat and eat – both disappointed there is no curry tonight. They eventually go for vegetable lasagne. Some of the café customers come because they really appreciate the authentic curries made by Shana (one of the part time office staff), or Patti (a member who is an excellent cook, and has recently started to earn Sterling instead of credits for her work in the kitchen). However, some of the other members only like traditional English dishes, and tell me that is why they don't come to the café more often.

Teenage sisters Trina and Katie are in buying their dinner for credits. Mat tells them off for leaving their rice pudding untouched, and they complain that it tastes nasty, to which Mat retorts 'So I've failed, have I?' He tastes it himself when they've gone, and remarks that they probably don't like it because it isn't super-sweet.

Several members come in to pick up takeaways, with one of them earning a time credit for delivering a meal to another member. Soon it's time to close. I purchase my meal for a time credit, gobble it down and then go and help clear up. Tamsin and Mat are clearly exhausted by a long day at work in the office, followed by a long stint in the kitchen, but the kitchen has to be left nice and clean for the Community Café people to take over again in the morning.

### ***Woolgone LETS: the monthly trading and social meeting***

*Me and my husband set off for our first LETS Trading and Social meeting with a car-load of plants, rice-salad and my violin. When we arrive we put our foxgloves and spiky house-plants on one of the trestle-tables in the community centre, and immediately get into trouble as our ants start invading the neighbouring member's homemade greeting cards! Nick started making cards to sell to fellow LETS members, but has now started selling them in a few shops as well. A card will cost me 2 Curlies, plus 30p to cover the cost of the materials.*

*I wander off to chat to some of the other members. Normally there are 8-10 members with things to trade, but today it's pretty quiet. There's me with my plants, Nigel with his cards, Sophia with homemade bread (for 3 Curlies plus 50p a loaf), and a couple of people with general bric-a-brac: second-hand clothes, kids' games and books,*

*a few videos. Roger, the co-ordinator, once commented that trading often resembled a particularly bad car-boot sale, 'But every now and then you see something and think "I really need that!"'.*

*Sula - who originally set up the group and is now its development person - presents me with a blank cheque, saying I should feel free to purchase things on her account until mine is set up. Noticing my shocked expression, she added, 'Well, you're not going to spend 150 Curlies with it, are you!' I buy a glazed pot and a couple of books, for a Curlie each. One of the members I buy from is not at her table, so I put a LETS cheque in the honesty box for her as instructed. Another is keen to engage in a bit of haggling: I offer her 2 Curlies for her pot, but she bargains me down to 1 Curlie, to which lower price I agree, feeling a little puzzled...*

*Near the end of the meeting I realise that - being new - I have forgotten to put a card on my table telling people my membership no. and how many Curlies I want for my plants. I am impressed to find out that someone has gone to the trouble of finding out my surname and writing down that they owe me 3 Curlies for some foxgloves (to be recorded when my account has been set up).*

*After we've all shared the food people have brought, we stand in a rough circle and Roger tells us all what the Core Group have been up to, then goes round the group asking for any offers and requests. I offer an electric fan (unwanted wedding present) and use of our canoe, but get no takers. Someone else wants a coffee-grinder, and is offered one. They'll talk to each other later about how many Curlies to exchange for it. Another member wants to hire a large boat trailer for Curlies. While they don't get anywhere with this, someone offers to lend them a life-jacket and someone else says she's got a small boat and trailer for hire. At the end I suddenly remember I need a measuring jug, and someone says they'll bring one for me next time.*

*It's almost time to leave, so everyone starts to help clear away and tidy up the hall. I still have some plants left, so we plant them in a bare spot in the centre garden, with Roger the co-ordinator joking that LETS is already teaching me to be more generous...*

## 2) OCCASIONAL SOCIAL EVENTS:

### Steelwear Time Bank: the annual Hanging Basket Day

It's a really hot sunny day in May. I arrive at the time bank office - a converted ground floor flat in a row of terraced houses - to find the back-yard, normally a bare and rather dilapidated area, where nothing can be left because it would 'walk', gaily decorated with hanging baskets. Under an awning, Tamsin (project manager) and Mat (community worker) are busily slotting seedling petunias and geraniums into hanging baskets, with help from members Fred, Sophia, Alan, and Alan's grandson Sam.

Most transactions in the time bank happen on a one-to-one basis. However, Hanging Basket Day has become something of a tradition, occurring every year in the Spring. Every year, the time bank buys some 4000 plug plants. When the plants are big enough, staff and members pot them on in the greenhouse at the time bank allotment. By May they are ready to go into hanging baskets. Time bank members can acquire a basket and plants for one credit, while non-members can purchase them for £4 (or £3 for a refill using your existing basket).

I join in, helping Tamsin and the others make up baskets. We have to be careful not to make too many: most people will want to make up their baskets themselves. Soon the yard begins to fill with people, several bringing pushchairs and young children. They queue in front of the tables, and haggle with the helpers over which plants they can have. One guy is a landlord, who wants 12 baskets for his tenants. He is not a member, but is happy to pay in cash, he thinks the baskets are a bargain and comes for them every year. Waila is a time bank member who wants several geraniums, although she's only really allowed one for the centre of her basket. She begs me so I go to ask Mat but he is firm: she may only have one. Later, she corners Tamsin, who happily gives her five. Another member, Charles, has come intending to take photos of the event, but after only a couple of shots the battery goes dead. 'I'll be buggered' he shouts, to which Tamsin promptly responds 'Watch your language, Charles!' Predictably, this has little effect: Charles - proud to tell anyone willing to listen that he is a recovered alcoholic - just *is* like this.

It's all a bit hectic and stressful, but it's sunny and people are happy, and soon Tamsin goes to get some squash and biscuits for everyone. Some of the people standing around, waiting to get their baskets made up, chat to their neighbours.

Now it's getting quieter, I get the chance to talk to Fred - does he enjoy gardening then? Fred says he loves gardening, often helps elderly people in a more affluent area of town with their gardens, he doesn't do this for time credits though, 'Oh no...', he prefers cash. Neither of us know, but over the next year Fred is to become more and more involved with gardening

through the time bank, today is just a first step.

Before I leave, with a hanging basket of my own, I have a word with Sophia, who is a sprightly little retired lady who hails from Brazil, and who is famous for having once danced on the table at a time bank party. Has she been involved in getting the plants ready for today? Sophia explains that she did come to help out once, when the staff specifically asked for her help. It was just her, the staff and one other member. She doesn't usually go to water or tend the plants because the allotment is very isolated and she is too scared to be there alone. Sophia's friends have teased her for working for no money, but she said helping others makes her happy, so she will continue to do it.

### ***Woolgone LETS Task Force event: thistle hacking for Janet***

*My LETS buddy just rang me to remind me about the Task Force event at Janet's. Janet is a LETS member with an organic smallholding, and needs help hacking down a plague of thistles in her sheep field!*

*The next morning promises a beautiful day, so I decide to go along and join in. I turn up to find about 12 people – of all shapes, ages and sizes -already hacking away, with an assortment of gardening implements and knives. It all looks a bit medieval, and it's funny to think that these field-labourers are doctors, teachers and office-workers in their everyday lives!*

*People have split off into little groups, each working in a particular area. When I join a group they explain that we must all go along in a line, in the same direction, so we don't miss any thistles. I'm glad we just have to hack the tops off, not dig them out, but it's still back-breaking work.*

*Luckily there are plenty of tea breaks, and you can take as long a break as you like. One lady decides to relax in the sun in the big green inflatable armchair (that appeared one day with the wind) while the rest of us go back to work. No one writes down when people start and finish. People just write down how many hours they think they've done before they go home.*

*After a while we stop for a shared lunch, Janet has made some food and some people have brought stuff with them to share too. Every year, Janet gets help from LETS members with her thistles, as this is the only way she can control them without using chemicals. People chat about how - in previous years - some members brought their*

*kids to help, and they got quite competitive, and started counting how many thistles they'd thwacked. Kids get Curlies at the same rates as grown-ups if they choose to work, but often spend most of their time playing together.*

*Roger, the present LETS co-ordinator, is joining in with the thistle-thwacking today. He says that usually Janet gets everyone working together in one big group, and it's better that way. 'It's an energy thing' he explains. However, he makes no attempt to change the way people are working.*

*As people leave, they admire Janet's tomato-filled greenhouse, and a couple of them purchase some duck eggs from her, again in exchange for Curlies. Working outside in the July sunshine has been a welcome break from the office and from hectic family lives for many of us. It feels good to have helped Janet keep her farm organic, and earned some Curlies into the bargain!*

## **7. The organisational structure of Steelwear Time Bank**

Steelwear Time Bank is a not-for-profit company with charitable status. It has a hierarchical management structure, the elements of which are described below.

### **7.1 The Board:**

The Board's role is to make decisions about issues facing the time bank, including those relating to the employment of time bank staff. Neither staff nor members may attend board meetings unless they are invited to do so. While some members are trustees or board-members, many others are quite oblivious to the structure of the time bank, and do not even know that there is a Board. There are also six trustees.

If anything goes wrong, Board members have (limited) personal liability for it. Perhaps because of this, the Board has made various rules for staff and members to follow. For instance, members must not look after each other's children for credits, unless they are registered child-minders.

One former member of the Board commented 'committees are by nature risk-averse. They don't really understand the risks involved and rather than get into this they avoid the whole issue' [by making blanket rules about what members can and can't do]. He suggested that a single incident was enough to send Board members plunging for their pens, ready to invent

new rules for members to follow, whereas a more grounded approach might be to deal with incidents on a case by case basis, unless several incidents of the same type suggested that a new rule was required.

Until recently, the Board left the day-to-day running of the time bank pretty much up to the Project Manager, Tamsin. Only in the last year, when the funding situation became critical, have they required Tamsin to report to them on a regular basis.

## **7.2 The time bank staff:**

When I first got involved with the time bank there were six paid members of staff: Tamsin the Project Manager, Jonathan the Broker/Development Worker, two part-time Events and Administration Assistants (Shana and Roshni), and finally, community development workers Mat and Alan. All of these people were also members of the time bank, and occasionally earned and spent credits. I focus on Tamsin and Jonathan below, as these were the central figures at the time I was studying the organisation.

### **1) Tamsin the Project Manager:**

At the time I was carrying out my fieldwork, the future of the time bank was very uncertain. Tamsin the project manager was clearly devoted to keeping the time bank going. She had to spend much of her time in the back room, making funding applications, and was always very busy, often taking work home to finish.

Despite this, she found time to befriend and support many time bank members, often going out of her way to help them in a crisis. For instance, one member told me that when she had to go into hospital suddenly, it was Tamsin who arranged for another member to look after her cats. Another member - a vulnerable asylum seeker with chronic health problems - told me how Tamsin had helped her to move back to Steelwear after the council had placed her in unsuitable high rise accommodation in another area.

On a less positive note, I got the impression that Tamsin's very conscientious nature meant that she felt responsible for everything that went on, and therefore liked to be in control at all times (rather than allowing others to learn from their mistakes). The central role she took on with regards to the time bank was in some ways very positive, but in others a weakness of the organisation.

Organisational practices were far from transparent. For instance, from time to time a member would receive credits for counselling another member, without the latter member's knowledge. This was possible because transactions were always entered on the computer by

paid staff rather than by the members themselves. Perhaps the most significant example of this top-down style of leadership was when Tamsin purposely decided to hold an AGM *before* she heard whether her last desperate funding bid had been successful, fearing that the news might be bad (as indeed it was). The alternative, which a more democratically-run institution might have taken, would have been to wait until she knew the worst, before discussing the way forward with members.

Indeed, the AGM in question appeared to be a mere formality. Tamsin presented the financial accounts for the last year, explaining that the amounts weren't as good as they looked, because lots of the money involved was already pigeonholed for various projects, but not going into any detail. While I have no absolutely no doubts in relation to Tamsin's honesty, the fact that everyone present simply accepted this minimal level of detail revealed to me the extent to which members placed their trust in the staff, rather than taking a more active and responsible part in the running of their time bank.

At no point prior to the time bank's (temporary) closure were members given the opportunity to discuss ways in which the time bank might continue in the absence of paid workers. At one point, a member volunteered to act as broker should the office be forced to close, but was told the board would not allow this. Just before the office closed, members were asked if they were happy to have their details circulated, and a few members agreed. However, while the time bank office was closed few transactions occurred, and it seems likely that if the office had remained closed activity between members would soon have dwindled to nothing.

*There was very little sense of hierarchy in Woolgone LETS. A handful of elected members formed the Core Group which carried out essential work to keep the system running, and made decisions on an on-going basis. This group and its meetings were open to all, with any members who did choose to attend being paid in Curlies (Panther, 2000).*

*Although Rupert the Co-ordinator was the central figure, any member could put themselves forward for this role, and every few years the Co-ordinator would change. In addition, the founder of Woolgone LETS continued to exert much influence on how the group was run, in her role as Development Person. This was not because she had any more power than other members, but because many of them respected her for her wisdom and experience. Neither co-ordinator nor the founder could make decisions alone: the Core Group had to meet and agree the way forward.*

*At the annual AGM, decisions about the future of the system were made by consensus rather than by majority: in other words, the issue would be discussed until all parties present were happy to proceed in a particular way. This could take some time...*

*This openness extended to the community currency accounts. Although Woolgone LETS did not publish all members' Curlie balances on a regular basis (as most LETS do, see 0), members could ask to receive a print-out of all balances (though in practice this rarely occurred).*

## **2) Jonathan the Development Worker/Broker:**

Jonathan was employed as broker and development worker. He also manned the front office to which members would frequently drop in, needing advice, a friendly word, or just the photocopier.

In his role as broker, Jonathan set up transactions for time bank members. Members were encouraged always to go through Jonathan, rather than to set up exchanges for themselves. This had significant implications for the network structure which evolved (see 0). On a deeper level, the broker's role was to deal with conflict. Conflict between members could easily arise for all sorts of reasons, including a lack of social skills (e.g. a member failing to turn up to an appointment with another member), mental health-related issues (e.g. the member who rang other members in the middle of the night), and occasional friction between different cultural norms.

In his role as development worker, Jonathan felt it was wrong for the time bank to put its energies into environmental projects just because funders were keen on them, and wanted more to be done to include those members of the community who were hardest to reach. He gave the example of a woman from a troubled family who had not been allowed to join the time bank because she could not manage to turn up to a pre-arranged appointment with staff, although she was given several opportunities to do so.

When the time bank was reopened with a reduced budget it was Jonathan whom the Board decided to dismiss, with the justification that the development work he carried out was valuable, but not essential to the continued running of the time bank. Jonathan had been a popular member of staff, and when he left the number of transactions carried out by members reduced noticeably.

*In Woolgone LETS, there was no broker. Instead there were strong group norms of trust, equality, and resistance to market forces. Members looked out for each other,*

*and relied upon gossip and humour to ensure individuals were not becoming too pushy or behaving inappropriately. For instance, when a member attempted to 'sell' an old saucepan for a large amount of currency, bystanders teased him about this, telling the would-be buyer to 'Watch him...' (Panther, 2000:41-45). Woolgone LETS did have a development person who for many years tried to bring 'hard to reach' groups (e.g. the unemployed) into the group, before eventually leaving to set up a time bank.*

### **7.3 The members of Steelwear time bank:**

According to transaction records, in the period Oct 2007-8 Steelwear Time Bank had 130 active accounts<sup>42</sup>, 113 of these belonged to individuals, and the remaining 17 to organisational members.

Of the 17 organisational accounts, two - the system account and the community pool account - were integral to the time bank itself. A further two belonged to the cafés which – at different times - used the building next door. One organisational account belonged to a food co-operative, run by an individual member of the time bank, while another organisational account was operated on behalf of the national organisation Time Banking UK. The remaining organisational accounts all belonged to various local community groups, many of which had been set up to support individuals from a particular ethnic background, or people living in a particular area of Steelwear ward.

70% of time credits were spent in transactions between organizational members, or between organizational members and individual members. Thus the role of organisational members of the time bank is a significant one, and is discussed in greater depth in Ch.7 Section II. Most of my thesis, however, focuses on the 113 individual members of the time bank. Arguably it is interactions between them (rather than between individual and organisational members) which had the potential to lead to the development of social cohesion and social reach within the time bank community. The next section looks at the individual members of the time bank in more detail.

*In 2000 Woolgone LETS had 154 active accounts. 150 of these accounts were operated by individuals, couples or families. The 4 remaining accounts were operated by organizations, including two by the LETS itself.*

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<sup>42</sup>An active account is defined as one belonging to an individual or organisational member who carried out at least one transaction in the year Oct 2007- Oct 2008.

## SECTION II: THE INDIVIDUAL MEMBERS OF STEELWEAR TIME BANK

In this section I describe the demographic characteristics of individual members of the time bank. Then, as a rhetorical device intended to bring my account to life, I go on to present detailed accounts of five individual time bank members who will reappear at various stages throughout the case-study.

### 1. The demographic characteristics of time bank members

The majority of time bank members were female (63%) and middle-aged<sup>43</sup> (57%), while 18% of members were 55 or over. 45% of questionnaire respondents reported that they lived alone, compared with only 12% of individuals nationally (Table 2.3, ONS, 2008:17). As living alone has much to do with social cohesion/exclusion this data is treated more fully in 0. A further 45% lived as a couple or family, while 10% lived with friends or relatives.

Although the majority of time bank members were White British (60%), according to staff records members came from a wide range of ethnic backgrounds: 22% were Asian/Asian British (9% Bangladeshi, 7% Indian, 6% Pakistani), 7.5% Black/Black British, and 10.5% from other minority ethnic groups (5% Iranian, 2.5% Arab, 2% Chinese, 1% other).

In terms of occupation, 16% of questionnaire respondents had a full time job, 43% were in some kind of employment, and 20% declared themselves to be unemployed. This latter figure is more than double the figure of 8.7% unemployment recorded for Steelwear in October 2009 (local government research, based on ONS, 2001) and suggests that unemployed residents of Steelwear were much more likely to join the time bank than those in full-time employment<sup>44</sup>.

In an attempt to ascertain socio-economic status, the questionnaire asked members what work they did, or to describe the last job they had had. 49% of members reported having jobs requiring several years of training, e.g. osteopath, whereas 31% reported having jobs requiring little or no formal training, e.g. factory work. 20% did not give information about their employment. I was able to compare this data with the staff's impression of members' educational level: 50% of members on the time bank's books were thought to have a university degree, or equivalent.

Several questionnaire respondents declared themselves unable to work for various reasons, including chronic ill health (10%), being of retirement age (16%), and looking after children

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<sup>43</sup> Defined as aged 35-54.

<sup>44</sup> It is also possible that unemployed members were more likely to fill in the questionnaire than those in full-time employment.

(16%). In addition, 8% were studying (including at school), while 2% were asylum seekers/refugees<sup>45</sup>.

As stated earlier (p.117), Steelwear is an area of high transience. Thus I expected my questionnaire to reveal that a high proportion of time bank members were new to the area, and using their membership to develop a support network. What I actually found was that the majority of members had lived in the area for some time: 66% of respondents had lived at in the area for five years or more, while 42% had lived there for 10 years or more.

There also appeared to be a fairly even split between members who had been in the time bank for a very long time, and those who had joined more recently: 47% of respondents had been members for less than 5 years, while 45% of respondents had been time bank members for 5 years or more.

The data presented here comes largely from the questionnaire I administered. Wherever possible I compared my findings with data collected by the time bank staff. Unfortunately, their reports did not distinguish adequately between active members and those who had not carried out any transactions for over a year. Nevertheless, it appears that unemployed people and members looking after children may have been over-represented amongst questionnaire respondents, whereas students, asylum seekers/refugees, those from Black or minority ethnic groups and members with chronic mental or physical health issues, or physical disabilities were probably under-represented. According to data collected by time bank staff, 18% of time bank members had recognised mental health issues, 13% had learning or physical disabilities, and 8% were refugees or asylum seekers.

It is interesting that the demographics of Steelwear Time Bank are very similar to those reported by other time banks internationally. For instance, Lasker and Collom, in their study of Community Exchange time bank in the Lehigh Valley, Pennsylvania (2011), found that the majority of participants were middle-aged white females, 43% of whom lived alone, and 53% of whom had a university degree.

Finally, an area for further research might be why the time bank did not include more so-called 'alternative' types among its members. One of the founding members of the time bank tried very hard to get some of the fifty members of his wholefood co-op to join the time bank, but few did. It has often been said that LETS only appeal to those with alternative or 'green' leanings (see p.29). Is it generally true that time banks do *not* appeal to such types, and if not how much does this matter? Arguably, attracting a wider range of members would bring a wider range of skills and needs into the system, benefiting all concerned. In order to attract a

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<sup>45</sup> These categories are not exclusive, and therefore the percentages do not add up to 100%.

wider variety of members it might help if members were granted more autonomy, and if the supply of time credits was better matched with the supply of goods and services (see 0).

*In Woolgone LETS, as in the time bank, the majority of members were female (66%) and middle-aged, and a high proportion of members lived alone (Panther, 2000). The membership of Woolgone LETS reflected the low level of ethnic diversity in Woolgoneshire itself (see Ch.4 0)0, being predominantly white British. There were some individuals in Woolgone LETS with mental or physical illness or disability, but fewer than in the time bank. Although transience among members of the time bank was lower than expected, I suspect that it was lower still amongst Woolgone LETS members. Many members had families who had lived in the area for generations.*

*Woolgone LETS members were scattered over a much wider area than time bank members. While 48% of Woolgone LETS members lived in or near Woolgone, the remaining 52% of members lived in the surrounding countryside, many in isolated hamlets and small villages (Panther, 2000). Although most LETS members had cars, they regularly gave each other lifts to the regular social events, earning local currency for doing so. This was to save petrol and decrease their carbon footprint. In Steelwear, car ownership is far less common and time bank members tend to travel to each other's houses on foot.*

## **2. Looking at eight members of the time bank in more detail**

*Here I describe 8 individual members<sup>46</sup> of the time bank in more detail. I have tried to include members with different levels of involvement in the time bank. I begin with three members who - like roughly half the members of the time bank - only carry out transactions very occasionally. For Maggie and Joanne, this lack of time bank activity is because they work full time. For Meseret, an asylum seeker, it is chronic ill health and bouts of depression that prevent her from being a more active member.*

### **1) Maggie: a single parent in full-time employment**

Maggie has lived in Steelwear for 12 years, and originally turned to the time bank as a 'support network' when was bringing up her daughter single-handed, having split up with her husband.

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<sup>46</sup> Pseudonyms have been used to preserve the privacy of the members concerned.

Maggie's daughter soon grew up and left home, and Maggie has since been kept busy with her full time work as an administrator. She commented that she was so busy with her working life that she didn't really look to the time bank for friendship, just for practical help.

Maggie has earned time credits in a variety of ways over the years. She once earned the princely sum of 35 credits for knitting a fellow member a jumper, but she has also earned credits by helping the time bank by distributing newsletters and leaflets, and by helping the time bank with development work.

She has used her credits to get a lot of decorating, cleaning, and moving of furniture done, and has also donated credits to the community pool account. In 2006 Maggie and Stephanie started to look after each other's cats on the Exchange, on an ongoing basis. Although this was a directly reciprocal relationship, Maggie said it hadn't really developed into a friendship, probably because both of them were such busy people.

Despite carrying out relatively few transactions per year, Maggie clearly feels that the time bank has an important role in her life. Recently Maggie had to go into hospital suddenly, and at very short notice Tamsin, the Time Bank Project Manager, arranged for her cats to be looked after. Knowing that in a crisis she can rely on the time bank - and in particular on Tamsin, who she sees as a trustworthy friend - means a lot to Maggie.

## **2) Meseret: an asylum-seeker for whom the time bank is a lifeline**

Meseret is a talented artist who has been in the UK for three years, seeking asylum. Chronic health problems including diabetes and depression mean she does not feel able to carry out many transactions. However, knowing that the time bank office is just round the corner, and that she can drop in there for a friendly chat with staff, is really important to her, especially as she cannot afford to have a landline or to use her mobile (except in emergencies). Meseret occasionally earns time credits by helping in the Time Bank Café. She spends them on help with her English, and on second hand things from other members, eg. a fridge, which greatly enhance her quality of life.

## **3) Joanne: a professional with a high negative balance**

Joanne works in arts publicity. She has been in the time bank for three years, after a period spent travelling. Like Maggie and Meseret, Joanne carries out few transactions. She spends credits on regular food orders from the Time Bank Food Co-op<sup>47</sup>, and on occasional life-

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<sup>47</sup> Tamsin commented that other members of the food co-op aren't even members of the time bank, and receive food deliveries at no cost, so she feels she can't comment if Joanne spends lots of credits on co-  
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coaching and gardening. While she has earned a few credits helping the Time Bank Food Co-op with administration and deliveries, and also by carrying out jewellery repairs for time bank members, she is very busy with her work and doesn't often find time to earn credits.

As a result of spending more than she earns over a period of time, Joanne's balance has gradually become more and more negative. However, Joanne relies on the time bank staff to let her know if she has too many or too few credits, and confesses that currently she has no idea what her balance is.

Recently Joanne broke her ankle, and asked the time bank for help for the first time. She needed help with housework and sorting out her yard. She commented 'it is good to know they [the time bank] are there when you need them'.

*The next three members - Stephanie, Anne and Patti - are much more active, having a turnover of more than 25 time credits in the year Oct 2007-2008. Although there are fewer individual members who are this active, they potentially have quite an influence on the dynamics of the time bank as a whole because of the number of transactions they carry out. What Stephanie, Anne and Patti appear to have in common is that life is somewhat of a struggle: Stephanie is a single parent, Anne is struggling with chronic health issues, while Patti has two small children to look after on a low income. All three find the time bank to be a huge support to them, but struggle to earn as many credits as they spend.*

#### **4) Stephanie: social benefits of time bank membership are key**

Stephanie is bringing up a teenager on her own following a divorce, while working part time in higher education. When she first joined the time bank, Stephanie earned credits in many different ways, including helping other members' children with their homework, gardening, and cooking for the Time Bank café. She mainly spent her credits on meals from the Time Bank café, and occasional pet-care when she went on holiday.

In 2007 disaster struck – Stephanie broke her leg and became largely housebound for some weeks. She remembers this period as one in which Steelwear Time Bank really helped her out. She got lifts from other members and they helped her with cleaning during these difficult weeks. Surprisingly, Stephanie managed to earn a lot of credits in this period, probably because she was unable to go to work. She carried out weekly homework help sessions (at her own house) for two different families, and earned credits for attending time bank board meetings.

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op deliveries. If, however, she starts to spend credits on other services offered by members, she will have to speak to her about her increasingly negative balance.

Stephanie enjoys dropping into the café or office for a chat with staff and fellow members, and she feels that for her the benefits of membership are overwhelmingly social: 'The hard benefits, like getting my cats looked after, are nothing compared to the soft ones, like us meeting here today. When I broke my leg last year, I came in [to the Time Bank café] to bake cakes with Alice, and it got me out of the house.'

### **5) Anne: determined to earn time credits despite chronic ill health**

Anne is a determined and highly educated young woman who is unable to work because of a chronic health condition, and lives on her own in a council flat within walking distance of the time bank office.

When Anne is relatively well, she earns credits in a great variety of ways. These include: helping with time bank gardening and litter picking events; writing articles for the time bank newsletter and carrying out research and proof-reading for other members; helping members with their English; helping with Time Bank Food Co-op administration and deliveries; cooking and food preparation for the Time Bank café.

Anne spends her hard-earned credits on things she finds hard to do because of her health problems, including shopping, getting her clothes washed and ironed, recycling, and decorating/ home repairs. She also uses credits for occasional alternative health treatments that she would not otherwise be able to afford, including Reiki and Indian Head Massage. Finally, she spends credits on deliveries of food from the Time Bank Food Co-op.

Despite her serious health problems, Anne is committed to maintaining her independence, which for her includes keeping her time bank balance positive. Anne is clearly aware that if she is not careful her balance will become negative. She is unusual among members in that she keeps a log of all her transactions so that she knows exactly what her balance is at all times. She also attempts to keep control of her balance by alternating between earning and spending credits whenever possible.

### **6) Patti: a busy working mum with little time to earn time credits**

Patti is a young Asian mother who is a long-standing member of the time bank, having first joined in Dec 2006. Patti is sharp and articulate, but has dyslexia and lacks confidence with English, her second language. She is keen to give her children the best possible start in life. She lives with her husband and two children in a flat in Steelwear. They have a large extended family in the area, members of whom often drop in expecting meals, and in return provide her with a support network, helping with childcare etc.

When Patti first joined the time bank she earned credits helping out in the Time Bank Café, and spent them on tutoring for her daughter (who she was keen to get into a good school), and meals from the Time Bank Café. From time to time, she 'donated' items to the time bank and fellow members in order to make her balance positive again.

In September 2007 Patti gave birth to her second child, and as a result her time bank involvement changed markedly. She continued to spend credits on homework help and Time Bank meals, but was too busy to earn credits. Her balance continued to fall until March 2008 when she began to work for the Community Café for credits, after which her balance slowly began to recover.

Patti explained to me how she had first got involved in the time bank through the two Cafés. Over time she had progressed from voluntary work in the Community café, to working for time credits in the Time Bank café, and finally to paid work in Community café. When the Community Café finally closed down, Patti was able to obtain paid work at the Time Bank café. Unfortunately, this meant Patti again had problems finding time to earn time credits.

*The last two individuals had an unusually high time credit turnover: more than 200 time credits earned and/or spent in the year Oct 2007-8. There were few such individuals in the time bank, but obviously their impact was significant, whether they mainly earned credits (like Graham), or mainly spent them (like Marion).*

## **7) Graham: time banking as a form of volunteering**

Graham is a single man in his thirties, self-employed and highly educated, but with a lot of free time. He joined the time bank in order to become more active in his community, and also hoped to drum up support for his computer business through getting to know more people locally.

The time bank staff soon put Graham's IT skills to good use. Nowadays he repairs or refurbishes old computers which can then be passed on to those time bank members who would never otherwise be able to afford one. He also earns credits by giving IT sessions to members, many of whom benefit as much from the chance for a chat, as from the chance to improve their computer skills.

Although from time to time Graham buys a meal at the weekly Time Bank Café with his credits, he does not really spend time credits on anything else, and over time his balance has become more and more positive.

Some of Graham's fellow time bank members have recognised that further time credits are of little value to him, and sometimes give him a small gift (e.g. a bag of home-grown vegetables) in thanks for his help.

## **8) Marion: housebound but very much involved with the time bank**

Marion is a long-standing member of the time bank, having first joined in December 2005. She is an elderly lady who is confined to a wheelchair and largely housebound. Marion spends credits on regular IT sessions with Graham, as well as on getting her shopping done, household repairs and decorating, and on help with organising her many books and papers.

Marion earns a small number of time credits by giving away unwanted bits of furniture and household items, and by providing companionship and life coaching to other members. Although she receives frequent donations of time credits from another member, her time credit balance is highly negative. This is something the time bank staff try to persuade her not to worry about, as they feel she is doing all she can to earn credits.

*Hopefully this selection of individual members, some employed some unemployed, some young some old, some tending to earn credits and others tending to spend them, gives some impression of the range of Steelwear Time Bank members . As in the time bank itself, the majority of the individuals I have chosen to represent here are women, and live alone.*

## **Section III: HOW AND WHY PEOPLE JOINED STEELWEAR TIME BANK**

### **1. How people find out about the time bank:**

52% of time bank members originally found out about the time bank through a friend or relative who was already a member. 23% were referred to the time bank through another organization, or by a counsellor. 15% became members having noticed the office as they walked past. Only 6% felt they had joined as a result of seeing the time bank's publicity materials. The remainder did not respond to this question.

It is pretty typical for community currency systems to grow by word of mouth (see p.30). Although this means that the organization grows gradually, it carries the advantage that new members already have a contact within the group, making it easier for them to become involved. My experience with Durham Exchange is that giving out publicity materials usually

results in lots of new members most of whom are never seen again, whereas it is people who come along as friends of existing members who tend to get involved and stay.

*As in the time bank, many Woolgone LETS members joined the system having heard about it from a friend. Local people were also invited to attend the monthly trading and social meetings, which took place in village halls in different parts of the county (see Ch.4 0).*

## **2. What members felt they got out of belonging to the time bank**

Although the time bank advertises itself in terms of its economic impact (see p.118), for many members (77% of questionnaire respondents) the time bank was all about 'helping each other out'. 57% of questionnaire respondents mentioned the social benefits of time bank membership, whereas only 35% mentioned tangible benefits, such as meals from the café, cat-sitting or lifts to work. As Stephanie put it, 'the hard benefits [of time bank membership], like getting my cats looked after, are nothing compared to the soft ones, like talking to you here today' (see case studies, p.127). The social benefits of membership are described in greater detail in Ch.5.

For some members, however, the time bank's economic impact was considerable (see p.245). Meseret, an asylum seeker, was able to obtain a second hand fridge, reconditioned computer and CD player from other time bank members. These items greatly increased the quality of her life (see case studies, p.126). Marion, housebound through disability, was able to get housework and simple household repairs done by other time bank members instead of having to ask in a stranger, and pay them in Sterling (see case studies, p.142).

14% of questionnaire respondents reported having joined the time bank to help others. As one put it 'I wanted to be able to help other people less fortunate than myself'. However, asked what they now got out of membership, only 8% of respondents mentioned enjoying helping others. This suggests that some people join seeing time banking as a form of voluntary work, but later find other benefits from membership.

Three respondents felt they hadn't benefited much from membership at all, one of these blaming his advanced age and consequent lack of mobility. Such members were less likely to fill in the questionnaire because of their lack of involvement with the time bank. With the benefit of hindsight, it would have been useful to contact those time bank members who neither carried out transactions nor completed the questionnaire and to find out why they had ceased to be (or had never become) active members.

*For the majority of Woolgone LETS members, the social benefits of membership were key. Members spoke of the LETS as being, or being like, their extended family (Panther, 2000). For some, being a member of the LETS also brought access to material goods and services which greatly increased their quality of life. For instance, one unemployed man commented that being in the LETS meant he could afford to obtain flowers and a present for his wife's birthday. Other members found being in the LETS meant they could get lifts and essential household repairs carried out. A few members had joined because it was the only way they could afford complementary therapy.*

## **Section IV: CURRENCY AND TRANSACTIONS IN THE TIME BANK**

In this section I introduce time credits, the local currency used in Steelwear Time Bank, and describe how transactions were set up and carried out. I then describe how active members were, what they spent their time credits on, and how they kept track (or did not keep track) of their time credit balances.

### **1. TIME CREDITS AND SETTING UP TRANSACTIONS IN THE TIME BANK**

#### **1.1 Time credits in Steelwear Time Bank**

As discussed in Ch.1, community currencies differ from money in several important ways. In addition, some types of community currency have specific features designed to ensure that they are used in a different way from conventional, or mainstream, currency.

In Steelwear Time Bank and other UK time banks, transactions are measured and recorded in a virtual currency known as 'time credits'. Time credits are specifically designed to revalue the work of what Cahn calls the 'core' economy (see p.32), activities which are traditionally unpaid. One time credit is worth an hour of a member's time, regardless of the person's level of skill, or the type of activity they are engaged in. This emphasis on equality is one of the central tenets of the time banking movement, distinguishing it from the majority of LETS, in which it is up to the member to decide how many currency units they charge (see 0).

Despite time credits having been designed to be quite unlike Sterling, in Steelwear Time Bank a negative time credit balance was associated with going into Sterling debt by members and staff alike. New members joining the time bank were encouraged to earn time credits

before they spent them, because the staff feared that otherwise they might spend credits and then leave.

Even with long-standing members, the emphasis was very much on earning credits rather than on spending them. At the AGM, the Star Member award went not to the member who had been most active in the group (both giving and receiving help), but to the one who had *earned* the most time credits: Sue, a member who had earned all her credits helping out in the Community Café, rarely spent her credits, and never carried out any transactions with other individual members.

As a result of these practices and norms, 72% of individual members had positive balances. As in a community currency system every transaction creates both a positive and a negative unit, it was only possible for most individual members to have positive balances because a few organizational members had very large negative balances (see 0).

*Woolgone LETS called its local currency the Curlie, a reference to a bygone age when Woolgone was an important wool-town. Although it stated in Woolgone LETS' constitution that one unit of system currency was equal in value to one Pound Sterling, in fact - as the founder of Woolgone LETS pointed out to me - the Curlie appeared to acquire different values in different contexts. First of all, most LETS members charged 5 Curlies for an hour of work (reflecting the fact that at that time the minimum wage was £5 per hour). Secondly, at monthly trading and social meetings the majority of items would be exchanged for a single Curlie. On these occasions the feeling was that the currency was not to be taken very seriously, and that a mere token payment would suffice (see 0 for more detail on this). Thirdly, those few members who offered their professional services on the LETS charged a combination of Sterling and Curlies, valuing one Curlie as equal to one Pound because they would have to pay tax as if Curlies were equivalent to Pounds (Panther, 2000).*

*If community currency system members all attempt to keep their balances positive by earning credits before they spend them, no one can carry out any transactions. Thus in Woolgone LETS, members were encouraged to allow their balances to oscillate between positive and negative over a period of time (see 0). They continuously reminded each other that 'Curlies aren't money', and exhorted each other therefore to 'Spend, spend, spend!' When a potential member first came to a meeting, a member of the core group would present them with a blank cheque in the core group member's name, thereby*

*emphasizing that local currency is not money and should be spent freely and generously.*

*Unusually, in Woolgong LETS balances were not published, and there were no official limits as to how high or low a member's balance could become (see Panther, 2000).*

## **1.2 Setting up transactions in Steelwear Time Bank**

When a time bank member needed help they would ring Jonathan, the broker, or drop into the office to talk to him. Jonathan would then set about finding another time bank member to carry out the task, using a combination of his own extensive knowledge of the members, and information from Timekeeper, computer software which presents the broker with a list of all members who have offered a particular skill, and their availability.

Whenever possible, Jonathan would select someone who had done this kind of work for the member before. On the one hand, he felt he was encouraging friendship in this way. On the other, if the two members had met before, it meant a member of time bank staff would not be required to go along and supervise the transaction.

Once Jonathan had found someone who might be able to help, he would ring them and ask if they were available. He would then have to ring back the person who had originally rang in, to tell them who would be carrying out the exchange and when, and to record this information on Timekeeper. Sometimes, if no one could be found to carry out a task - which was often the case with gardening and decorating work, both in high demand - the time bank staff would arrange for the time bank sessional workers to carry out the task, or to do it themselves.

Only if two members had carried out a certain type of exchange for each other before were they were allowed to carry out further such exchanges together without going through the broker, instead informing the office from time to time about how many transactions had taken place. 43% of questionnaire respondents said they had occasionally set up transactions for themselves, which presumably were 'repeat' transactions of this type.

As well as carrying out favours for each other, members occasionally brought in things to donate to other members, earning themselves a single time credit in the process, ostensibly for the preparation and delivery of the item rather than in exchange for the item itself. Usually the newsletter would include a few things members had to offer each other on this basis. 65% of questionnaire respondents felt that this was a fair practice. The general feeling seemed to be that members could always turn to the market economy if they wanted to get more than a single time credit for their goods: 'they could Ebay it otherwise'. One member even felt the

one credit rule did not go far enough: 'I don't think people should get any credits for exchanging goods. Credits should just be for time.'

*In Woolgone LETS (as in other LETS) members were issued with a directory of goods and services available from fellow members, and a list of members' phone numbers, so they could set up transactions for themselves. However, it was unusual for members to use the directory to set up a transaction. Instead members tended to set up transactions with members they had got to know at the monthly Trading and Social meetings (see Ch.4 0).*

### **1.3 How members view time credits and transactions involving them**

Even for those time bank members who have previously been involved in mutual aid networks (e.g. a baby-sitting circle), being in a time bank - a formalised system of recording favours in terms of a local, virtual currency - is a completely new phenomenon requiring the acquisition of new cultural norms and patterns of behaviour.

Questionnaire responses indicate that individual members understand and use the time bank in different ways. Asked to choose between the various options, 67% saw their activities within the time bank as 'friends/neighbours helping each other out', 21% saw them as 'just like doing work for money, except you pay credits instead', and 8% saw their involvement in the time bank as 'a form of charity, people helping others less fortunate than themselves'. These differences could be seen as evidence of different behavioural strategies (see p.79).

For many, the time bank is a way of giving to the local community. Helping other people and/or improving the local area makes them feel good - the credits that they receive in the process are merely the icing on the cake, and as such are not taken very seriously.

For other members, being a member is a kind of safety-net. These individuals are often middle-class and in part or full time employment. They have a good understanding of how the time bank is supposed to work, and agreed with the statement in the questionnaire that 'it is important that we all have chances to both give and receive'. Despite this, in practice they mainly earn credits, only spending them on the occasional Time Bank meal.

These members know that if their circumstances change for the worse, they will be able to use the credits they have saved up to cope. One middle-class member, Fiona, spent many hours helping another time bank member's children with their homework. Only when she broke her leg did she really start to make use of the time bank's resources to her own

advantage. She spent credits on pet-care while she was in hospital, and then on lifts and housework when she came out.

While most members do spend at least some credits with other members, a few members never spent their credits apart from on the odd meal from the Time Bank café. Some of these joined the time bank so as to be able to help others. Others are people with a low level of education and little self-confidence who were initially suspicious of the time bank, but have gradually got to know and trust the staff through volunteering (in the traditional sense) in one of the cafes. They become members so as to be able to spend the credits they earn on the occasional meal from the Time Bank café, but often remain reluctant to earn or spend credits in any other way, or to engage with other members. One lady explained that she liked coming to help in the café and supporting her local community, otherwise she would be at home doing nothing all day.

In general, time bank members do not offer services that are both highly valued and in high demand in the Sterling economy (e.g. plumbing) for credits. Pounds will always be taken in preference to Credits, as the value of local currencies is restricted by the limited pool of goods and services available in exchange for them. Instead, members tend to offer work that requires a low level of skill (e.g. carrying out errands, house-sitting, giving someone a lift), or work that does require skill but is traditionally part of the household economy and thus unpaid (e.g. basic decorating and gardening, help with homework). These are the kind of things you might expect neighbours to do for each other anyway in a small, stable, well-integrated community. The difference is that time bank members perform these favours for people who are not necessarily their physical neighbours, whatever their ethnic or social background, in an area where traditionally there has been a high degree of transience, with people from different backgrounds tending to keep to themselves.

A few members do offer skills that have taken years to develop and which they could offer professionally (e.g. saxophone lessons, IT support). They feel able to offer these skills for the odd hour here or there, but either do not want to, or are unable to, offer them within the Sterling economy. They may already be in full time employment, or they may have health problems, either of which preclude a more committed and formal utilisation of their skills.

*Woolgone LETS members often referred to the group as being like their extended family, a support network they could call upon in a crisis. There was strong sense of a community with its own set of values and norms (see p.134). New members would hear again and again that it was fine to have a negative balance, that they should 'Spend, spend, spend' and that Curlies were not money, and perhaps not to be taken too*

*seriously. This attitude would be inculcated from the start, by a member of the Core Group presenting them with a blank system cheque written out in that Core Group member's name, to use as they wished. The feeling of being given a blank signed cheque by a stranger is a memorable one! If a Woolgone LETS member appeared to be treating Curlies like money, for instance trying to get as many Curlies as they could in exchange for some item at a meeting, they would be teased by their fellows and thus swiftly brought back into line (Panther, 2000).*

## **2. TRANSACTIONS IN THE TIME BANK**

### **2.1 Transactions involving social favours**

Generally speaking, time banks do not aim to attract professionals, concentrating instead on the revaluing of what Cahn (2000) has called the 'core' economy: the everyday skills which keep our communities going. In Steelwear Time Bank, few members offered skills at a professional level. However, professional-level skills – such as gardening, decorating, or help with one's computer - were in high demand. In addition, questionnaire respondents commented that they would like to see more alternative health therapies on offer.

As already described, a social favour is valued at one time credit per hour, whatever the nature of the work or the skill level of the worker. It is likely that any member providing professional level skills would quickly be swamped with time credits but – in the absence of other professionals – might find little to spend them on, and eventually leave the group. Perhaps more needs to be done to attract people with these much demanded skills into the time bank, and to ensure that they then find plenty to spend their credits on. Encouraging the exchange of things might go some way towards solving this problem, but in addition local businesses and the council might be persuaded to provide tickets for swimming pools, the cinema etc. as an incentive for the continued involvement of those with much demanded skills.

*A small number of Woolgone LETS members chose to offer their professional services through LETS. They were all alternative health practitioners (e.g. homeopaths, psychotherapists) who wanted to make their skills and knowledge available to individuals who otherwise would not be able to afford them. As they had to pay taxes on all the work they did (whether they received Sterling or LETS currency for it), they charged a combination of Curlies and Sterling, using the Sterling to cover their taxes.*

*These few individuals treated Curlies as equivalent to Pounds Sterling, charging up to 15 Curlies per hour. Some members felt this was unfair, when most members only charged 5 Curlies per hour. Others were very happy to be able to access services which they would never be able to afford outside the LETS.*

*As there were so few of these members, they did not have much impact on the system as a whole, but greatly increased the value of system membership for those few members who accessed their services.*

*Their presence raises the important question of whether community currency systems should try to attract members whose services are in demand in the market economy (e.g. plumbers), and whether it is possible to do so both legally (in terms of their tax responsibilities within the market economy), and ethically (in terms of the norms established within the community currency system, which in many ways is closer to the sphere of the gift economy).*

## **2.2 Transactions involving things<sup>48</sup>**

When a member of Steelwear Time Bank has something they do not need any more which might be of use to another time bank member, they tell the time bank staff. Sometimes the staff know that a particular member will benefit from the item and contact them directly. Otherwise, they will mention the item in the next monthly newsletter.

Because the government has said time credits cannot be used in exchange for goods, transactions involving things are described as 'equipment donations' on Steelwear Time Bank's books, and the member offering the item receives a single time credit (whatever the value of the item), not for the item itself, but for the time they have taken to prepare it and to deliver it to the office (see 0).

65% of questionnaire respondents felt that this was a fair practice. The general feeling seemed to be that members could always turn to the market economy if they wanted to get more than a single currency unit for their goods, as a member said 'they could Ebay it otherwise'. One member felt quite strongly about the issue, and for them the one credit rule did not go far enough: 'I don't think people should get any credits for exchanging goods. Credits should just be for time.'

Only 2% of transactions between time bank members involved things, rather than services (see p.153). It is likely that the one credit per item rule, and the generally low profile the

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<sup>48</sup> I have chosen to use terms 'things' and 'social favours' rather than 'goods' and 'services' because of the economic implications of the latter.

exchange of things plays in the time bank, have both much limited the exchange of material items amongst time bank members. This seems a great pity, as the exchange of unwanted items at social gatherings would reduce what goes to landfill while giving members an excuse to socialize (see entry on Woolgone LETS below). It is unlikely that such exchange would assume any real economic significance, as anything of high Sterling value is likely to be exchanged for Sterling, rather than for local currency. Finally, the exchange of things would make it easier for those members who are time-poor to get involved (see 0, also 1).

*Although helping each other out on a one-to-one basis was seen as central to the identity of Woolgone LETS, a large number of transactions took place at the popular monthly Trading and Social meetings, held in rotation at various village halls and community centres around the region. Thirty to fifty members would attend, bringing all sorts of items to trade, including homemade cakes, cards, bread, plants, as well as assorted bric-a-brac (Panther, 2000).*

*Although the emphasis at these meetings was on the trading of goods rather than services, it was at these meetings that LETS members renewed their social ties and arranged to carry out tasks for each other over the next month. Thus the exchange of things provided an excuse to socialize which led to continued social interaction*

*When it came to paying with Curlies, the majority of things were exchanged for a single Curlie, as a kind of token payment regardless of the Sterling value of the item. If an item was home-made a LETS member would usually charge 5 Curlies for every hour that it had taken to make. Occasionally, if something was felt to be worth more than a single Curlie, members would agree on some price in Curlies which both parties to the transaction were happy with. This was often the occasion for the strange phenomenon of what I called 'reverse haggling': the member selling the item trying to lower the number of Curlies being offered, and the member wishing to acquire the item trying to raise the price! It was clear that both members involved in such a deal valued their continuing personal relationship with the other member over any economic considerations (Panther, 2000).*

**Next I present narrative accounts of some of the transactions I experienced. Again, the idea is to give the reader some impression of what it was like to be a member.**

## **NARRATIVE ACCOUNTS OF TRANSACTIONS BETWEEN INDIVIDUAL MEMBERS**

### **1) TRANSACTIONS INVOLVING SOCIAL FAVOURS/SERVICES:**

#### **Woolgone LETS: Decorating for Felix the homeopath and his wife, Siobhan**

Off to Woolgone to do some decorating at Siobhan and Felix's manor house. So grand was the entrance with its stone pillars that at first I drove on past it, thinking it couldn't be the right place... Gwen and her husband, fellow LETS members who I'd be working with, arrived just after I did, at 1pm (although I'd been told they would be starting at 12.30). While we were papering walls with Gwen and her husband, Siobhan and Felix and their daughter were working in the same large room, putting stuff away, but also keeping a bit of an eye on us, I think.

Gwen and I had never met, but worked well together. We learnt from each other: I wasn't too confident about measuring walls and paper at beginning. Meanwhile, Gwen didn't know about using brush to get rid of bubbles behind paper, or about putting glue on wall to make paper slide better.

Siobhan was lovely, kept praising us and saying how nice we were, made scones specially and kept offering us tea. She was happy to chat away for ages when we were 'meant' to be working. However, Felix was a real pain: very critical. In the middle of the job, he asked if we'd ever papered before. Then he accused us of leaving a gap between the sheets of wall-paper. I explained to Felix that we'd done that on purpose, you do that so that when you paint it the paint goes into the crack and hides the join... He looked surprised but didn't apologize.

That man really pressed my buttons! I tried to joke about whether he was the resident perfectionist, mentioning that that was my role at home, and how it good it was for me to be on the receiving end. Siobhan agreed that he was awful to have around when you were decorating, and told him to go away, but he kept coming back.

For our efforts, we got 20 Curlies each, for 4 hours work at the standard rate some members choose to use of 5 Curlies an hour. We spent quite a lot of that time chatting and eating scones... Apart from Felix's comments, it was an enjoyable experience. Perhaps Felix expects LETS members to behave like professional decorators because he is one of the few LETS members who carries out his professional work (homeopathy) for Curlies? Definitely a feeling of a bit of a culture clash here, with Siobhan and ourselves enjoying each other's company and getting the job done together, but husband Felix seeming to expect a professional decorating service, but for local currency...

### **Steelwear Time Bank: Decorating for Anne**

I arrived at the time bank office, and they rang up Anne, and arranged for me to go round to decorate the inside of her bathroom cupboard. Anne lives in a council flat in a large complex in walking distance of the time bank office. There is usually a lot of rubbish outside the flats, which she is trying to get the council to deal with.

I put a sealant coat on the bare plaster in the cupboard. While I was finishing two other Steelwear Time Bank members turned up to clean the back of the oven. They chattered away to each other in Polish. Anne didn't really talk either to them, or to me. The feeling was that we were there to get the job done, and that was it. The girls were using some kind of gooey chemical to clean the cooker, and at one point Anne picked up a lump of it that they were going to throw out and put it back on the cooker. She had clearly been keeping an eye on them and didn't want them to waste any of the stuff they were using. When I had finished my job, Anne offered me a piece of toast as she was having some. She didn't offer the girls anything or chat to them, perhaps because they were still working, or possibly because I'd been to help her a couple of times before and we had chatted about my research and her PhD.

On another occasion, I went along to help Anne with fellow member, Raj. Before he arrived, Tamsin informed me that he is very good at decorating and has been doing a lot recently as he is between jobs. As we walked over to Anne's Raj pointed out his old house. Recently there was a police raid on it because the family there were growing Malaysian plants for cooking, but the neighbours thought it was cannabis. Just near Anne's flats we passed a dead pigeon which Raj told me had either been poisoned or shot. When we got to Anne's flat, Raj rang the bell. When Anne asked over the intercom who it was he said 'Time Exchange' rather than his name, as if he were a company employee rather than a friendly neighbour!

Anne explained that she had requested that there be two people to move her cooker, as those are the rules at work-places and she thought they should apply to Steelwear Time Bank too. I commented that at work the company would be sued if someone was hurt. Wouldn't a time bank member think it was their own fault if they tried to move something too heavy by themselves? Anne wasn't too sure, a member might feel they *had* to move an item if that was what the job required. There followed a farcical moment where I had to pretend to help move the cooker while Raj easily pulled it out on his own - felt like a bit of a waste of my time.

I cleaned the floor behind the cooker while Raj did some painting. He didn't bother putting masking tape down the corner of wall as he knew the fridge would be going back there later. Anne made me and Raj a cup of tea to have while we worked.

I asked if Anne and Raj had known each other long and how they had met. They explained that they had met through the time bank, about 10 years ago. Raj's wife, Kalla, used to cook for Anne, and Anne gave her children homework help. They haven't seen each other for a couple of years and Anne didn't know Raj had moved. She asked why they had moved, when they had had such a nice house? Raj explained that it was because there were lots of youths standing around at street corners and his kids felt uncomfortable walking past them to college. Anne added that there were lots of prostitutes and brothels in the area too. Raj remembered that he had hated saying goodbye to neighbours because he'd lived there for 17 years and hardly spoken to them. One gave him a big hug and asked why he hadn't spoken to them before, and he joked that that (the big hug) was why!

Just before we left Tamsin rang Anne, Anne explained that we were just setting off and needed 2 credits each. Raj explained that it was 2 credits each, because it was one credit per hour, and we'd been there for an hour and fifteen minutes. I told Anne I didn't feel I'd worked more than an hour. She said I needed to talk to Tamsin about it - it was all up to Tamsin.

On the way back, I asked Raj whether he had made any real friends through the time bank. He said no, until he lost his job recently he hadn't really had time to socialize. He would say hello to people he knew from the time bank when he passed them in the street, but that was all. Kalla however had more time, being at home with the kids. She used to drop into the café a lot when they lived round the corner, and knew everyone.

## **2) TRANSACTIONS INVOLVING THINGS/GOODS:**

### **Steelwear Time Bank: Meseret and her refurbished computer**

Today when I came into the office Tamsin asked if I could deliver a refurbished computer to Meseret when I went to help her with her English, as I had my car with me. Meseret was delighted with the computer - it will help her to do her college homework, and she only had to pay one time credit for it. However, as an asylum-seeker she can't afford to go on the internet or use email, which is a pity as she has several friends overseas.

When Meseret turned the computer on for the first time I was surprised to see a message on the screen advertising Graham's computer business. When I spoke to Graham (another time bank member) a few days later he said that he hoped that Meseret would become a customer of his. I felt obliged to explain that this was rather unlikely as she is not allowed to work and cannot even afford to make phone calls.

**For an account of transactions involving things/goods in Woolgone LETS please see p.126.**

### 2.3 Transactions involving staff or paid community workers

Many time bank transactions involve one or more staff members and/or community workers. When two members have not met before, a member of staff will go along to introduce them to each other and supervise their first transaction. Where a job is deemed to be particularly tricky or potentially hazardous, staff or community workers will be there to supervise. This includes most gardening and decorating work. Finally, members of certain religious groups only allow male time bank members into their homes when their wives are alone if a member of the time bank staff is present.

When – as a Steelwear Time Bank member - I went along to help get the plants ready for hanging basket day at the allotment, I was closely supervised by two community workers, who bantered away to each other, occasionally telling me exactly what to do and exactly how to do it. Whilst they were not unfriendly to me, it was clear that I was not seen as an equal: they were the paid and committed experts, while I was a mere occasional helper. Despite the fact I'd done lots of gardening before, I was given the repetitive and monotonous job of deadheading hundreds of petunias, while they carried out the more tricky, responsible - but also more creative and enjoyable - task of planting up some hanging baskets.

Walking back from the allotment across the park, I bumped into long-standing time bank member, Anne. When I mentioned that I'd been helping with the gardening, she said she'd gone along to help with the plants a couple of times, but had stopped because she always felt a bit like 'a spare part'. An additional problem had been that there was nowhere to sit down; she has chronic health issues which prevent her from standing for long periods.

A few days later I spoke to Tamsin, the project manager, about why few time bank members helped out at the allotment. In her view, members enjoyed the fun bits (like Hanging Basket Day itself), but were not really interested in watering and weeding on a regular basis. Members could not be relied upon to give the plants the care they needed, which was why it was important to have paid community workers involved in the project.

An alternative view of the situation is that the presence of paid workers means that it is all too easy for time bank members to leave important tasks to them, feeling that their own input is not vital. Perhaps not being relied upon leads to individuals becoming unreliable?

There is great demand in the time bank for gardening and decorating work, to the extent that Tamsin and Martin have often gone to tackle such jobs themselves, in an effort to reduce the back-log. I, personally, would feel uncomfortable tackling a decorating job while under the supervision of a community worker. Perhaps it is worth risking there being the occasional less-than-perfect decorating job in order to get members actively helping each other rather than relying so much upon staff and community workers.

### 3. TIME BANK MEMBERS AND THEIR TIME CREDIT BALANCES

#### 3.1 Members' awareness of their time credit balances

In community currency systems based upon the LETS model, it is usual for members to receive not only their own balance, but the balances of all other members, several times a year<sup>49</sup>. In Steelwear Time Bank - despite all the emphasis on earning credits and having a positive balance (see p.144) – members do not receive even their own balances unless they specifically ask for them, which many never do. There are even some members who have never grasped the idea of a community currency system, and do not realize that they are earning and spending credits when they engage with the staff and other members.

Tamsin, the project manager, explained that the problem with sending each member their own balance was the prohibitive cost - in both time and Sterling - of mailing out balances. However, it turned out that there were deeper reasons behind not publishing balances. When I mentioned that in Durham Exchange we put each member's balance in their copy of the newsletter, to save carrying out an extra mail-shot, Tamsin liked this idea, and asked Shana to add a 'Post-It' note with the member's balance on it to the newsletters when they next went out. Several weeks later, however, I found out that the balances had not in fact been issued. Tamsin explained that members who had earned a lot of time credits through helping others had told her they would be upset if their generosity was officially recognized in this way. It was interesting that it was members with high positive balances who had been upset by the idea, rather than those with high negative balances. This suggests that volunteerism still very strong in the time bank, and that members who mainly give to others have considerable influence on how the group as a whole is run.

On a deeper level, the practice of not publishing balances may have arisen from an underlying belief that while credits mattered to the funders, there was no advantage to be had from giving members knowledge of their balances. Perhaps the staff felt that people whose skills were in demand just needed to be encouraged to use them to help others, while members who tended to be on the receiving end of exchanges because of their circumstances would just be worried to hear they had a steadily increasing negative balance.

Not only the balances themselves, but the transaction records themselves, were kept securely in the office. Once I happened to mention that a member of Durham Exchange who also happened to be a friend, wanted to borrow a tent but not to pay credits for it. Tamsin commented that I should just pay myself credits from the Community Pool for loaning out the

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<sup>49</sup> This was not the case in Richmond LETS (Panther, 2000), which made it particularly interesting that the group managed to maintain cooperation for such a long period.

tent so that the credits would be recorded. I couldn't contemplate doing this without telling the member concerned. I said that doing this would look odd to the member whose job it was to enter transactions onto our system. It was Tamsin's turn to be shocked: she explained that this was why only staff should enter transactions onto the system, not members.

On another occasion, I learned that when time bank staff gave counselling or advice to members who dropped into the office, the time bank earned credits for this. The aim was to increase the credit turnover of the time bank, while recognizing the time and effort the time bank staff put into advising members on a daily basis. What surprised me was that the members themselves were not informed that a transaction was taking place, and that credits were being taken from their accounts.

While in both cases it was the lack of transparency which horrified me, Tamsin was equally horrified by any suggestion that the institution should be more transparent. The intention was never to deceive people in order to do them harm, but rather to protect them from themselves. In order for the group as a whole to run as smoothly as possible, it was felt to be necessary to withhold information from individuals, and that in the end this would be in the individuals' best interests also. From this perspective, retaining information about balances was a way of retaining power centrally, information being a source of power.

*Members of Woolgone LETS received printed details of the transactions they had carried out, and of their own balances, on a regular basis. However, Woolgone LETS was unusual among LETS in that it did not set limits on how negative or positive an account could become, and - in addition – in that members only received their **own** balances, not those of all other members.*

### **3.2 Members' control over their time credit balances**

As the time bank no longer sends members their time credit balances, it is up to individual members to decide how much effort they will put into keeping track of their balances. If a member's account becomes negative the staff will usually make them aware of this, and warn them that they need to start earning more time credits.

Some members are quite concerned about their balances from the start, and will ring or drop into the time bank office to find out what their balance is. A few individuals told me that they even kept their own records of transactions, so as to ensure that their balances remained positive. A method of balance control requiring considerably less effort was to alternate between spending and earning credits. For instance, a member might earn one credit then

spend one credit, earn two credits then spend two credits, earn one credit and spend one credit, and so on. The staff had noticed Anne's pronounced tendency to do this, but the transaction records revealed that in fact many members manage their balances in this way, at least for short periods of time<sup>50</sup>.

Other members blithely spend credits, thinking that if the staff have not contacted them then everything must be all right. Unfortunately, this approach gives plenty of opportunity for misunderstandings between staff and members. On one occasion Tamsin, the project manager, complained that Joanne (see case study, p.138) had a fairly high negative balance, and yet when they rang her to ask her to help other members, she always declined, saying she was too busy. Tamsin had always assumed that Joanne was well aware of the state of her balance, so she was surprised to hear that Joanne had admitted to me that she had no idea what her balance was.

The particular approach taken by a member appeared to have more to do with personality than with either social class or level of education. For instance, while some highly educated members left it all to the staff, others kept meticulous records.

There are two dangers attached to lack of communication about balances. Firstly, if a member suddenly finds out they have a large negative balance, they might feel so embarrassed about the situation that they decide to leave the time bank altogether. Secondly, a more insidious but actually more serious problem is that members who do not know what their balances are will often be unnecessarily cautious about spending credits. The time bank staff mentioned having to constantly encourage certain individuals to spend their credits, and it is likely that overall this - in most cases uncalled-for - cautiousness about spending credits greatly reduces the flow of currency within the system.

Some time bank members were deemed by the staff to be unable to earn many credits because of their life circumstances, and encouraged not to worry about their balances becoming steadily more and more negative. Often these individuals are unhappy about the situation. For instance, Marion (see case-study, p.142) - who is basically housebound - knew she had a high negative balance, and wanted the time bank staff to find ways for her to earn credits. Tamsin explained to me that it was not really practical to spend a lot of staff time trying to set up lifts for Marion, so as to enable her to earn credits. Instead, she was encouraged to forget about her balance being negative, and to continue to spend credits freely on companionship (in the guise of IT support), household repairs and errands. From time to time other members were persuaded to make donations of credits to Marion's account, and

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<sup>50</sup> This practice is not to be confused with turn-taking, in which two members take it in turns to give and receive help from each other (see p.??). While turn-taking was rather common in Woolgong LETS it was very rare in the time bank.

from time to time Marion earned a few credits for offering advice to people who had innocently dropped by to help her with housework. Clearly, regular reminders of her balance would make Marion much more anxious about her situation. On the other hand, one could argue that enabling Marion to set up her own transactions with fellow members over the telephone might make it possible for her to get out and about (using fellow members for lifts), and thus to earn more credits. While the time bank staff have limited time and energy to put into arranging transactions, someone who is housebound is likely to have both the time and the motivation to improve their situation.

Other time bank members have no problem earning credits, but find it hard to spend them. Having a high positive balance is not seen as such a problem as having a high negative balance in the time bank. In fact, the Star Trader award every year goes to the member who has earned the most time credits. If a member is having trouble spending credits, the staff will often encourage them to donate some to a fellow member who finds it hard to earn credits.

*When individuals joined Woolgone LETS, they signed a Members' Agreement, promising to bring their balances to zero before they left. However, there was no punishment for members who did not do this, and many did leave with a non-zero balance, though usually a small one.*

*If an active member's balance became very large (whether positive or negative), the Core Group would offer them advice on how to reduce their balance, but they would not be punished, nor prevented from spending further.*

*Despite this lack of monitoring and punishment, the majority of Woolgone LETS members both gave and took, which suggests that they were engaging in some form of mutual aid, rather than simply acting to further their own selfish economic interests.*

**Please see Ch.6 for further investigation of how members' balances changed over time, and Ch.7 for a more in-depth examination of how currency flowed through the system as a whole.**

## 4. HOW ACTIVE TIME BANK MEMBERS WERE

### 4.1 Overall activity of individual members:

In both Steelwear Time Bank and Woolgone LETS, some individual members were much more active than others. Just fewer than half the individual members carried out only 1 to 5 transactions in the year while, at the other extreme, about 10% of individual members carried out more than 50 transactions<sup>51</sup>. The difference between the two groups lay between these two extremes: in both groups roughly half the members carried out more than 5 but less than 51 transactions, but within this group, Woolgone LETS members tended to be more active<sup>52</sup> than Steelwear Time Bank members:

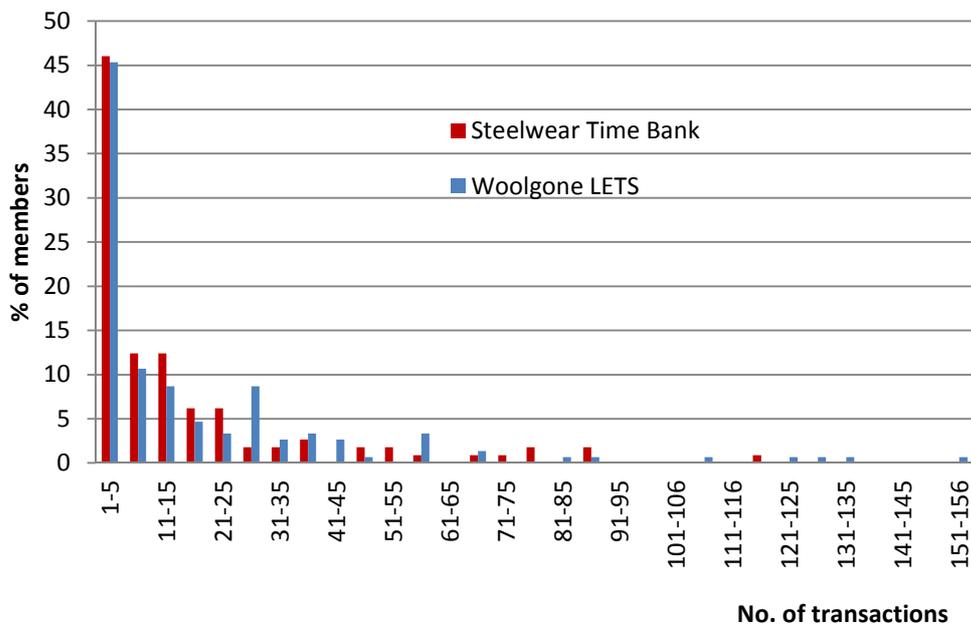


Figure 9: No. of transactions carried out in one year by Steelwear Time Bank and Woolgone LETS individual members

In both groups, activity levels were linked to number of partners and levels of direct reciprocity (see p.209), and the most active members tended to be people who had more time, because they were not in full-time work (see 0).

<sup>51</sup> Questionnaire data collected on this topic turned out to be wildly inaccurate, perhaps because the time bank was under threat of closure at the time.

<sup>52</sup> It does not make sense to present an average, as the distribution is obviously far from normal.

## 4.2 Transactional activity *between* individual members

I was particularly interested in how the individual members of the time bank interacted *with each other*, both because of the insights this might give into the evolution of co-operation, and because it is out of these interactions that friendship and social cohesion may grow.

In one year (Oct 2007-8) the 113 individual members of Steelwear Time Bank carried out 404 transactions with each other. Therefore on average an individual took part in 7.2 transactions, as either giver or receiver<sup>53</sup>.

*For the purposes of comparison, the 150 individual members of Woolgone LETS carried out 1164 transactions with each other in the year 2000, which works out at an average of 15.5 transactions per individual. In other words, on average an individual member of Woolgone LETS carried out more than twice as many transactions as an individual member of the time bank in one year.*

In both community currency systems, some individual members carried out many more transactions with other individual members than others, and roughly a quarter did not carry out any transactions with other individuals at all. For some, this may have been due to social skills or mental health issues which made it hard to interact outside group activities. Others may simply have found it hard to find ways to spend community currency because of the range of skills available.

At the other extreme, in both groups a small number of members (11% of Woolgone LETS members, and 4% of Steelwear Time Bank members) carried out more than 50 transactions with other individual members:

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<sup>53</sup> Transactions per individual = no. of transactions/no. of members, all doubled because each transaction involves two members: one as giver and one as receiver.

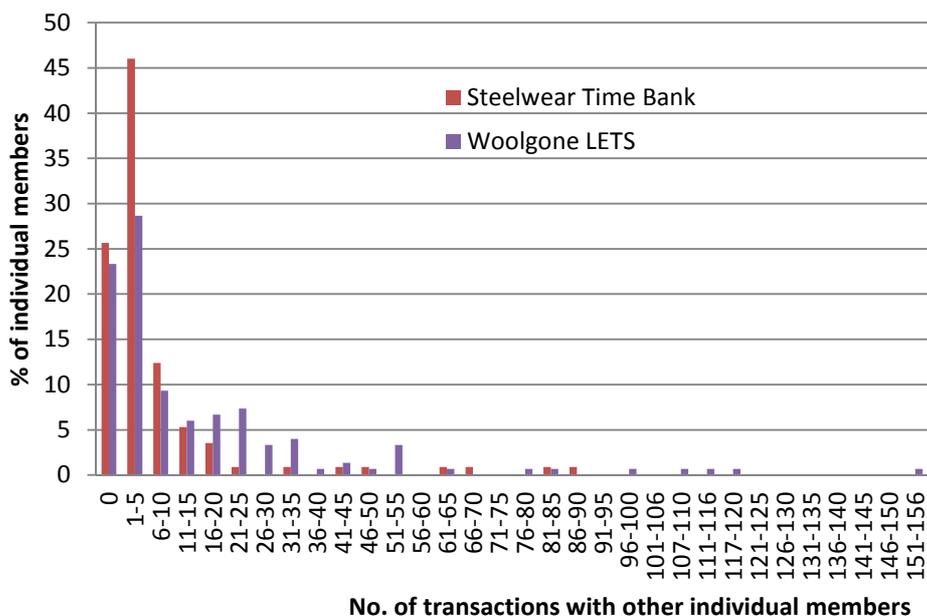


Figure 10: Transactions with other individual members in a one year period

Again, the greatest difference between the two groups lay between these two extremes. 58% of the individual members of the time bank carried out only 1 to 10 transactions with other individuals in a year, compared with only 38% of Woolgone LETS members. By contrast, while only 14% of individual time bank members carried out 11 to 50 transactions in a year, 30% of individual Woolgone LETS members did so.

### 4.3 Number of transactional partners

In both Steelwear Time Bank and Woolgone LETS, there were a few individual members who carried out transactions with many other individuals, but the majority only had a few partners. In other words, the degree<sup>54</sup> distribution was not normal, but highly right-skewed:

<sup>54</sup> The term 'degree' is used in network analysis to denote number of partners.

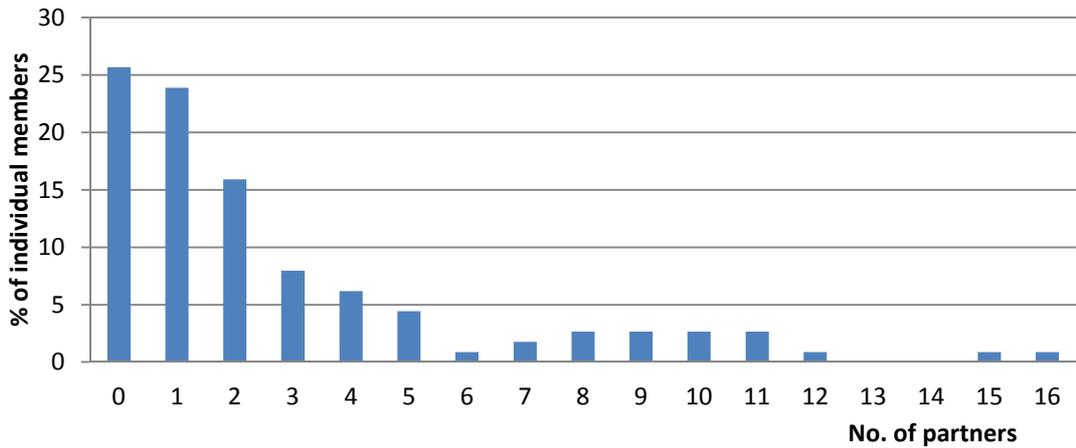


Figure 11: No. of transaction partners for individual members of Steelwear Time Bank (Oct 2007-8)

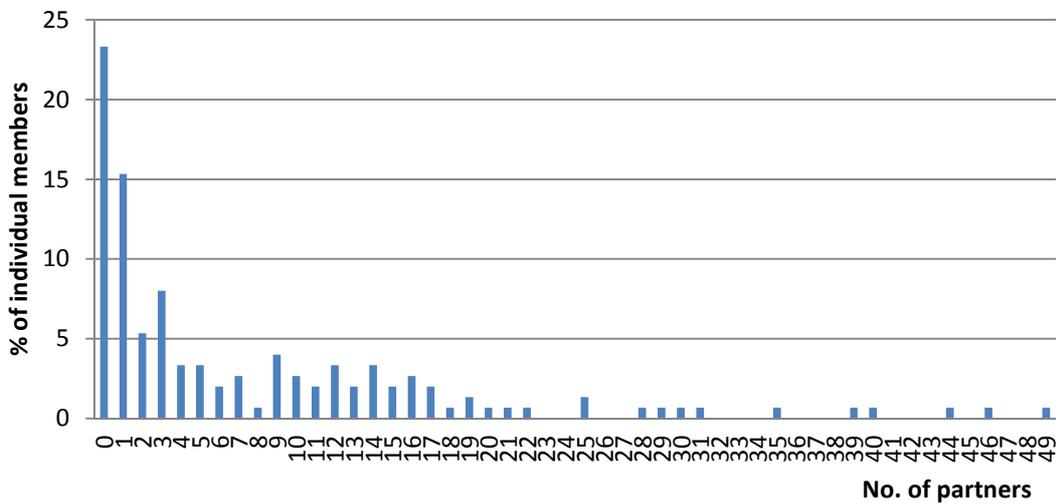


Figure 12: No. of transaction partners for individual members of Woolgongone LETS (2000)

For a discussion of how this type of degree distribution may have evolved, see p.215. For a discussion of its implications for social cohesion, see 0.

While the overall shape of the two distributions appears similar, upon closer inspection there are important differences. In Steelwear Time Bank, 66% of individual members only interacted with up to 2 partners in the course of a year. When members who did not carry out any transactions with other individuals are removed from the calculation, 54% of members only had 1 or 2 partners. There were 9 members who had 10 or more partners, and the maximum number of partners was 16.

*In Woolgone LETS, 21% of members only interacted with up to 2 partners. When members who did not carry out any transactions with other individuals are removed from the calculation, 27% of members only had 1 or 2 partners. There were 48 members who had 10 or more partners (32% of all individual members), and the maximum number of partners was 49.*

In short, Woolgone LETS members tended to have many more partners than Steelwear Time Bank members. While the majority of time bank members (66%) had only 1 or 2 partners, the majority of Woolgone LETS members (56%) had 3 or more partners.

It seems likely that Steelwear Time Bank members had relatively few partners because members were encouraged to go through the broker rather than setting up transactions for themselves. The broker tended to arrange for members who already knew each other to carry out transactions together, as otherwise he would have to be present at the transaction to introduce members to each other (see p.146).

Finally, in both groups about a quarter of individual members did not carry out transactions with other individuals at all. It would be interesting to find out more about these individuals and what they got out of membership. It is possible that they preferred to take part in group activities (e.g. helping out in the Time Bank Café) because of issues with social skills or mental health.

#### **4.4 Level of recorded activity versus real life**

It is important to remember that transaction data only reveals how many favours have been *recorded*. Time bank members who carry out favours for each other on a regular basis, and are therefore allowed to set transactions up for themselves, will often fall into a habit of only telling the time bank office about their transactions every few months or so, and may forget exactly how many transactions have taken place. A couple of long-standing members told me that they help out friends who they originally got to know through the time bank without bothering to use time credits. This applies to both Steelwear Time Bank and Woolgone LETS<sup>55</sup>, so the comparisons between them still hold.

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<sup>55</sup> Although one could argue that it is more likely that Woolgone LETS members fail to record transactions as they set them up and record them for themselves, one could also argue the opposite: that Woolgone LETS members are more likely to record transactions, because Curlies are more valuable to them, and thus they are more highly motivated to earn them (see Ch.7 about time credits and inflation).

#### 4.5 What prevented time bank members from being more active?

When asked in the questionnaire what would help them to become a more active member of the time bank<sup>56</sup>, members answered as follows:

**Table 2: Responses to question 'Which of these (if any) would help you become a more active member of the time bank?'**

Having more free time	25 (51%)
Having different skills to offer	15 (31%)
More social events	15 (31%)
Being in better health	14 (29%)
More skills (eg. typing, plumbing) on offer	14 (29%)
Knowing more of the other members	11 (22%)
More things (eg. furniture, vegetables) on offer	9 (18%)
Being able to get hold of the broker more easily	4 (8%)
Being able to get more credits for things	3 (6%)
Being able to arrange exchanges directly with other members	1 (2%)

It is interesting that although Steelwear is an area of high unemployment, 51% of questionnaire respondents said that having more free time would help them to become more active members of the time bank. While it is considered socially acceptable to excuse oneself from things on the basis of being 'too busy', the time bank staff often spoke of members being pressed for time, and of how this made it hard to persuade them to carry out exchanges. Despite low levels of full-time employment, many time bank members had some form of part time work, and had to perform a juggling act between work and family-related responsibilities.

It would require further research to discover whether time bank members were truly busier than Woolgone LETS members, and whether or not this had anything to do with the community currency system being based in a city rather than in a rural location.

It is possible that time bank members would have found the time to carry out more transactions if there had been a wider range of services available (mentioned by a third of respondents), and if there had been more social events (mentioned by a third of respondents)

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<sup>56</sup> Again, members were given a choice of responses, and allowed to tick as many as they wanted to. There was also the option to include their own ideas but few took this up.

so that they could get to know more of the other members (mentioned by a fifth of respondents).

*In Woolgone LETS, members who were struggling to combine full-time jobs with family commitments still managed to find a place for Woolgone LETS meetings in their lives. Such individuals did not have much time to earn Curlies by carrying out tasks for fellow members, but they could pass on unwanted second-hand items of furniture and clothing at the meetings, thus earning Curlies to spend on services that would make their busy lives easier, e.g. baby-sitting. In the process they were helping fellow members who were time-rich but had little cash to spend to improve their quality of life.*

## **5. WHAT TIME BANK MEMBERS SPENT THEIR CREDITS ON**

### **5.1 Time credits spent on transactions between individual members:**

In Steelwear Time Bank, only 25% of time credits were spent in transactions between individual members. These transactions involved a wide range of activities, from pet-care to gardening, from tuition in English as a second language, to shopping for someone, or giving them a lift somewhere.

However, many of the goods and services popular in many LETS were noticeable by their absence in the time bank. Sometimes this was because of safety issues. For instance, a time bank member would not be allowed to use something potentially dangerous, like a chain-saw or hedge-trimmer, on behalf of another member unless he or she had appropriate certification. Even services like decorating or gardening required supervision by time bank staff to ensure they were done safely and correctly, which limited their availability to members.

For similar reasons, time bank members were not allowed to provide child-care, unless they were registered child-minders<sup>57</sup>. As looking after other people's children is one of the few things one can do easily while looking after one's own children, this made it much harder for families to earn time credits.

Other services may not have been on offer because members with skills at a professional level were not allowed to charge a combination of time credits and Sterling, using the Sterling

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<sup>57</sup>The history behind this was that there had been a particularly shocking case of child abuse perpetrated by a council worker in the area. One could argue that the very fact that this had happened was proof that being registered was not a guarantee of children's safety.

to cover their tax (as in many LETS). This is probably why few alternative health treatments were available, despite the fact that they were in demand from time bank members (Members Satisfaction Survey, carried out by Mellor, 2005).

While the services on offer were very useful to more vulnerable members of the community, it was not always obvious how more able-bodied members could spend their time credits, especially as services like decorating or gardening were in high demand but limited supply. As a result, members like Graham (see case-study, p.141) tended to accumulate large numbers of time credits.

In Steelwear Time Bank, only 2% of time credits were exchanged for things (see p.150).

*In Woolgone LETS, 83% of Curlies were spent in transactions between individual members. The services members spent most Curlies on were DIY/gardening, holiday accommodation and complementary health treatment. However, 27% of Curlies were spent on things<sup>58</sup> rather than services.*

## **5.2 Transactions involving organisational members:**

70% of time credits were spent in transactions between organizational members, or between organizational members and individual members<sup>59</sup>. The majority of these time credits (44% of all credits), were spent on meals from the time bank café. Advice/counselling by staff accounted for a further 10%, and administrative tasks for 7%. The role of organizational members in the time bank is explored further in 0.

*In Woolgone LETS, only 17% of Curlies were spent in transactions<sup>60</sup> involving an organizational member (on one or both sides of the transaction), of which 7% were spent on LETS wages (the Curly payments made to members of the Core Group for their services rendered to the LETS).*

The pie-charts overleaf show what proportion of time credits were spent in transactions between individual members, and what proportion were spent in transactions involving one or more organisational members. They also show what proportion of time credits members spent on particular goods and services.

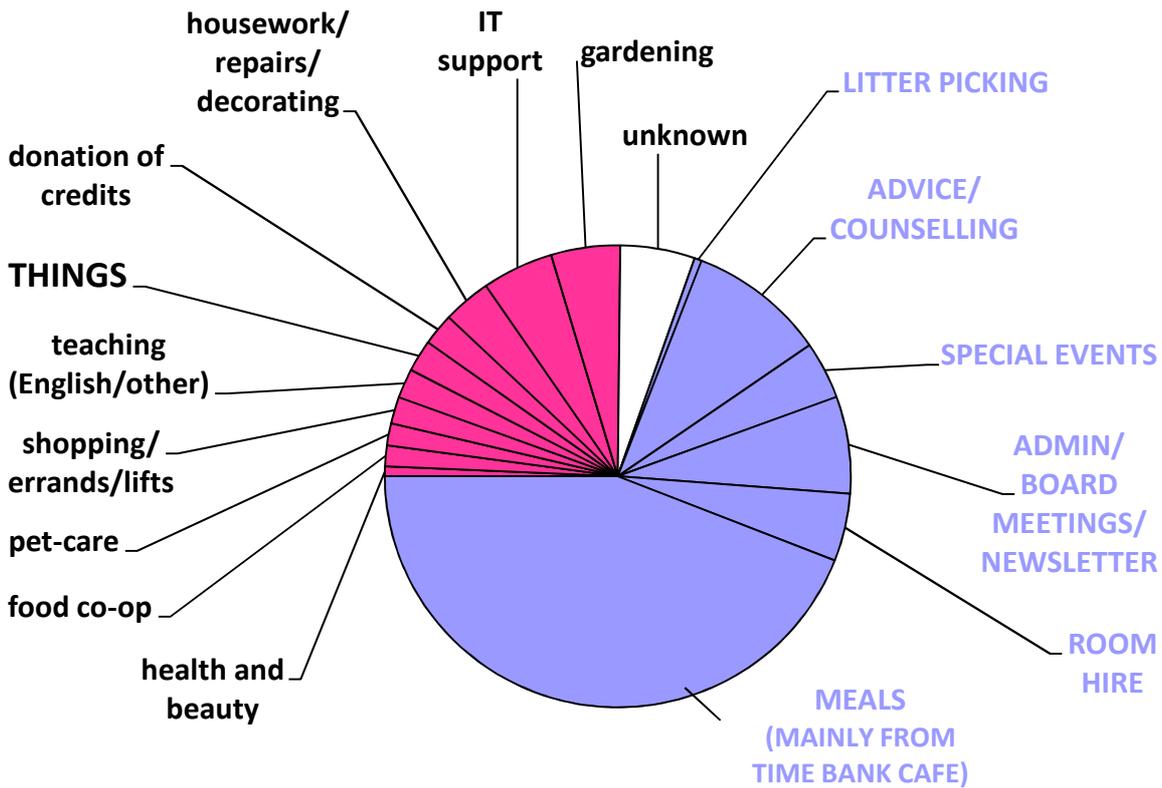
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<sup>58</sup> Not including food from the food co-op as Curlies were paid for delivery rather than for the food itself.

<sup>59</sup> The remaining 5% of transactions could not be categorized because of lack of information.

<sup>60</sup> Curlies spent on membership were not included, as time bank members do not pay membership fees so this would be an unfair comparison of the two groups.

**HOW TIME CREDITS WERE SPENT IN STEELWEAR TIME BANK (OCT 2007-8)**



**HOW CURLIES WERE SPENT IN WOOLGONE LETS (2000)**

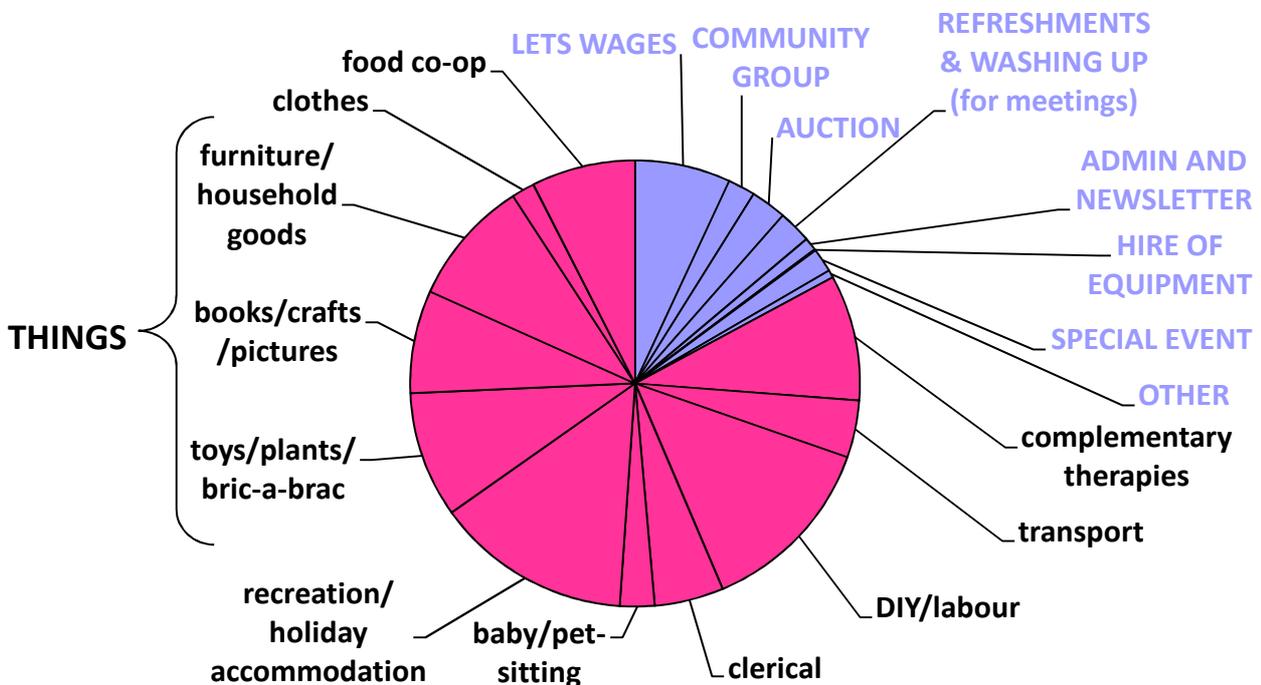


Figure 13: Pie-charts of how community currency spent in the two systems

KEY :

individual to individual



ORGANISATION-INDIVIDUAL, or ORGANISATION-ORGANISATION



## Section V: CHANGE AND THE FUTURE FOR STEELWEAR TIME BANK

### 1. How members felt about how Steelwear Time Bank had changed

37% of questionnaire respondents felt the time bank had improved over time:

*It has got better because it has evolved to suit the needs of the community it serves. It was set up as a time bank but it is a more rounded community resource now.*

*It now does more for the community.*

*It has got better in terms of environmental stuff (hanging baskets, cleaning planters, recycling, litter picking).*

*Projects are more efficiently run and delivered.*

Upon closer examination many of these comments came from board members or staff; ordinary members were less sure.

While some were quick to praise the dedication of the staff:

*The staff have worked incredibly hard to make the time bank what it is.*

and some felt there was more variety of things on offer:

*There is more involvement with other organizations and businesses and more courses for members to do.*

others felt that the original purpose of the time bank, to organize exchanges between individual members, had been somewhat sidelined:

*There seems to be less energy put into organizing exchanges, or perhaps it is more difficult for staff to organize, they take longer to be organized.*

*There is less focus on credits themselves, and more on running other community projects.*

However, only 5% of members felt strongly enough about these issues to claim that the time bank had changed for the worse:

[I think it has got] slightly worse, as I have sometimes not been able to contact the office via phone.

One member, embittered because his own specialist skills had never been taken up by other time bank members, commented that 'instead of offering high level, worthwhile skills, it [the time bank] seems to be a way for unemployable losers to get stuff for free'. It is likely that most time bank members would have found this person's comment highly offensive. I have only included it because it is true that the time bank's focus was on everyday skills, eg. getting someone's shopping, rather than specialist ones, eg. music teaching, and that some members would have found it easier to spend their credits if a wider range of skills had been available. It is also true that there were some members who found it very hard to earn system currency, had amassed high negative balances, and yet continued to benefit from the skills of other members. Most time bank members accepted these facts, but anyone who did not was unlikely to find membership of the group a satisfying experience.

## **2. How members felt Steelwear Time Bank could be improved**

35% of members felt that having more social events would increase their involvement in the time bank (see p.122), while several members felt the staff should put more of their energies into setting up transactions:

*If you offer something, then you should hear yes or no back, rather than silence.*

*Each member in the office knowing who has exchanged what [would improve the time bank], there is confusion sometimes.*

*More time spend on arranging exchanges [would improve the time bank].*

*I've not been asked to do tasks/exchanges very often.*

*More proactive approaches to members, encouraging them to participate.*

Some members felt that the time bank could also offer more skills-based courses, for instance in decorating. One member suggested that the time bank could establish a pool of equipment to lend out to members, eg. a carpet cleaner, or camping equipment. A couple of members felt that more should be done to involve young people. One suggested that including more teenagers might be beneficial to all, with teens carrying out tasks like dog-walking for older members, in exchange for help with homework.

While many of these are excellent ideas that the time bank staff would probably be keen to put in place if their funding issues were behind them, others would take more of a sea-change in attitudes. One staff member explained that social events were not a priority because they did not directly generate credits. A more long term view might be that social events help members to get to know each other better, which will naturally generate a greater flow of credits between them, provided of course that members are encouraged to set up transactions for themselves. Currently, the practice of members setting up exchanges for themselves is frowned upon, unless members have carried out similar transactions before together (see p.0146). This norm would have to change were social events to become a more central part of the time bank, but changing it would mean a massive shift in the current organizational culture.

Finally, given the current economic situation, it is unclear how long Adult Services will be able to support the time bank. A more sustainable and long term solution is needed (see 0 for further discussion of the possibilities).

### **3. The future of Steelwear Time Bank**

The future of the time bank is far from certain. Until recently, Steelwear time bank received core funding from New Deal and Northern Rock, with additional smaller pots of funding for many of its satellite projects. However, when I started my fieldwork, New Deal funding had come to an end, and Tamsin the project manager was desperately scrabbling for more funding.

In September 2011 the time bank was actually forced to close due to lack of funding. Fortunately, within a week the council's Adult Services department had been persuaded to step in and rescue the project. When the time bank reopened, however, it was with a much reduced budget. This led the Board to dismiss Jonathan the broker, a popular staff member who had built up strong relationships with many time bank members. Although Shana and Roshni now set up transactions, one can only imagine that without a designated broker, less time and energy will be put into arranging transactions between members in the future.

As mentioned in Ch.3, my questionnaire was administered only a few weeks before the time bank was forced to close, at a time when everyone was very worried about what the future

might hold. Many members used the questionnaire to praise the time bank staff and their work. However, several used the opportunity to make the point that what the time bank needed was a reliable and long term source of funding. One board member admitted 'If we had more time to fund raise on a more strategic level the long term future would be easier to secure. As it is the time bank is not operating as well as it could because of funding uncertainties'.

Unfortunately, the current global economic crisis is going to make it yet harder for community organizations to obtain long-term funding. If Steelwear Time Bank and its fellow time banks are to survive, they must find a way to survive which is - at least to some extent - independent of external financial support. This is not impossible; one has only to look at the Church to see that individuals are willing to pay for they believe in. It would be especially ironic if community currency systems in the West were to fail because of the very scarcity of national currency which they were originally created to deal with.

*Since I carried out my fieldwork ten years ago, there have been many changes to Woolgone LETS. Although it was seen as one of the most successful LETS in the country, and regularly contacted by other LETS looking for advice, the person who had set it up felt it was not reaching the people who needed it most: the unemployed, and those with chronic physical or mental disabilities . In the end she left Woolgone LETS to start up a time bank in the hope that having funding, an office and a paid worker would enable her to bring the benefits of a community currency system to people who were unemployed or on low incomes. Unfortunately, for many reasons, the time bank did not succeed. Meanwhile, Woolgone LETS continues but in a much reduced form, which suggests that her personal energy, commitment and values were in some way vital to it.*

## **Ch.5            SOCIAL COHESION AND SOCIAL REACH IN STEELWEAR TIME BANK**

### **INTRODUCTION**

In Ch.2 Part I the concept of 'social capital' was explored and problematised, and finally rejected in favour of two distinct concepts: social cohesion and social reach.

The current chapter begins by looking at problems relating to social cohesion and reach in Steelwear. First of all I look at particular groups of Steelwear residents who are less likely to be integrated into the wider community, or have limited access to resources within or outside this community, and at whether people from these groups join the time bank. Then I examine the impact of the high levels of ethnic diversity in Steelwear on social cohesion in the area, and the time bank's role in bringing people from different ethnic groups together.

Next, I look at manifestations of social cohesion and social reach amongst time bank members themselves, and particularly for evidence that the time bank has influenced the social cohesion and/or reach of its members.

Like Ch.4, this chapter draws upon questionnaire results, interpreted not in isolation, but within the context of qualitative data from participant observation and informal interviews, juxtaposed against data from time bank staff, and supplemented by national survey data specific to the areas concerned. In addition, social network analysis of transaction records is used to support - or alternatively to question - my qualitative findings. Please refer back to Ch.2 Part I Section IV0 for a fuller account of why particular network properties have been chosen here, and the issues relating to them.

Wherever possible, comparisons are made using data from my earlier work with Woolgone LETS (Panther, 2000). Although I was not able to administer my questionnaire to Woolgone LETS members as my work there took place ten years ago, I was able to re-analyse the transaction records of Woolgone LETS members using social network analysis, and to make sense of these results using the qualitative data I collected during my original fieldwork.

## **Section I: PROBLEMS RELATING TO SOCIAL COHESION AND REACH IN STEELWEAR**

### **1. Do Steelwear residents at particular risk of social exclusion join the time bank?**

In Steelwear, people living alone, the long-term unemployed, and people with ongoing mental or physical health issues seemed to be at particular risk of suffering a low level of integration into the wider community, or having limited access to resources as a result of a lack of social connections. Some individuals fell into all of these categories. Here I look at how successful the time bank was at attracting individuals from these groups.

#### **1.1 Extended families, versus people living alone:**

It is often reported that poorer areas have a strong sense of community, with a high proportion of extended families, whose members traditionally help each other through bad times (e.g. Bott, 1957).

There were certainly many extended families in the areas surrounding Steelwear, both White and Asian. Time bank members from these areas spoke of their cousins and uncles living in nearby streets. Sometimes their presence was a blessing: one man mentioned how he tried to keep an eye on his young nephews and nieces and had got them involved in the time bank to keep them out of trouble. Sometimes it was more of an obligation: one young Asian mother mentioned that her relatives popped in frequently, and she was always expected to prepare food for them all.

However, in Steelwear itself 25% of people lived alone, compared with only 19% in Fortismouth as a whole (ONS, 2001 Census), and 14% nationally (Table 2.2, ONS, 2008:17). Many of these people were below retirement age.

These data have to be taken in context. Over the last thirty years, there has been a dramatic increase in the percentage of people living alone in the UK. This is largely due to a doubling of the percentage of people below retirement age living alone (Table 2.2, ONS, 2008:17), the result of 'an increase in the number of divorces, a tendency for young people to live alone before cohabitating, or getting married, rather than moving in with a partner directly from the family home, and an increase in international migration' (ONS, 2008:19).

The high percentage of people living alone in Steelwear is clearly related to the housing available. 42% of dwellings are flats (ONS, 2001 census<sup>61</sup>), most of them rented out by private landlords to council tenants. These flats are in high demand, and the council has a waiting list for them. However, they tend to appeal to people of limited income living alone. Growing families tend to apply for a council house in one of the surrounding areas.

People living alone in Steelwear and the surrounding areas were clearly drawn to the time bank: 45% of questionnaire respondents reported that they lived alone<sup>62</sup>, with 38% of all male respondents and 50% of all female respondents living alone. While some of these individuals were elderly, of those respondents who reported living alone 64% were below retirement age.

People living alone often joined the time bank out of a desire to 'become part of something larger than oneself' as one such member put it, to get help with household tasks they could not manage alone, or simply to make new friends. Maggie (see case-study, p.137), a single parent whose daughter had grown up and gone to live abroad, talked about the time bank as being like a safety net, something she could turn to in a crisis. When she had to go into hospital at short notice, it was the time bank staff who arranged for someone to look after her cats.

## **1.2 The long term unemployed in Steelwear:**

Komter describes how - possibly through a combination of lack of money and restricted social networks - the unemployed tend to both give and receive less than other members of society. This effectively excludes them from mainstream society, the solidarity of which is based upon such exchanges (Komter, 2005:92).

As described earlier (see p.135), there is a history of long term unemployment in Steelwear, but the fact that 20% of questionnaire respondents claimed to be unemployed (more than double the official figures for the area) suggests that the time bank has been incredibly successful at persuading unemployed residents to join.

## **1.3 People with ongoing physical or mental health issues:**

High numbers of people with ongoing health issues live in deprived areas, because such people tend to have a limited income, and are thus unable to afford to live elsewhere. While only 10% of questionnaire respondents said reported being unable to work because of chronic ill health, 16% of respondents declared that they had particular health or support needs which affected their role within the time bank and what they wanted from it. These needs ranged from

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<sup>61</sup> Census output is Crown copyright and is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland.

<sup>62</sup> Another 45% lived as a couple, with or without children, and 10% lived with relatives.

physical problems which severely restricted mobility, to mental health problems and learning disabilities, to a lack of childcare.

From talking to staff and getting to know time bank members in the course of my fieldwork, it appears that members suffering from severe disabilities or long term illness were underrepresented among questionnaire respondents. When one includes members with physical or mental health problems or disabilities who did not fill in the questionnaire, or who did not declare these issues in it, about a third of time bank members have such issues, much higher than the 10% of Steelwear residents who reported having 'not good health' in 2001 (ONS, 2001 census).

## **SUMMARY:**

In short, Steelwear time bank appears to be successful in attracting members from precisely those groups in society who are most likely to be socially excluded: people living alone, the unemployed, and people with chronic mental or physical health needs. This is important because one of the main criticisms that has been levelled at other types of community currency system (e.g. LETS) is that they fail to attract such individuals (see p.29).

## **2. Impact of high levels of ethnic diversity on social cohesion in Steelwear**

As mentioned before, there were many positive sides to the high levels of ethnic diversity<sup>63</sup> in Steelwear. Several members spoke of the vibrant multi-cultural nature of the area, and how they enjoyed living in Steelwear because of this. In addition, people from ethnic minorities were less likely to experience racism than in other predominantly White parts of Fortismouth (see p.115).

However, comments members and staff made in the course of my fieldwork suggested that the community was somewhat fragmented, with a tendency for people to socialize with others from the same ethnic background. One young Asian man commented that although he himself had 'different colour friends', 'you rarely see people mixing'. Meseret (see case-study, p.138), an asylum seeker from Africa, commented that she had never been inside a white person's house, and that she tended to socialize with people from her country, who all attended the same church, and helped each other. Jonathan the broker confirmed that - outside the time bank - people tended to mix most with people from the same ethnic background, adding that

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<sup>63</sup> I include white British members of the community as one of the ethnic groups I am talking about.

at least in Steelwear people would talk to their neighbours whatever their colour, and that he had noticed that inter-marriages were becoming more common.

While many different languages were spoken locally, it was not merely a language barrier that kept people apart. For instance, Hindi was widely spoken because of Bollywood, but despite this access to this common language, Pakistanis and Bengalis tended not to mix because of cultural issues, sometimes relating to different interpretations of Islam, e.g. how women should dress, and whether or not shellfish should be eaten.

According to one member, levels of ethnic conflict had risen in the last five years as there had been a large influx of Iraqis and Iranians who tended to treat women very differently to how we do in the UK. This same member pointed out that there had long been a thriving Pakistani community in the area, but they had tended to keep themselves to themselves, which she felt led to less ethnic tension.

It seems likely that this lack of overall cohesion made it harder for members of the community to deal with problems which affected everyone, from the high levels of litter in the street, to gangs of young men on street corners after dark, or joy-riding (see p.109).

## Section II: EVIDENCE OF THE TIME BANK LEADING TO INCREASED SOCIAL COHESION AMONG ITS MEMBERS

In this section I explore evidence for the idea that the time bank has increased the social cohesion of its members, creating a sense of community. On the one hand, the lack of transactions between members coupled with a lack of social events mean there are limited connections between members, and many of them don't know each other very well. On the other, the time bank appears to play an important role in bringing together individuals from different ethnic groups, and there is a sense of generalised trust in the community as a whole, mediated by the staff, which spills out into the wider community.

## 1. Participant observation gives impression of lack of social cohesion

I spent many months coming up to Steelwear time bank, interviewing members and carrying out transactions with them, and attending time bank events. For a long time I felt that I must be missing something, because - although I made every effort to get to know time bank members and got to know some individual members quite well - I still felt I had no sense of the group as a whole. Instead, my impressions of the time bank were much dominated by the staff and the time bank office, where indeed I spent much of my time.

At first, I wondered whether this lack of a sense of the group as a whole was due to the fact that I was not living in Steelwear, and only coming into the area a few times a week. Then - to my astonishment - my name appeared on the list of top traders at the AGM. Apparently, despite not living locally, I was one of the time bank's most active members.

Next it occurred to me that perhaps I was making unfair comparisons between Steelwear Time Bank and Woolgone LETS.

In a LETS social events are essential as this is how members get to know each other, and thus to set up transactions with each other. Woolgone LETS had monthly get-togethers which were very popular, often filling a village hall. At these meetings LETS members would mill around, chatting and sharing food, and exchanging things they had brought to trade (Panther, 2000). These meetings gave members the opportunity to put their shared values into practice, embodying them in the way they carried out transactions. For instance, someone charging for items as if Curlies were Sterling would be brought back into line with gentle ribbing from other members (see top of p.121 for a description of such an incident).

In time banks, members are encouraged to use the broker to set up transactions. The only regular opportunity for Steelwear Time Bank members to get together was at the weekly café evening. Only one clique of members - consisting of 9 individuals - attended the café more than once in a while, and no transactions between individuals took place there. Perhaps Steelwear time bank had a different way of doing things, with less of an emphasis on social events, but one which was just as effective?

However, when I interviewed time bank members they rarely mentioned friendships with other time bank members, and indeed several admitted that they knew few other members. Instead, what came up again and again was how much members valued their relationships with the time bank staff themselves. They saw the staff as their friends, and felt they could rely upon them to be there for them at times of need. This seemed to confirm my own experiences and feelings as a time bank member.

## 2. Interpreting questionnaire results in terms of transaction records and data collected during informal interviews

Directly contradicting the impressions I had formed during participant observation, and the evidence I was collecting through interviews, questionnaire respondents claimed to have made large numbers of friends through the time bank<sup>64</sup>:

**Table 3: Responses to question ‘Have you made friends through the time bank? If so, how many?’**

No. of friends	No. of friends members claimed to have made through the time bank								Total
	1-3	4-6	7-9	10 +	Some /lots	0	Don't know	Left blank	
No. of respondents	10 (20%)	8 (16%)	6 (12%)	11 (22%)	4 (8%)	4 (8%)	4 (8%)	2 (4%)	49

Faced with such a discrepancy, I turned to the transaction records in an attempt to clarify the situation. As there were few social events, it seemed likely that time bank members who claimed to have made friends had done so in the course of carrying out transactions for each other. However, the transaction records for the year 2/10/07 to 2/10/08 (see p.161) revealed that on average individual time bank members carried out only 7.2 transactions with other individual time bank members. For means of comparison, in 2000 on average an individual member of Woolgone LETS carried out 15.5 transactions with other individual members – more than twice as many<sup>65</sup>.

Given that 51% of questionnaire respondents claimed to have made 4 or more friends through the time bank, it appears that there was a bias among questionnaire respondents towards the more active members of the time bank: those who both carried out more transactions, and had more partners, the system ‘hubs’.

Furthermore, the fact that the time bank was under threat of closure at the time the questionnaire was administered appears to have encouraged some members to exaggerate how many friends they had made through it. For example, one member wrote on their questionnaire that they had made more than 10 friends through the time bank, but several

<sup>64</sup> This was when respondents were specifically asked if they had made friends through being in the time bank. It is interesting that when they were asked what they got out of time bank membership, only 20% mentioned friendship (see p.169).

<sup>65</sup> Even when members who did not carry out any transactions with other individuals and members who carried out 50 or more transactions with other individuals, were eliminated from the calculations, on average time bank members carried out only 13 such transactions in a year, compared with 24 in Woolgone LETS.

months later told me that they had never made any real friends amongst time bank members, and in fact had never been inside any other member's home.

It was also likely that some long-term members of the time bank had made friends with other members in previous years when the time bank held more frequent social events, and/or arranged more transactions between individual members.

Finally, members were likely to have understood the word 'friend' in a number of different ways. More accurate data about friendship might have been obtained if I had asked members to name their friends and/or if I had defined the term 'friend' in some way (perhaps as someone a member had contact details for, had met up with in the last year, and would like to stay in contact with, after Roberts et al, 2009:140).

### **3. Social network analysis confirms suspicions about lack of overall cohesion**

I was further reassured that my early impressions of the time bank were something close to the truth when I carried out social network analysis of transaction data. As discussed in Ch.2 Part I, one way of measuring social cohesion is in terms of the density of a social network: the total number of actual ties divided by the total number of possible ties.

In the year 2/10/07 to 2/10/08, Steelwear Time Bank had 113 active individual members who carried out a total of 404 transactions with each other. The density of the network was 0.0137 (meaning that only 1.3% of all possible ties<sup>66</sup> between individual members were present), and on average an individual member had 2.5 partners<sup>67</sup> in this period (see diagram on facing page).

*By contrast, Woolgone LETS had 150 active individual members in the year 2000. These members carried out 1164 transactions with each other. The density of the network was 0.0303 (meaning that 3.0% of possible ties were present), and on average, an individual member had 5.2 partners (see diagram on facing page). The fact that the Woolgone LETS network had a much higher density than the Steelwear Time Bank network suggests greater social cohesion in Woolgone LETS.*

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<sup>66</sup> A tie is a link between two individuals, connected by a transaction or transactions.

<sup>67</sup> This figure is the normalized average degree of the network. It is considered to be a more meaningful measurement of network cohesion than density, as it removes any effect of network size (de Nooy, 2005:64), while normalizing the data lessens the effect of outliers.

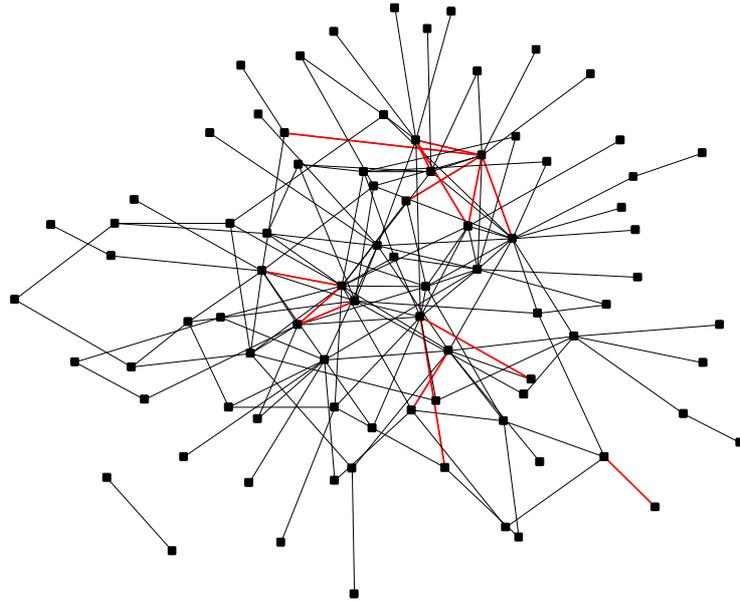


Figure 14: Ties between individual members of Steelwear Time Bank (Oct 2007-8)

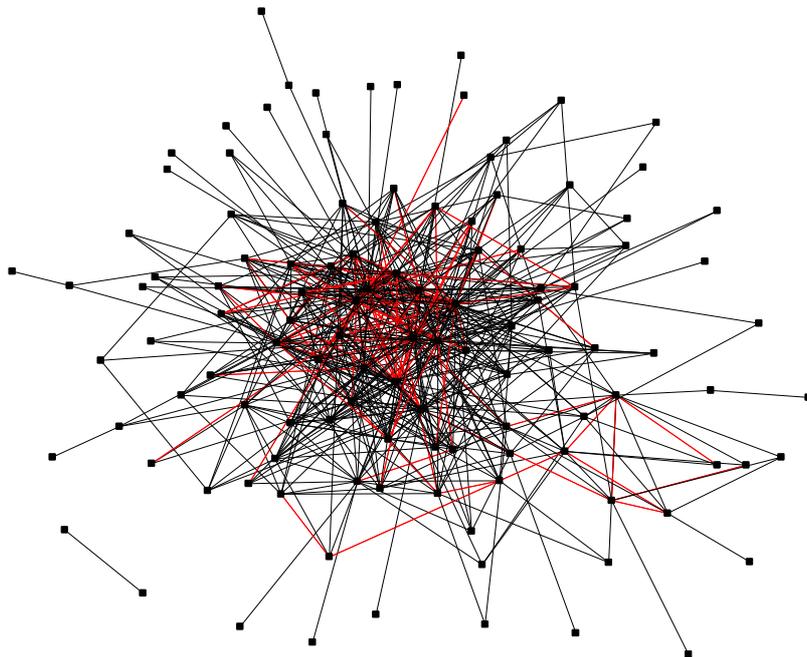


Figure 15: Ties between individual members of Woolgong LETS (2000)

In short, the individual members of Woolgone LETS carried out roughly twice as many transactions with roughly twice as many partners as the individual members of Steelwear Time Bank. The result was that Steelwear Time Bank social network was much less dense than the Woolgone LETS one.

Unfortunately, it is not possible to test the statistical significance of this difference using ANCOVA, as the networks are of different sizes<sup>68</sup> (see also p.71). However, the fact that the larger network (Woolgone LETS) is three times *more* dense than the smaller network (Steelwear Time Bank)<sup>69</sup> makes it likely that the difference is significant, as density normally *decreases* with network size (de Nooy et al, 2005:63; see p.66).

It seems likely that the lower density of the Steelwear network had much to do with how the two groups were run, in particular the fact that Steelwear time bank held few social events (see p.122), and discouraged its members from setting up transactions for themselves (see p.146).

An alternative - or possibly complementary - explanation is that the greater social cohesion in Woolgone LETS is due to its members having more in common with each other. This idea is explored below.

#### 4. Diversity, a challenge to cohesion?

As described earlier (see p.50), homophily is the tendency for similar individuals to cluster together. The members of Steelwear time bank were more diverse than those of Woolgone LETS<sup>70</sup>, not only in terms of ethnicity but also in terms of class, income and educational level (see p.135). It would be a mistake to assume that such characteristics such as gender or ethnicity have exactly the same influence upon cluster formation in Steelwear as in the USA more than twenty years ago when Marsden carried out his research (Marsden, 1987). However, it is important to consider the possibility that the greater diversity of Steelwear Time Bank members made it harder to create social cohesion in Steelwear than in Woolgone.

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<sup>68</sup> As the statistical analysis of networks is at the cutting edge of network-based research, I asked Professor Everett of the Mitchell Centre for Social Network Analysis for his advice on the specific issue of comparing the densities of networks of different sizes. He told me 'You cannot use ANCOVA as it assumes the errors are normally distributed' (email communication, 29/9/2011).

<sup>69</sup> Woolgone LETS had 150 active individual members whereas Steelwear only had 113.

<sup>70</sup> On the other hand, the level of homogeneity in Woolgone should not be overstated: one of the reasons Woolgone LETS' social gatherings were so popular was because members enjoyed the opportunity to meet people from many different backgrounds and ways of life. For instance, townspeople could meet farmers, spinsters could meet families with young children, and alternative health practitioners and craftspeople could meet people with similar interests from the other side of the county.

In my questionnaire, I specifically asked whether time bank members - when *not* involved in time bank activities - tended to mix with others of different ages, social classes, and ethnic backgrounds. Roughly two thirds of respondents reported that they mixed socially with people from many different backgrounds. However, given that this was the 'politically correct' answer, these responses - like those to the question about friends (see p.179) - could not be taken at face value. More reliable results would have been obtained if I had asked individuals to list their friends, and to give information about their age, occupation and ethnic origins.

As I have already described, comments time bank members and staff made in the course of my fieldwork suggested that the community was somewhat fragmented, with a tendency for people to socialize with others from the same ethnic background (see p.176).

Many time bank members spoke positively about how being in the time bank brought people from many different ethnic and class backgrounds together. For instance, Marion (see case-study, p.142) explained that although outside the time bank she tended to mix only with people from the same ethnic group, she was very glad that through the time bank she had got to meet and become friendly with people from many different cultures and backgrounds. Another member who worked full time in a company where most employees were White British commented that 'the time bank gives good opportunities to mix with people of other ages and ethnicities - I value this'.

One could argue that bonds and friendships between individuals become more valuable the less homogeneous a neighbourhood is, especially where they bring together members of groups between which there have traditionally been tensions, or bring together people who have access to very different resources and information. If there is a tendency for people to associate with others of the same ethnic and/or class background, it may be important that people are not left to their own devices (setting up transactions with those who are similar to them), but encouraged by the time bank broker to make friendly contact with others from very different backgrounds. Perhaps one should not judge the success of a community currency system solely in terms of the number and strength of the social ties it creates, but include some adjustment for the level of diversity in the group the system is working with, and thus the value (to the community as a whole) of any ties created between different groups.

## **5. Social benefits of membership, despite lack of social cohesion**

Given the low level of interaction between members, and the fact that many of them did not know each other, the responses to one questionnaire item surprised me: 46% of respondents said that they trusted other time bank members more than non-members, and only 19% felt this was not the case.

In my opinion, this trust was not based upon individuals' knowledge, experience and friendships with other individual members, but rather was a kind of generalized trust placed in the organization itself, via the staff.

Time bank members knew that if another member did not behave in an appropriate way, the staff would put the situation right. For instance, if a member turned up at the office at a pre-arranged time to carry out a transaction for another member who did not show up, he or she would still earn a credit (from the community pool), while the person who had not turned up would be reprimanded by staff.

In a similar way, many time bank members felt that the time bank *as a whole* provided a kind of safety net they could rely upon in a crisis. When Stephanie (see case-study, p.139) broke her leg and was almost housebound for several weeks, she received a lot of help from time bank members. However, these were not individuals she had befriended prior to her accident, but members she had never interacted with before. Stephanie could rely upon the time bank not because she had made many friends within it, but because she knew and trusted the staff. They had got to know her over a period of time, and when she needed help from the time bank, they ensured that she received it.

It was clearly very reassuring for certain more vulnerable members of the community - especially those who lived alone and/or had chronic health problems - to belong to the time bank. Some time bank members who mainly carried out favours for others were thus accumulating time credits which they hoped to be able to draw on in some future crisis. One lady described the time bank as being 'like another friend to call for help', while another member remarked 'when you get to know fellow time bank members they all feel like friends'.

The fact that 27% of questionnaire respondents felt they could trust their neighbours (who presumably were not time bank members) more since joining the time bank suggests that for some this trust in the time bank as a whole extended *beyond* the boundaries of the time bank itself, into the wider community.

*Woolgone LETS members often referred to the group as being like their extended family (Panther, 2000), and this included the knowledge that they could draw on the support of their fellow members if there was a crisis. However, I suspect that in the event of such a crisis, members who regularly attended meetings and thus were widely known within the group would be more likely to receive support than those who kept a low profile. Certainly, in Durham Exchange members asking for help with a sizeable task (e.g. building an eco-shed) are much more likely to receive this help if they regularly attend meetings and trade widely with other members.*

### **Section III: SOCIAL REACH AND STEELWEAR TIME BANK**

As defined in 0(p.63), while social cohesion is a group-level phenomenon to do with the connectedness, or density, of a network, social reach refers to how much access an individual/community has to individuals/communities with different intellectual, physical or other resources. It is a relative term, because if all were equally connected, there would no longer be separate communities to reach between.

In this section I explore ways in which time bank members used the network created by the time bank to access resources, both from within the network, and from outside it. Members did this in a number of ways. Some used the network as a source of local knowledge, and as a way of getting to know more people living locally. For others it was a route to developing new interests and skills. Some members used the contacts they made through the time bank to find employment. For many, belonging to the time bank provided a kind of safety net in times of crisis.

I then go on to question whether these benefits really came from belonging to a network of members, or rather through the support of the time bank staff themselves. Next, I look at whether social reach was evenly distributed amongst time bank members. Finally, I explain how the support the time bank could give its members was limited by the fact that it had to remain loyal to its funders at all times.

#### **1. HOW BELONGING TO THE TIME BANK INCREASED SOCIAL REACH**

In the questionnaire, time bank members were asked what they got out of time bank membership, and their responses relating to social reach are summarised below.

##### **1.1 A source of local knowledge**

8% of respondents mentioned that the time bank was a source of advice and/or local knowledge: 'it's how you know what's going on'. As described earlier, time bank members often dropped into the office to ask staff for advice about issues ranging from housing to applications for asylum. The time bank newsletter kept members informed about local events, like the annual firework display in the local park, and the surgeries held by local MPs.

Much of this local knowledge was accessed through the staff and official channels such as the newsletter, rather than through other members themselves.

*In Woolgone LETS, members had plenty of opportunity to swap not only gossip, but local news, at the well-attended monthly social and trading meetings.*

## **1.2 Making useful contacts locally**

When asked what they got out of time bank membership, 20% of questionnaire respondents mentioned getting to know more local people, 20% friendship, and 16% support from other members or time bank staff<sup>71</sup>. Sometimes these contacts could be very useful to members. For instance, one member was an artist, but also an asylum seeker with chronic health problems. Through the time bank staff, she made contacts which led to her being invited to exhibit her work in a gallery. Later, when she was forced to move away from the area into a tower block, time bank staff helped her to find accommodation locally again.

Again, it tended to be the staff who put members in touch with useful contacts (whether inside or outside the time bank), rather than other members of the time bank. This was probably because there were few occasions when time bank members got together socially, and many time members only knew a few other members (see p.122).

*Roughly half the members of Woolgone LETS were from the villages surrounding Woolgone, many of which were quite isolated. The monthly meetings provided people with the opportunity to see people from the other side of the county, whom they would not otherwise get to know, and to hear about events that had happened far from their own villages.*

## **1.3 Developing new interests and skills**

When asked what they got from time bank membership, only 4% of respondents mentioned developing new skills or interests. However, when asked specifically whether they had gained skills or developed interests through their membership of the time bank, 56% of respondents said that they had. These included IT skills, DIY, gardening, teaching experience, catering skills, Indian head massage and yoga. A few members mentioned general social and communication skills, and increased confidence.

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<sup>71</sup> Members often mentioned more than one of these benefits.

Time bank members often picked up new skills from courses run by the time bank for its members. These courses were often employment-related, e.g. how to write a CV. Sometimes they were able to learn new skills from fellow members. For instance, a couple of members offered music lessons, one offered to share her knowledge of herbs, while several offered help with learning English or other languages.

*Woolgone LETS members had some fairly esoteric interests (e.g. wood turning, duck rearing). As a member, I got to carry out several unusual tasks which I had never before attempted, including polishing church brasses, and hacking thistles. At a taster day I attended, members gave introductory sessions in t'ai chi, belly-dancing and self-defence. One could certainly develop new skills and interests through Woolgone LETS, but as people tended to offer what they enjoyed, these skills tended not to be employment-related.*

#### **1.4 Finding employment**

When asked what they got out of time bank membership, only one member mentioned finding employment. However, when asked specifically about this, 27% of respondents felt that being a member of the time bank had helped them to find paid work, largely through increased confidence (17%), people they had met through the time bank (13%), and training (4%). Four members mentioned how being on the board of the time bank had helped them learn useful skills they could apply elsewhere.

During my fieldwork, I happened to be present when one member was negotiating with another about doing some cleaning work for a neighbour, for a Sterling payment. The time bank held few social events, and it seemed significant to me that this conversation took place on one of the rare occasions when a few members were assembled together in the café. Doubtless if more such get-togethers could be arranged, members would benefit greatly from sharing knowledge about local opportunities in this way. While the particular exchange I witnessed concerned cash-in-hand work, I have no doubt that information about more politically correct forms of employment would also be shared on such occasions, if such work became available locally.

*As described in Ch.1, generally speaking, LETS do not have a good track record for helping their members back into paid work (Williams and Windebank, 2001; Seyfang, 2002).*

*Woolgone LETS members came from a wide area, and mingled with each other at well-attended monthly meetings. This gave them plenty of opportunities to pass on information about work opportunities. Unfortunately, however, the organisation had few unemployed members to benefit from these opportunities. As described in Ch.4 (p.142), many new members were friends of existing LETS members, which meant the group tended to attract people who were similar to existing members. Although the core group were keen to attract people on benefits, having no paid staff meant there was no one with the time and energy to publicise the group in areas of chronic unemployment. In addition, there was no one to offer the extra support some long term unemployed people might need to become active in a community currency system. Finally, LETS have not been given the Benefits Disregard that time banks have, so it was not possible to reassure would-be members of Woolgone LETS who were unemployed that their benefits would not be affected by membership.*

*A couple of Woolgone LETS members who were unemployed used their membership to test out small business ideas, with one member making cards and another bread for fellow members. Both brought their goods to the monthly social and trading gatherings, and charged system currency, plus a small amount of Sterling to cover their costs. Later on the card-making member started to sell his cards for Sterling in local shops.*

## **2. USING SOCIAL NETWORK ANALYSIS TO INVESTIGATE SOCIAL REACH IN THE TIME BANK**

As described in 0 (p.67), a 'small world' network is one with high clustering, but a short number of steps between any two members. Such a structure enables information to be efficiently transmitted across the network, which is likely to lead to both greater cohesion and social reach. In order to find out whether either of the community currency systems had a small world topology, I used UCINET (Borgatti, Everett, Freeman, 1999) to calculate the clustering coefficients and average path lengths for both networks.

I also looked at degree distribution in both groups. Most small-world networks have a highly right-skewed (or ‘power-law’) degree distribution. According to Barabási (2002:77), having such a distribution not only suggests self-organisation, it also makes a network more robust (see p.68). I predicted that Woolgone LETS - in which members set up transactions and form partnerships for themselves - would have a highly right-skewed degree distribution, whereas in Steelwear Time Bank - where most transactions are arranged by a broker - the degree distribution would be much closer to a normal distribution.

What I found was that the Woolgone LETS network showed stronger ‘small-world’ properties, it was much more highly clustered than the Steelwear Time Bank one, and also had a shorter average path length:

**Table 4: Clustering coefficient and average path length for both networks**

	<b>Steelwear Time Bank</b>	<b>Woolgone LETS</b>
<b>Clustering coefficient<sup>72</sup></b>	0.197	0.743
<b>Average path length</b>	4.4	2.7

The Steelwear network may be less highly clustered because members are not free to set up their own transactions, instead going through the broker. Meanwhile, the longer average path length in Steelwear Time Bank was probably due to members having fewer partners, and the network as a whole being less highly connected.

Together, these features would have made it harder for information (whether relating to group norms, or employment opportunities) to pass from member to member, spreading out through the time bank. One might argue that time bank members can simply pass useful information to the central broker figure to distribute, however there are limits to how much information one person can handle, and the broker might feel his or her role is to arrange transactions, rather than to act as a conduit for gossip. He or she might also feel a need to censor information they become party to, for instance if it relates to cash-in-hand work or other illegal activities.

Somewhat surprisingly, both community currency systems appeared to have a highly right-skewed degree distribution<sup>73</sup>, although the tail of the Woolgone LETS graph was much longer (see overleaf).

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<sup>72</sup> Clustering coefficient is calculated as the ratio of actual to possible ties between all the neighbours of a node. Following on from this, the clustering coefficient of a network is the mean clustering coefficient of all its nodes.

As stated earlier (see footnote to p.68), there are not enough data points to be sure whether the distributions are exponential, or power law. Perhaps what matters most is that in both networks the majority of members only have a small number of partners, but there are a few individuals with a great many partners. The role of these individuals with a great many partners, the network ‘hubs’, will be explored in greater detail in the next chapter. It appears that their presence has less to do with how transactions are set up (which is so different in the two systems), than other factors, e.g. the skills particular individuals have to offer, or how much time they have available (see p. 217).

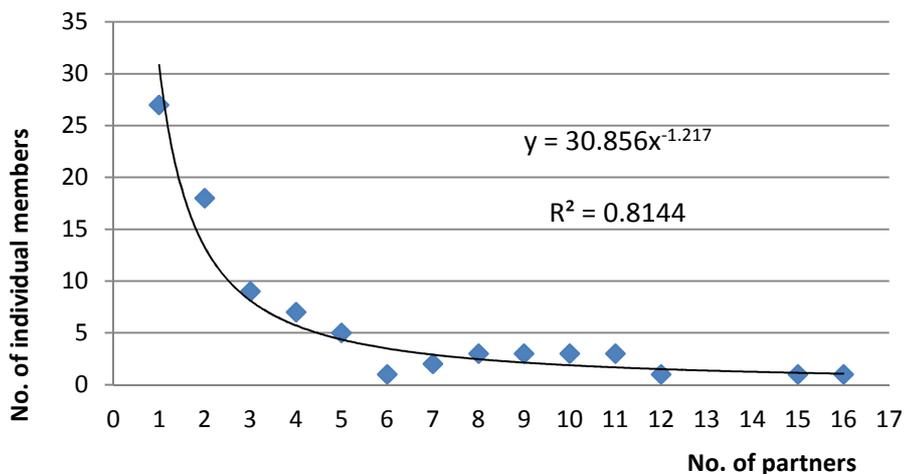


Figure 16: Degree distribution for Steelwear Time Bank

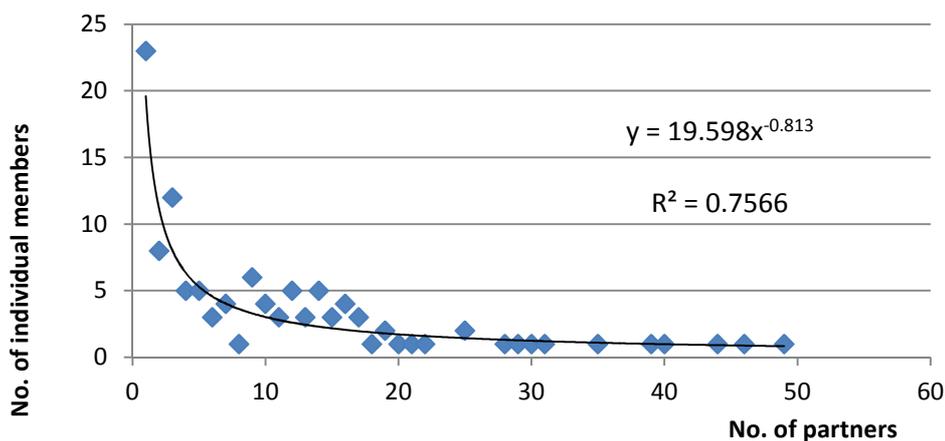


Figure 17: Degree distribution for Woolgone LETS

<sup>73</sup> ‘Degree’ means number of transactional partners. Individual members with a degree of zero (because they had not carried out transactions with other individual members) were excluded in these calculations, as the presence of zero values affects which trend lines can be plotted.

### **3. DIVIDED LOYALTIES LIMIT SUPPORT TIME BANK STAFF ABLE TO PROVIDE**

The time bank staff were extremely dedicated people, who went to great lengths to help time bank members. However, there were limits to what they were prepared to do, which were often related to the demands the organisation's funding bodies put upon them.

The most powerful example of this was when the time bank felt unable to set up a petition to support a member who was an asylum seeker, and struggling to stay in the country. A member of staff explained that 'we are happy to offer support, advocacy and references but we are not in a position to do more than that... as we receive funding from XXXX [a council department] we can't organise any petitions either. It is really hard when you get to know people and you can't do anything to help. There is often a fine balance between personal and professional I find' (personal email).

In a LETS there would have been nothing to stop the group assembling a petition to support one of its members. It seems a great pity that a time bank, set up to create social capital amongst its members, should be limited in the use of this capital by divided loyalties between members and funders. Community currency systems have sometimes been lauded as a way to give citizens more political consciousness and more of a voice (e.g. Hart, 2006). However, where a community currency system is funded by the very bodies citizens need support to stand up to, there is clearly going to be a conflict of interests.

*Woolgone LETS had persuaded the local council to become a member (see p.119) but did not receive on-going funding from them.*

### **Section IV: EVIDENCE OF SHARED GROUP VALUES, DESPITE LACK OF SOCIAL COHESION AND REACH**

*In my previous study of Woolgone LETS (Panther, 2000), I found that shared group values of trust and equality helped the community to self-regulate, despite balances not being published as in most other LETS. As mentioned previously, group events facilitated the promulgation of group norms and values (see p.178). For instance, a new member was likely to be offered a blank cheque to use until their own account was set up, driving home the message that market economy values and practices did not apply here. Any individual members who attempted to cling to the values of the Sterling economy, e.g. by trying to get as many Curlies as they could for an item, were heckled back into line by other members observing the transaction.*

In the time bank, not only were balances not published, but there were few social events, thus few opportunities for members to observe, and gossip about, each other's behaviour. The fact that there were few transactions between individuals, and the staff set up those which did take place, meant there was little clustering of members and relatively high path length from one member to the next (see p.67 for a description of the properties of 'small-world' networks). This made it harder for group values and norms to be promulgated through the system. I was curious about whether there could be a strong group culture of shared values despite these network properties, and if so, what these values were, and how they were spread.

Unfortunately, as there were few group events it was not possible to find out about group values simply by hanging around at meetings listening to what time bank members said to each other (a method which had worked very well in my work with Woolgone LETS). Instead I had to rely on comments individual time bank members made when I was carrying out transactions with them, and questionnaire responses. Questionnaire responses relating to values should be treated with caution, as members were responding to the phrases I had used<sup>74</sup> rather than expressing their own ideas, and may have been driven more by political correctness than a desire to accurately represent their value systems.

I have attempted to group values into clusters to make the picture clearer:

### **1) Equality: the central tenet of the time banking movement**

88% of questionnaire respondents agreed with the statement 'I feel it is fair that all time bank members receive one credit for an hour of work, whatever that work is'.

### **2) Saving money, or helping each other out?**

The time bank advertised itself as a way of saving money (see p.118), and the staff often emphasized that time bank members were expected to carry out transactions in a professional manner (p.246).

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<sup>74</sup>For most items, respondents were given a choice of responses and allowed to tick as many as they wished, rather than having to select any one response. There were some interesting anomalies. For instance, 52% ticked the box to say that what they liked best about the time bank was 'the chance to help less fortunate members of the community'. However, in response to a later question, only 8% agreed that carrying out time bank transactions was 'a form of charity, people helping others less fortunate than themselves'. It is likely that use of the word 'charity' affected people's answers to the second of the two questions.

Asked what they liked best about the time bank, 65% of respondents selected 'using credits instead of money', but an even more popular response was 'helping each other out' (77% of respondents). 67% of respondents felt carrying out transactions in the time bank was like 'friends/neighbours helping each other out', however 21% felt it was 'just like doing work for money, except you pay credits instead'.

Few time bank members had ever complained about the standard of work carried out by another member, suggesting that for them transactions belonged within the realm of the gift, rather than the market, economy. Only three questionnaire respondents admitted having complained, and reported feeling quite guilty about this.

### **3) Co-production, or volunteering?**

According to Cahn, time banks are supposed to embody co-production: the idea that everyone has something to give, and that we all need chances to both give and take (see p.33). Steelwear Time Bank was only partially successful in implementing co-production as its underlying philosophy. While members are generally encouraged to both give and take, the staff emphasize earning credits over spending them. Every year, it is the member who has *earned* the most credits who receives the Star Trader award (see p.144). In addition, the staff have found it is too impractical and time-consuming to attempt to set up opportunities for certain members to earn credits (see p.144).

Among the members, some seem to have embraced the ideals associated with co-production: 79% of questionnaire respondents agreed with the statement 'We all have something to give, it is important that everyone gets to both give and receive.' Asked to contribute their own ideas, one member wrote that the time bank was 'a good way to help others like ourselves to help each other', or more simply in the words of another member, it is 'a win-win activity'.

However, a good many time bank members still clung to the traditional volunteering ethic. Asked what they liked best about the time bank, 52% of respondents answered 'the chance to help less fortunate members of the community'. The staff seem to have resigned themselves to fact that some members only want to give, and not to receive, in other words to treat time bank membership as a form of volunteering. The decision was made not to send members their balances because certain members who had earned lots of time credits helping others made it clear that they would find this upsetting.

## CONCLUSIONS:

The great diversity of members in Steelwear Time Bank means it is potentially a very rich source of information and support for the individuals involved. To some extent it is true that the time bank brings together an otherwise fragmented community and offers members the opportunity to interact with all sorts of people, many of whom would never have met each other otherwise. However, currently there are relatively few transactions between individual members, and few social events for members to get to know each other. Thus social cohesion is only increased to a limited extent, and any increase in social reach is largely mediated by staff. Unfortunately, the staff themselves are necessarily limited in the support they can give members because the time bank receives funding from official bodies such as the council.

Although time bank members did not have the chance to promulgate shared values by observing and commenting on each other's behaviour at social events, a group culture of sorts was present. Generally speaking, members agreed that time banking was about helping each other, that everyone should have the chance to both give and take, and that everyone's work should be valued equally. There was potential for conflict, however, because of various inconsistencies in terms of values held by staff and members. While the staff emphasized the need for members to act as professionals, many members saw the time bank as being about friends helping each other. Meanwhile, other members saw being in the time bank as a form of volunteering, and yet others saw transactions within the time bank as just like doing work for Sterling.

At present transactions are tightly controlled by the broker. Organising more social events and allowing members more autonomy would enable a stronger group culture to be created, and with it greater social cohesion, but possibly would bring conflicting values to the surface, where they would have to be dealt with.

In this chapter I have focused on social cohesion and reach, looking at how highly connected members were and at the arrangement of ties in the network as a whole. In the next chapter I go a level deeper, for the first time taking the direction of ties into account in order to find out more about reciprocity between time bank members.

## Ch.6      **RECIPROCITY AND CO-OPERATION IN STEELWEAR TIME BANK**

### **INTRODUCTION**

In this chapter I begin by further investigating the idea that interactions within Steelwear Time Bank can be seen as a formalisation of mutual aid, as practised within small-scale hunting and gathering, or peasant, communities (see p.81). I look at whether members' balances tended to oscillate around zero, and at whether there is evidence to support the idea that different members have different behavioural strategies.

Next I look at evidence for different types of reciprocity between group members. The research presented here follows on from work I carried out for my MA, in which I looked at the relative proportions of one-off transactions ( $A \rightarrow B$ ), repeated one-way transactions ( $A \rightarrow B$ ;  $A \rightarrow B$ ;  $A \rightarrow B$ ), and directly reciprocal transactions ( $A \leftrightarrow B$ ) in Woolgone LETS (Panther, 2000). Social network analysis provides a much more sophisticated way of looking at transaction types, the clustering of individuals, and overall network structure.

First of all I focus on direct reciprocity. Transaction records suggest that there is relatively little direct reciprocity amongst time bank members, and I explore possible reasons for this, finding a relationship between number of transactions, number of partners, and the number of partners with whom a member engages in direct reciprocity. I find that in both community currency systems, members engaging in direct reciprocity tend to cluster together, leading to the creation of network 'hubs' (members with an unusual high number of transaction partners). This may be a mechanism leading to the evolution of co-operation.

In the next section, I focus on higher order forms of social interaction, in other words patterns of ties involving three or more members. In order to simplify things I look in particular at the sixteen possible triads which can be formed from different combinations of three one-way and/or directly reciprocal ties. Two triads are of particular interest: the 030C triad, which one might expect to occur where individuals are engaging in indirect, or 'generalised' reciprocity, and the 030T triad, which is supposed to arise out of a phenomenon called transitivity, which causes individuals to cluster together and is thought to be one of the key processes by which networks are structured (Wasserman and Faust, 1994:246).

As in previous chapters, the focus in this chapter is on how individual members relate to one another, therefore all of the following analyses are based upon transactions between individual members only.

## Section I: ARE TIME BANK TRANSACTIONS A FORMALISED VERSION OF MUTUAL AID?

In Ch.4 I looked at how aware time bank members were of their time credit balances, and at how some of them sought to control them, e.g. by alternating between earning and spending time credits (see p.157). Here I look at the resulting balances, at how members' balances changed over time, and at whether there is evidence to suggest that different behavioural strategies exist among members.

### 1. Looking at whether balances tend to oscillate around zero:

As discussed in Ch.2 Part II Section I, in a balanced and stable gift economy, the majority of individuals tend to give roughly as much as they receive (Mauss, 1954 [1923]), although they do not necessarily receive from the same individuals they gave to (Sahlins, 1972). Therefore, if a community currency system represents a formalised version of mutual aid (see p.79), one might expect to see a tendency for the balances of individual members to oscillate around zero.

Continuing now with this line of thought, if balances are oscillating around zero, at any one point in time roughly half the balances will be positive and half negative. In addition, one might expect the overall distribution of balances is likely to be symmetrical, and much the same at one point in time as at another.

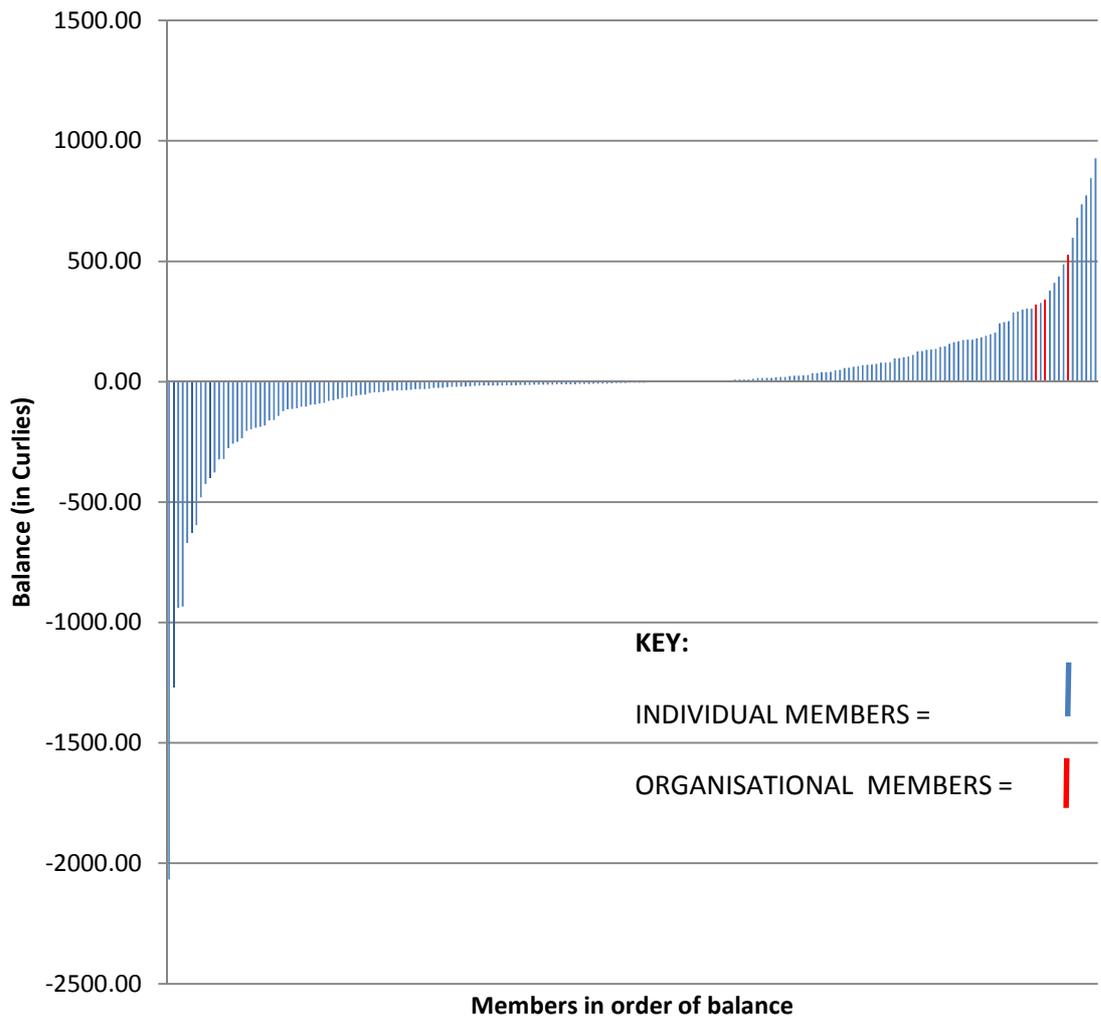
By contrast, in a system where members do not give and take in equal measure some balances will become more and more positive, while others become more and more negative, leading to an increased range of balances. The resulting distribution is unlikely to be symmetrical: there may be a few large negative balances, and many small positive balances (or vice-versa), and the distribution is likely to look quite different at different points in time.

*In Woolgone LETS, 52% of individual members had negative balances and 45% had positive ones<sup>75</sup> (see diagram overleaf). The distribution of balances was roughly symmetrical, although there were two accounts with very large negative balances. The range of balances among individual members was 2912.5 Curlies (from -2066.5 Curlies to 846 Curlies), equivalent to 582.5 time credits<sup>76</sup> (see chart on facing page):*

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<sup>75</sup> New members who had paid the annual membership fee of £1 to £5 plus 10 Curlies (taking their balance down to -10 Curlies) but had not carried out further transactions were not included.

<sup>76</sup> To calculate this figure, the standard rates of 5 Curlies, or one time credit, per hour have been used.

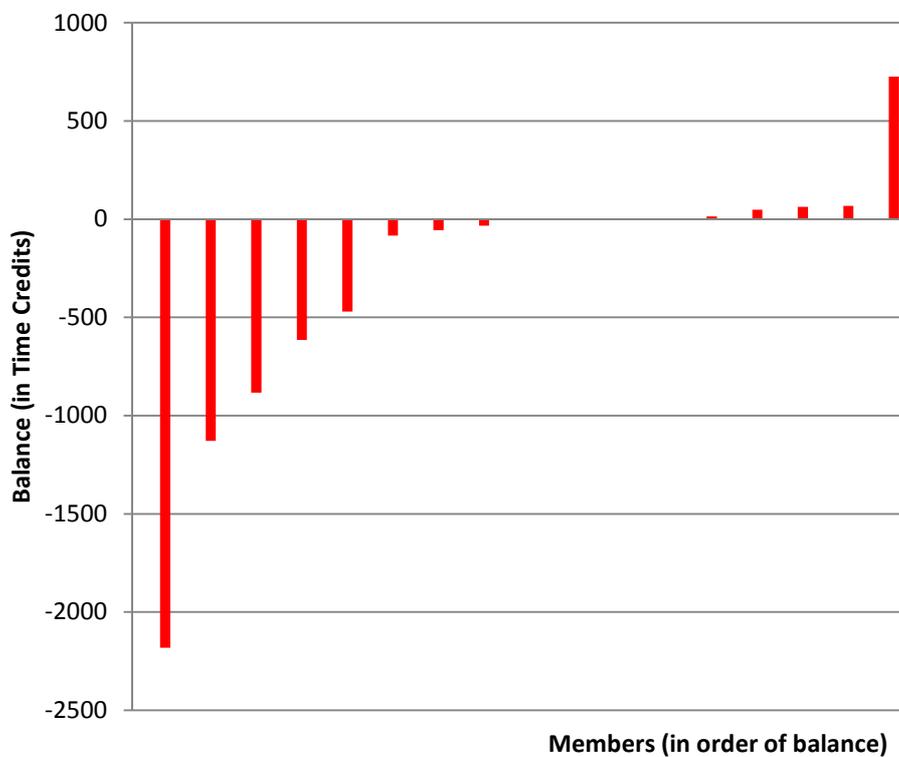


**Figure 18: Distribution of balances for Woolgone LETS members (as of June 2000)**

*There were only four organisational accounts, three of which had positive balances. Transactions involving the fourth - the Food Co-op - had been incorporated into the account of the individual member who ran the co-op, so do not appear on the chart above.*

By contrast, in Steelwear Time Bank the majority of individual members had positive balances (76%). As every transaction creates both a positive and a negative time credit, this was only possible because a few organisational members had high negative balances:

**Figure 19: Distribution of balances for individual members of Steelwear Time Bank (averaged over Oct 2007 and Oct 2008)**



**Figure 20: Distribution of balances for organisational members of Steelwear Time Bank (averaged over Oct 2007 and Oct 2008)**

Few individual time bank members had negative balances. Members were encouraged to earn time credits before they spent them, and saw having a negative time credit balance as being similar to being in debt in Sterling (see p.144).

There were a few individuals in the time bank with very high positive balances, suggesting a lack of goods and services for members to spend their time credits on, and/or that some members saw the time bank as a form of volunteering (see p.202). As a result, the range of balances among individual time bank members was 903.5 time credits (from -53.5 time credits to 853 time credits), much higher than in Woolgone LETS.

## 2. Oscillating, but not around zero:

Members of the time bank tended to have positive balances, therefore clearly their balances did not tend to oscillate around zero. However, I was surprised to find that their balances tended to change very little from one year to the next, and that this was true even for relatively active members:

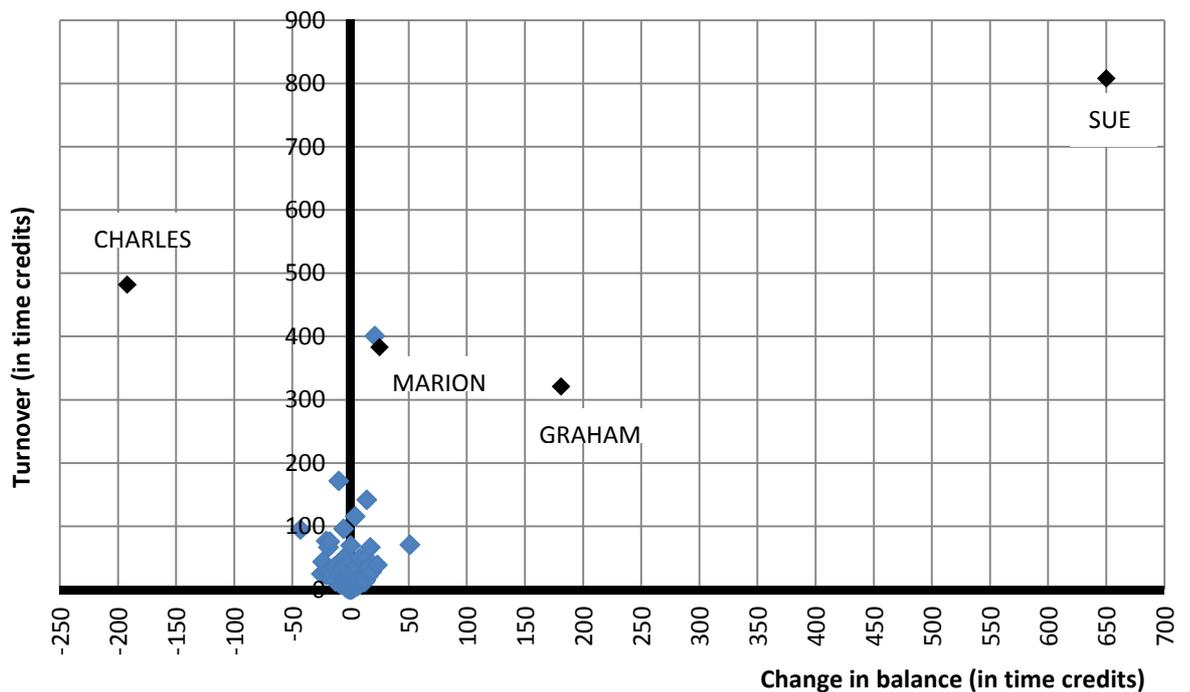


Figure 21: Change in balance, against turnover (Oct 2007-8) for all individual Steelwear Time Bank members

This graph reveals that only 3 members (Charles, Graham and Sue) had balances which changed by more than 50 time credits in the course of a year. All three of these members were unusually active, with high positive balances. Graham (see case-study, p.141) and Sue were

members who used the time bank as an opportunity to volunteer, rarely spending any credits. Graham helped Marion and Charles with their computer skills on a weekly basis, while Sue helped out in the Community Café every week. Charles earned lots of credits by editing the time bank newsletter every month. He regularly donated credits to Marion (see case-study, p.142), as well as spending them in various ways, including on computer lessons with Graham. The graph below focuses in on the cluster of members with a turnover below 200 time credits. It reveals that the majority of time bank members had balances which changed by fewer than 25 time credits in the course of the year:

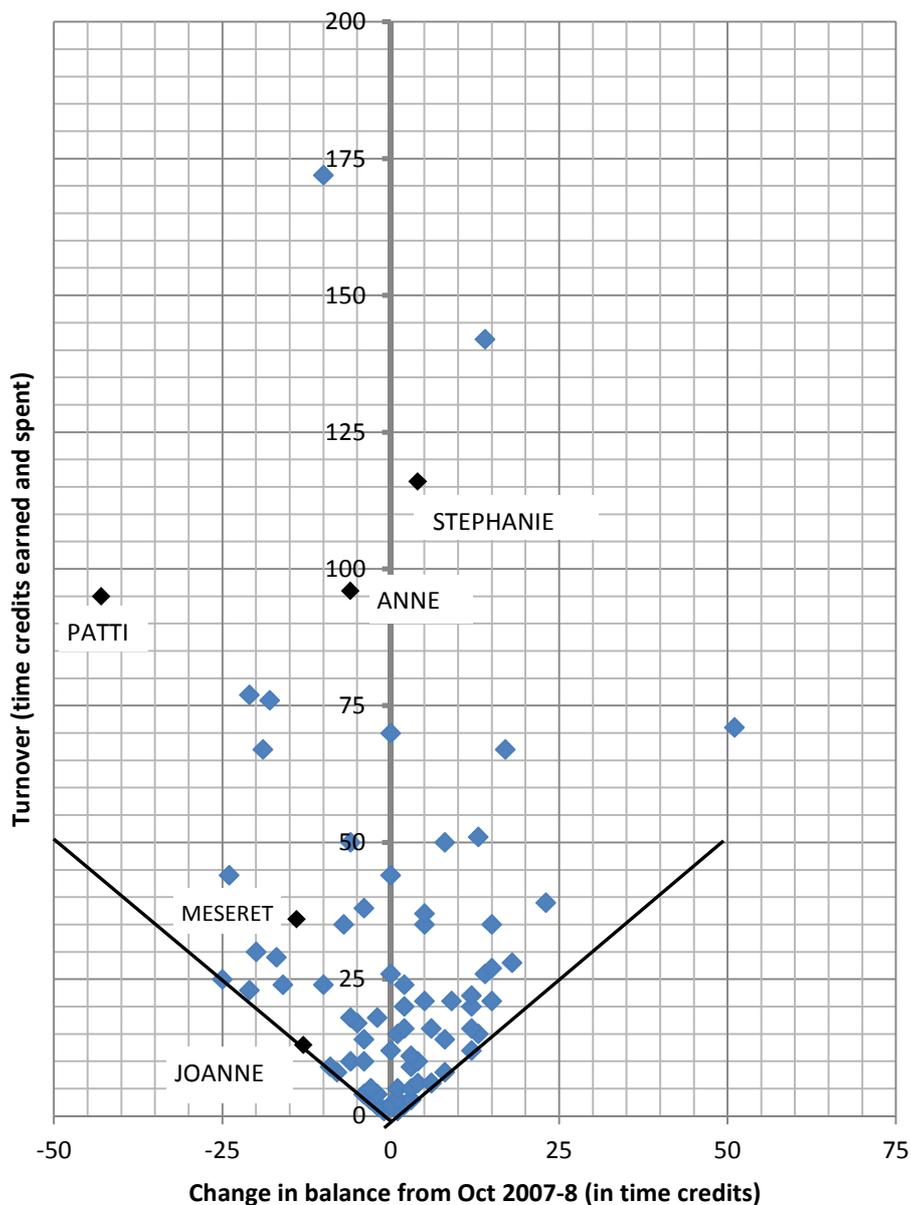


Figure 22: Change in balance, against turnover (Oct 2007-8) for individual time bank members with a turnover of below 200 time credits

The diagonal black lines on the graph indicate how much change in balance would result in a year if members only either gave, or received, favours. Thus the greater the distance of a particular member from these lines (and the closer to the central line), the more of a tendency a member's balance had to oscillate up and down.

For example, here is a graph showing how Anne (see case study, p.140), a member near the vertical axis, maintained a low positive balance over a period of time. When Anne's balance became slightly negative she carried out some work for the Time Bank Food Coop, until it was safely positive again:

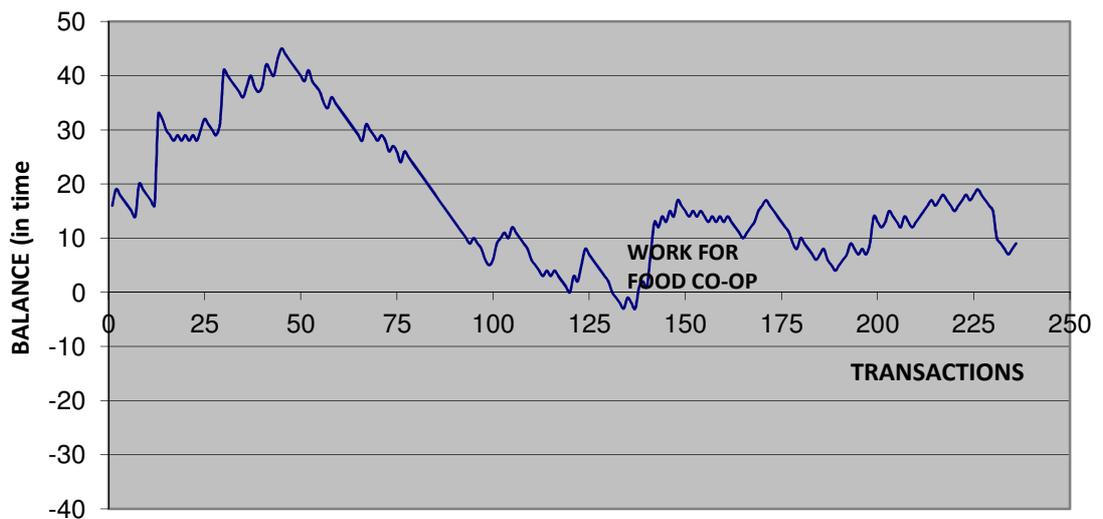


Figure 23: Time credit balance against no. of transactions completed for time bank member Anne.

By contrast, Joanne (see case study, p.138), a member lying on the black line on the graph on the previous page, was unusual in that her balance did not oscillate but became more and more negative. She only carried out a few transactions per year, so this table shows several years' of transactions:

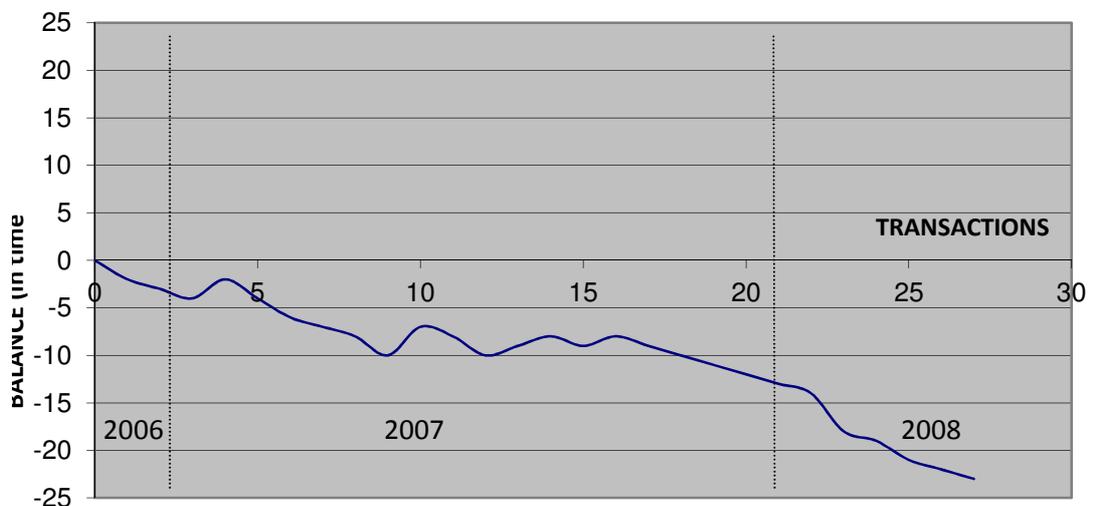


Figure 24: Time credit balance against no. of transactions completed for time bank member Joanne.

In short, it appears that the majority of individual time bank members *did* attempt to balance how much they gave and received amongst their fellow individual members. As a result, their balances oscillated around a fixed point, or points. They were able to do this while keeping their balances above zero by earning credits in their transactions with organisational members, many of whom had negative balances (see 0).

*In Woolgone LETS, members of the core group were always exhorting one to 'Spend, spend, spend!', and reassuring members that a negative Curlie balance was nothing like a negative Sterling balance, and that such balances were indeed essential to the continued operation of the LETS (Panther, 2000). The majority of individual members<sup>77</sup> (78%) gave and received help a similar number of times, and their balances tended to oscillate around zero.*

### **3. Time bank members who mainly gave favours:**

Roughly a sixth of time bank members tended to give, rather than to receive, favours: 17% of members earned at least 10 more time credits than they spent in the year from Oct 2007 - Oct 2008.

8% of questionnaire respondents saw their activities within the time bank as 'a form of charity, people helping others less fortunate than themselves'. For example, Sue (see graph on p.183) regularly helped out in the Community Café, and accumulated a huge number of time credits doing this. She saw her activities as a form of volunteering that got her out of the house, and only spent her credits on the occasional meal from the Time Bank Café, never in transactions with other individual members. Graham (see graph on p.183, and case study on p.141) found fulfilment in helping other members of the group learn how to use computers, and rarely spent credits apart from on the occasional meal from the Time Bank Café.

Questionnaire respondents who mainly carried out favours tended to explain their behaviour in terms of personal beliefs about virtue and generosity:

*It's why I joined the time bank, so I could help others.*

*To give without reward is true giving.*

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<sup>77</sup> New LETS members who had paid their membership fee of £1 to £5 and 10 Curlies (but had not yet carried out any transactions) were excluded from all of these calculations as there is no equivalent joining fee in the time bank.

Whether helping others truly brings no reward is questionable. Andreoni (1990) has suggested that people give in part because of the 'warm glow' - or increase in self-esteem - they receive from doing so. Certainly one time bank member explained the fact that he mainly gave to others in terms of his personal satisfaction: 'I like to give'.

Often, time bank members who tended to help other members were relatively active, and a high positive balance was the result. In terms of evolutionary theory, these members might be seen as unconditional co-operators as they appear not to be concerned by the fact that they are putting much more into the system than they are getting out (at least, in terms of credits). Perhaps such individuals, by helping others, are accumulating credit in the community, thereby ensuring that they themselves receive help if they are ever in a real crisis (rather like investing in an insurance policy). Neither Blau (1964) (see p.73) nor Layton (2000) (see p.79) mention individuals who give, but prefer not to receive. Perhaps there is a place for the 'volunteer'-archetype in their schemata?

Finally, some questionnaire respondents felt it was only natural that they should mainly give because their personal circumstances meant they had more to give, and fewer needs, than other members of the group:

*I do not require as much help as I have to offer.*

*As a single man I have few needs.*

*Can't think of anything I need.*

It is possible that such individuals could find little to spend their time credits on. While there was much the time bank could offer members who had mobility issues, were struggling to cope financially, or had trouble with basic skills, it was less clear how healthy, relatively well-off, individuals could spend their time credits, especially since practical skills such as gardening and decorating were in short supply.

*In Woolgone LETS, only 7% of individual members tended to give favours rather than to receive them<sup>78</sup>, and no LETS members had very high positive balances. It would be interesting to find out whether this lack of 'volunteering' type activity had more to do with ideology, diversity of membership, or availability and range of goods and services.*

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<sup>78</sup> Defined as giving favours 10 or more times than they received them.

#### 4. Time bank members who mainly received favours:

There were also a few time bank members who tended to receive, rather than to give, favours. According to transaction records, 13% of time bank members spent at least 10 time credits more than they earned in the year Oct 2007-8.

In terms of evolutionary theory, these members might be described as ‘free-riders’, i.e. individuals who are out to exploit others for their own benefit. While one might expect such members to have large negative balances, and possibly a fairly low turnover (in order to maintain a low profile and evade detection), the chart below reveals that such members differed greatly in terms of the size and polarity of their balance, as well as in terms of their overall turnover<sup>79</sup>:

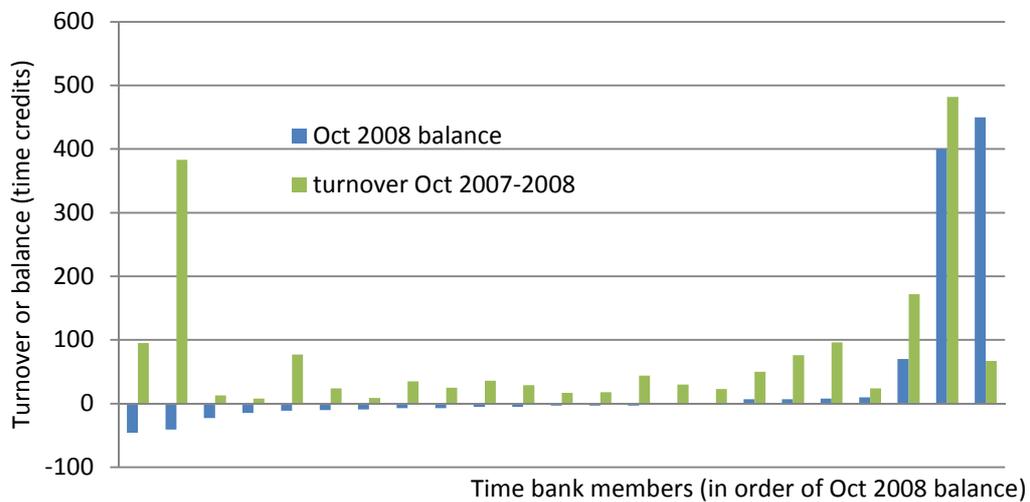


Figure 25: Balance and turnover of individual time bank members who mainly received help (Oct 2007-8).

Looking at the qualitative data, it appears that a tendency to receive, rather than to carry out, favours can arise for many different reasons. Some of these members were individuals who found it difficult to earn time credits because of poor health or disability, or child-care commitments. For instance, Marion (see case study, p.142) found it much easier to spend than to earn time credits because she was housebound, while Patti (see case-study, p.140) was too busy looking after her young children to earn many credits.

In other cases, the problem appeared to be a lack of involvement in, and commitment to, the time bank, and in particular a lack communication about balances. For instance, Joanne’s balance was becoming more and more negative as the result of Food Co-op deliveries (see

<sup>79</sup> Turnover = credits earned + credits spent, and gives an idea of level of system involvement.

case-study, p.138). She had no idea that her balance was negative, and repeatedly turned down the broker's requests for help because she was busy working full-time.

There were also members in this group who were largely spending time credits because they had already amassed a large positive balance, and were trying to reduce it. Having a very large positive balance often indicates that a member is having trouble spending credits. When a member's balance reaches a certain size, they may decide to stop earning credits and concentrate on spending the ones they have. If they still cannot find ways to spend their credits, it is likely that they will become relatively inactive and may even leave the group, taking with them the valuable skills they used to obtain their credits in the first place.

To give an example, Megan had amassed a large positive balance but felt awkward about asking for help:

*In the past I built up a lot of credits. Now that I'm so busy [member had full time job and small child] I usually receive help; and borrow equipment. I would like some decorating doing but it's such a big job and I don't like to ask the time bank.*

Megan was becoming increasingly inactive, and reported that the office staff rarely contacted her anymore, which she joked might be because she had too often turned down their requests for help for other members.

Finally, there were some members in this group who found there was little demand among fellow members for the services they offered. The time bank staff use Time Keeper to provide a list of members willing to provide a particular service, and this limits members to the particular skills and services they and the staff have identified at the introductory interview. A member who is finding it hard to earn credits because the skills they have offered are not in demand will be encouraged to offer a broader range of services, but sometimes skilled members are unwilling to take on what they see as menial tasks. For instance, Mohammed complained that his skills with computers were not being utilized, and that instead he was being pressured to act as the time bank postman, delivering leaflets door-to-door.

From my experiences as a member of Durham Exchange, members who get to know each other at social events often find ways of helping each other that neither they nor the organizers could have thought of. For instance, while chatting at such a gathering, one Durham Exchange member found out that the wax left over after she had extracted honey from her beehives was very useful to another member who was making natural cosmetics.

*In Woolgone LETS, 14% of members tended to receive favours rather than to give them<sup>80</sup>. None of these members had high positive balances, which suggests that no one had difficulty spending the Curlies they earned. A couple of members in this group had high negative balances. Other members were aware of this, despite balances not being published as in other LETS. They did not see it as a problem however, commenting that one of these individuals was going through a life crisis, while the other was contributing a lot to the running of the group, not all of which was being recorded in Curlies.*

## **SUMMARY:**

Looking at transactions between individual members of the time bank, the majority kept their accounts in balance by alternating between spending and earning time credits. This provides broad support for the idea that interactions within a community currency system may be seen as a formalization of mutual aid as it exists in other small-scale societies, although it remains to be seen - in subsequent sections of this chapter - whether the mechanism behind this balancing of incoming and outgoing favours was direct reciprocity, indirect reciprocity, or some combination of the two.

The fact that there were groups of members who did not balance earning and spending - instead tending to either earn, or spend, credits - is evidence in favour of the idea that a combination of behavioural strategies is necessary for co-operation to become an evolutionarily stable strategy (see p.79).

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<sup>80</sup> Defined as receiving favours on 10 or more occasions than they gave them.

## **Section II: DIRECT RECIPROCITY IN THE TIME BANK**

### **1. Prevalence of directly reciprocal interactions in the time bank**

According to transaction records, there was very little direct reciprocity amongst the individual members of the time bank. Only 18 individual members (16% of all individuals) engaged in direct reciprocity with each other.

Those time bank members who did carry out directly reciprocal transactions usually only had one partner with whom they did this. A few members had two partners with whom they engaged in direct reciprocity, and there was a single individual who had 5 such partners.

Members who engaged in direct reciprocity carried out very few directly reciprocal transactions. Most carried out only one directly reciprocal transaction in the course of a year, while 4 individuals carried out two.

*By contrast, in Woolgong LETS 53 individual members (35% of all individual members) engaged in direct reciprocity. Members who engaged in direct reciprocity tended to have several partners: 34 of the 53 members engaging in direct reciprocity had more than one directly reciprocal relationship, while 4 of these members had 10 or more directly reciprocal relationships. They also tended to carry out many more directly reciprocal transactions than time bank members: 26 pairs of Woolgong LETS members carried out more than one directly reciprocal transaction together. Some directly reciprocal ties were very strong indeed. For instance there were 2 pairs of members who carried out more than 5 directly reciprocal transactions with each other in the course of a year.*

### **2. Immediate or delayed direct reciprocity?**

As described in Ch.2 Part II (p.74), it is important to distinguish between direct reciprocity in which a favour is reciprocated immediately, and direct reciprocity in which a favour is only reciprocated after some interval of time. Immediate reciprocity tends to be associated with purely economic transactions.

By contrast, delayed direct reciprocity is all about developing a relationship based upon trust. Neither party may demand that the other reciprocates, or stipulate how or when this reciprocation will occur (Blau, 1964).

In both Steelwear Time Bank and Woolgone LETS<sup>81</sup>, approximately one quarter of directly reciprocal transaction pairs involved immediate reciprocity, while the remainder were delayed. In the time bank, because there were so few directly reciprocal transactions there was no clear relation between whether a friendship developed, and whether direct reciprocity was immediate or delayed.

*In Woolgone LETS, immediate directly reciprocal transactions tended to take place at the monthly Trading and Social meetings, when members brought goods to exchange, whereas delayed directly reciprocal transactions tended to take place between meetings, when members helped each other with various tasks (post-MA analysis).*

### **3. Evidence of turn-taking**

In the time bank there were so few directly reciprocal transactions, there could be no real evidence of turn-taking.

*In-depth analysis of transaction data from Woolgone LETS (post-MA) revealed that there were 11 pairs of members (15 individual members) who took turns to carry out favours for each other, resulting in extended sequences of delayed directly reciprocal transactions.*

*For instance, on Feb 28 H did some office work for B, on Mar 10 B made some phone calls for H, on May 3 H did some baby-sitting for B, on May 15 B had a Reiki treatment from H. Finally, on May 17, H did some DIY for B.*

*I observed that many of these pairs of members were friends, and it seems likely that turn-taking leads to friendship, while friendship itself leads to further transactions in a kind of positive feed-back cycle.*

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<sup>81</sup> As it would be too time-consuming to analyze all of these transactions, I took a random sample of 30 members and found out what percentage of their directly reciprocal transactions were immediate.

#### 4. Why are levels of direct reciprocity so low in the time bank?

Here I look at a number of possible causes for the apparent low incidence of direct reciprocity in the time bank.

##### 4.1 Direct reciprocity linked to no. of transactions and no. of partners

In my MA research, I found that the more transactions Woolgone LETS members carried out, the higher the percentage of directly reciprocal transactions (Panther, 2000:63). Further analysis (post-MA) revealed that individuals who carried out more transactions tended to have both more transactional partners *and* more relationships involving direct reciprocity:

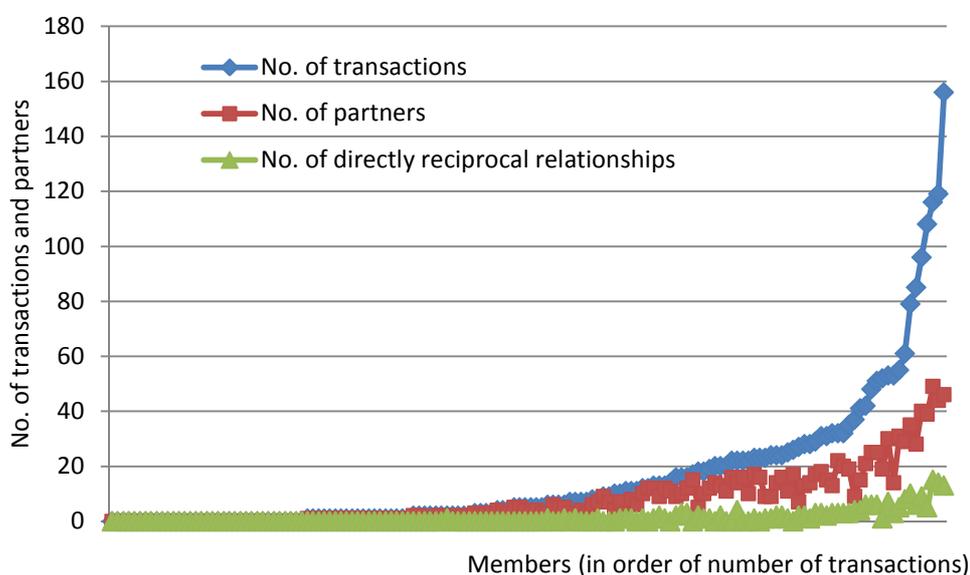


Figure 26: No. of transactions and partners for individual Woolgone LETS members

It was not possible to determine whether it was a higher number of partners which led to a greater number of transactions being carried out, or vice-versa, but it seems likely that the relationship goes both ways: a greater number of transactions leads to a greater number of partners, while at the same time a greater number of partners leads to a greater number of transactions. Presumably carrying out transactions with a greater number of partners makes it more likely that a member will encounter individuals with whom they feel able to build a relationship based upon trust and direct reciprocity.

In Steelwear Time Bank, only 8 members carried out more than 20 transactions, so there is no strong evidence about a correlation between number of transactions and number of partners, though there does appear to be a similar trend:

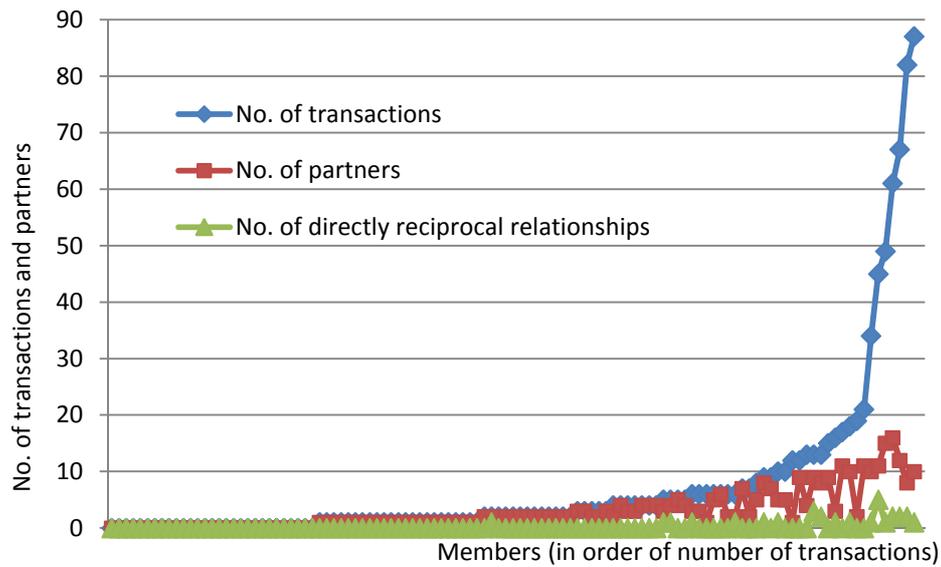


Figure 27: No. of transactions and partners for individual Steelwear Time Bank members

#### 4.2 Influence of going through the broker on number of partners, and thus on direct reciprocity

The higher levels of direct reciprocity in Woolgong LETS are not solely due to members being more active. Even when number of transactions is held constant, Woolgong LETS members have more partners, and more directly reciprocal relationships, than members of Steelwear:

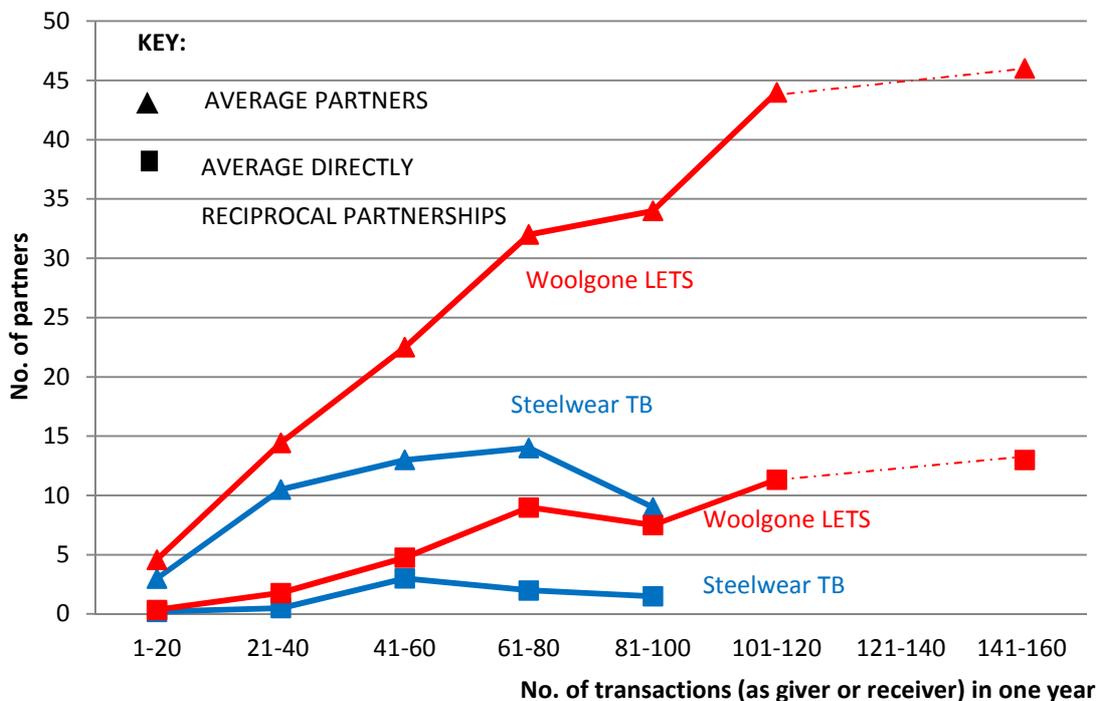


Figure 28: No. of partners, and no. of directly reciprocal partnerships for both groups, with no. of transactions held constant

This difference is likely to be due to the fact that in Steelwear Time Bank it is the broker who sets up transactions. Going through the broker is likely to limit how many partners members have, and how many directly reciprocal relationships they form. The broker tended to choose members an individual had interacted with before (see p.146), and did not attempt to set up transactions in directly reciprocal pairs.

### **4.3 Immediate direct reciprocity is under-reported by members**

Finally, it appears that immediate direct reciprocity may be under-reported in the time bank. When I spoke to Tamsin about the apparently low levels of direct reciprocity<sup>82</sup> in the time bank, showing her my anonymized network diagrams, her response was that members would often return a favour by giving the member who had helped them a snack or a small gift<sup>83</sup>, but would not report this favour-in-return to the office.

I found some evidence of this myself during my fieldwork. For instance, when Graham (see case-study, p.141) helped another member with her computer, she gave him a bag of home-grown vegetables, in addition to the normal credit payment through the office. This gift suggested tacit recognition of the fact that time credits had little value for Graham, who already had a very high positive balance.

The staff discouraged members from returning favours unofficially in this way. The Guidelines for Members (Steelwear TB, 09 May 2000) state that one should not 'borrow or accept money, tips or gifts from people you are visiting'. This was intended to prevent members growing to expect (or even to demand) some kind of reward (perhaps even money) for their services, beyond the credits they were receiving<sup>84</sup>.

Having failed to stop the practice altogether, the staff had begun to encourage members to charge time credits for their (immediate) return favours, so that at least they could be included in the time bank's turnover, helping it to reach funders' targets. On one occasion, I earned myself a credit for helping someone with their homework, and was delighted to accept the offer of a tasty snack at the end of the tutoring session, which I took as a gesture of friendship.

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<sup>82</sup> Obviously I did not use this terminology with her, as she was unfamiliar with it.

<sup>83</sup> It is significant that the return favour was only a *small* gift. If it had been equal or greater in value than the original favour this could have been taken as a sign that the returner of the favour wanted to pay off the giver of the favour, rather than entering into a relationship of trust with them, or with the group as a whole.

<sup>84</sup> This rule had been introduced following an incident in which members who carried out decorating work for a fellow member tried to pressure her into paying them Sterling for the work, as well as time credits.

I was then rather taken aback when, after I had eaten the food, the member concerned (who had a high negative balance) asked if it would be alright to charge me a credit for this snack!

Unfortunately, the fact that the smallest unit of currency is one time credit, equivalent to an hour of work, seems likely to prevent the official recording of immediate return favours becoming commonplace. A time bank member who helped another member for an hour, earning a time credit in the process, would leave with no increase to their balance if they then had to *pay* a time credit for the snack or other small favour which they received in return.

*In Woolgone LETS, having a standard rate of 5 Curlies per hour meant members were able to acknowledge even the smallest favour with a Curlye. Despite this, they did not always bother to do so, and again it was small reciprocal acts that were the least likely to be recorded. For instance, a member receiving a favour would often give the member carrying out the favour a drink and a snack without expecting any Curlies for this.*

*In addition, a small subgroup of members living in the same hamlet frequently exchanged goods and services without recording these transactions in Curlies (Panther, 2000).*

## **5. Clustering and the creation of network ‘hubs’**

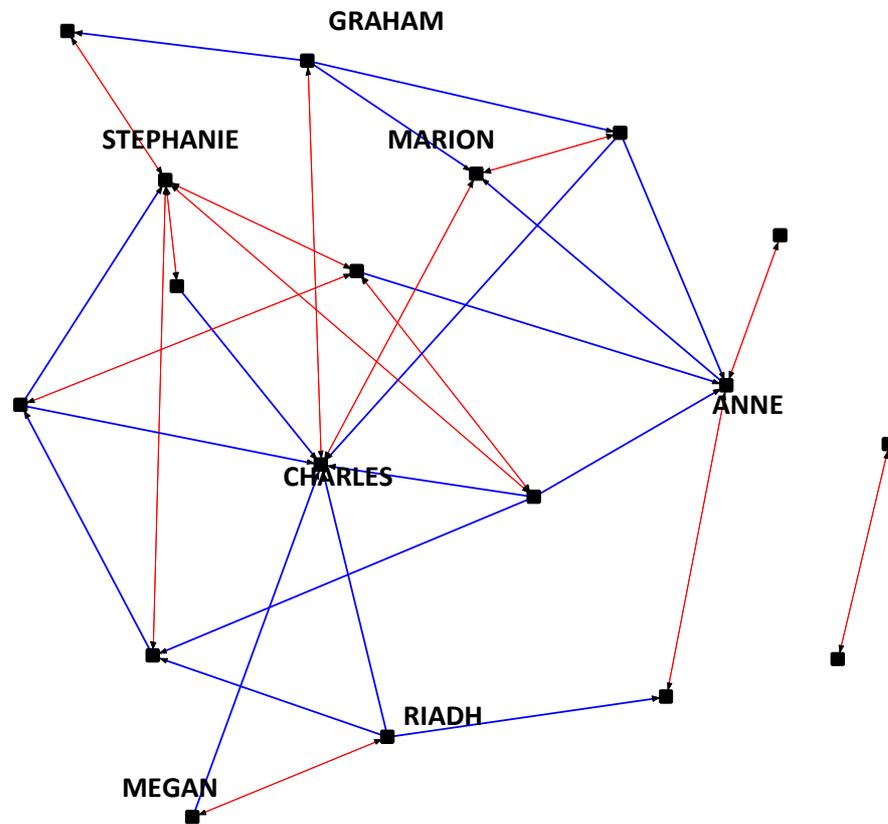
### **5.1 Members who engage in direct reciprocity tend to cluster together**

Social network analysis revealed that in *both* Steelwear Time Bank and Woolgone LETS those members who carried out a directly reciprocal transaction or transactions tended to be clustered together. In other words, these members had at least one tie (reciprocal or otherwise) to *another* member<sup>85</sup> who had carried out a directly reciprocal transaction or transactions in the year in question.

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<sup>85</sup> In other words, a member other than the member with whom the original directly reciprocal relationship was formed.

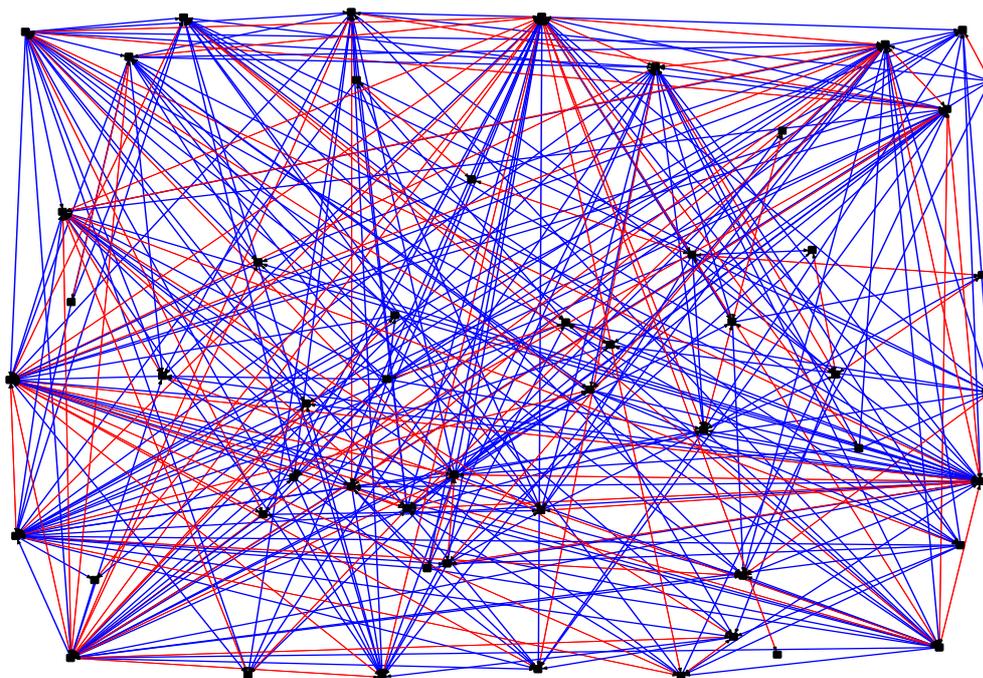
The diagram below shows *only* the transactions between the 18 time bank individual members who engaged in direct reciprocity:



**Figure 29: All transactions between individual members of Steelwear Time Bank who engaged in direct reciprocity**

15 of the 18 individuals depicted here are not only in a directly reciprocal pair themselves, but are also directly connected to at least one *other* individual also engaging in direct reciprocity. For instance, Megan (who carried out directly reciprocal transactions with Riadh) was directly connected to Charles (who carried out directly reciprocal transactions with Graham and Marion). Of the 3 individuals who carried out directly reciprocal transactions but were not connected in this way, 2 were new to the group, and 1 had severe learning difficulties.

Here is the equivalent diagram for Woolgone LETS, showing only the 53 individual members who engaged in direct reciprocity, and all transactions between these members. Again, the vast majority of members engaging in direct reciprocity are directly linked to another member doing so (outside the original pair):



**Figure 30: All transactions between individual Woolgone LETS members who engaged in direct reciprocity**

It appears that this clustering occurs because members engaging in direct reciprocity both carry out more transactions and have more partners than other members, which increases their chances of interacting *with each other*. Alternatively, it is possible that direct reciprocators preferentially engage with other direct reciprocators. Further research is necessary to determine the exact mechanism by which this clustering takes place.

## 5.2 How clustering appears to lead to the creation of network 'hubs'

The clustering together of members engaging in direct reciprocity also appears to lead to certain members acquiring an unusually large number of transactional partners, and with this, a pivotal role in the structure of the network as a whole. I refer to these members with an unusually high number of transactional partners as system 'hubs'.

In the time bank, there were 9 individuals with 10 or more partners, including Charles, Patti, Anne, Stephanie, Riadh, Graham, Sally and Matthew. All but 2 of the 18 time bank members who carried out directly reciprocal transactions carried out transactions with one or more of three hub members: Charles, Anne, and Stephanie:

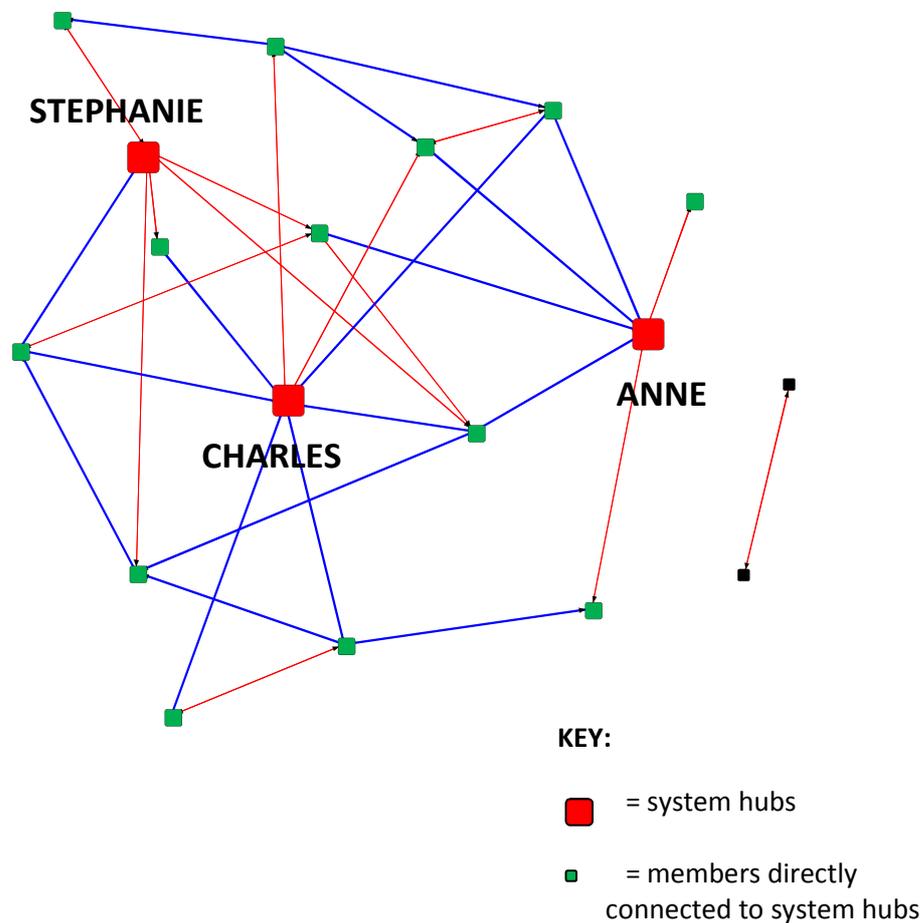
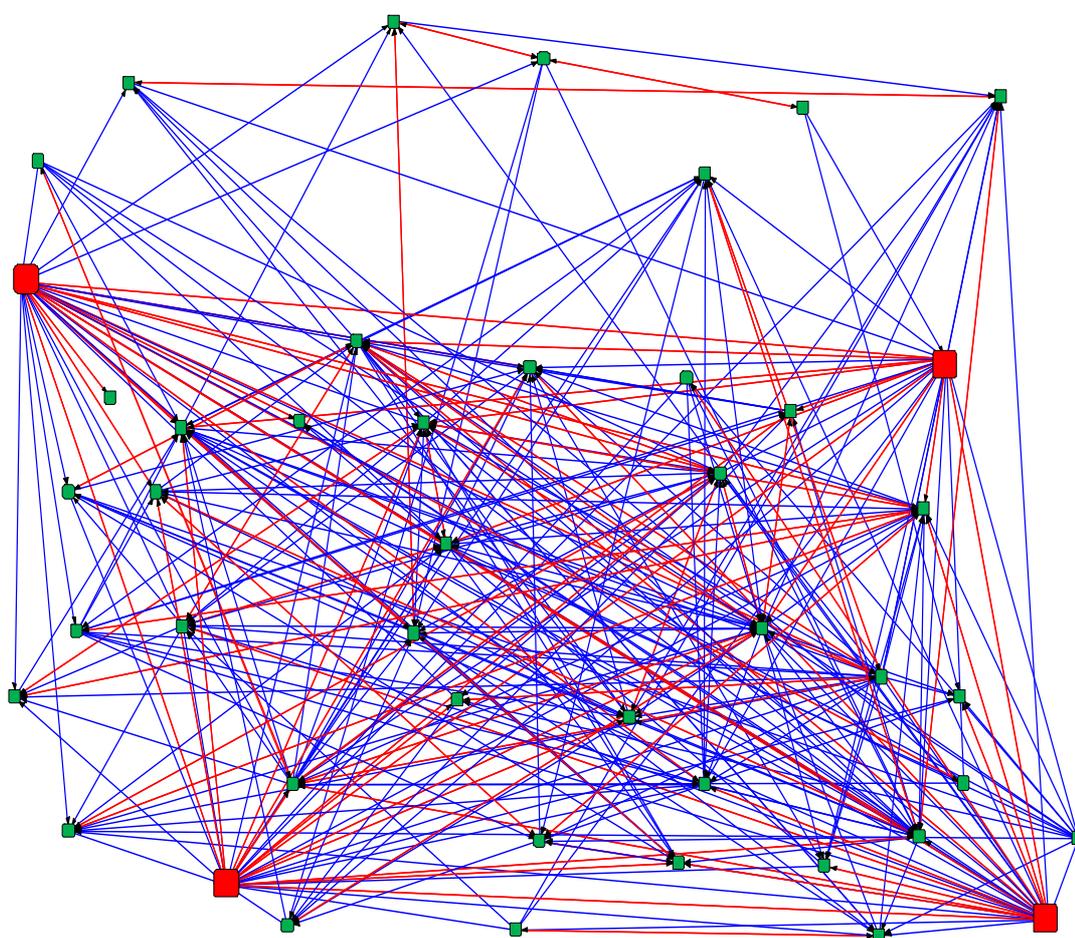


Figure 31: Ties between individual members of Steelwear Time Bank who engaged in direct reciprocity, illustrating the pivotal role of system 'hubs'

*In Woolgone LETS there were 48 members with 10 or more partners, who therefore could be described as system hubs. Four of these hub members appeared to be especially significant in the network: all 53 individual members who engaged in direct reciprocity carried out transactions with at least one of these four individuals.*

**Figure 32: Ties between individual members of Woolgone LETS who engaged in direct reciprocity, illustrating the pivotal role of system 'hubs'**



KEY:

■ = the four system hubs, to at least one of whom all other individual members were connected

### 5.3 What makes certain members hubs, and not others?

According to Barabási's 'preferential attachment' model (1999), new nodes joining a network tend to attach themselves to the existing nodes with the greatest number of partners (see p.68). From this one might predict that it will be the longest-established nodes which have the most partners (Newman and Watts, 2006).

Data from Woolgone LETS<sup>86</sup>, however, suggests that number of partners is not related to length of membership, except possibly for the very newest members of the system:

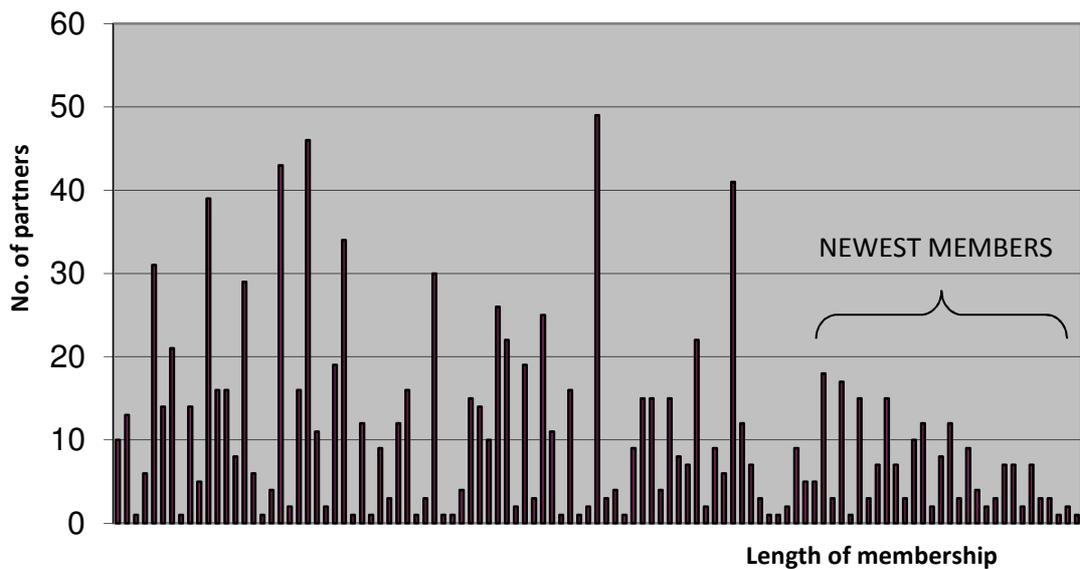


Figure 33: Length of membership against degree for Woolgone LETS members

A competing explanation for the existence of system hubs is that a combination of random copying and drift are all that is needed to create some nodes<sup>87</sup> that are much more popular than others (after Bentley, 2005; 2007). According to this model (see p.68), the more popular members are, the more likely individuals are to copy others in linking to them, leading to the creation of hubs. At the same time, however, drift means there will always be a small proportion of members who attach themselves to members who were not popular previously. Thus over time the most popular individuals in the system will change, with some new members quickly rising to popularity. While this second model seems better supported by the

<sup>86</sup> As membership numbers are assigned sequentially and not re-assigned in Woolgone LETS, I was able to use them as a proxy measure of length of membership. Unfortunately, in Steelwear Time Bank membership numbers are random numbers generated by the Time Keeper program, so I was not able to use them in the same way.

<sup>87</sup> Bentley himself has looked at the changing fashions for particular baby names and dog breeds, but suggested his model could also potentially be applied to my data (personal communication, 2010).

data from Woolgongone LETS, neither of the aforementioned approaches attaches much significance to the characteristics and circumstances of the individuals who become hubs.

In a community currency system, certain skills are going to be in much higher demand than others, and members who attend social gatherings thereby getting to know other members seem much more likely to acquire a large number of partners than those who do not.

Looking at the 8 time bank members who had 10 or more partners, a few had specialist skills which were in high demand. For instance, Graham (see case-study, p.141) helped people master their computers, as well as repairing and refurbishing computers for members. But there were also hub members who tended to carry out everyday tasks, e.g. running errands for people. What seemed to matter most was how much time individual members had. 7 of the 8 hubs were, for various reasons, not in work, while the eighth worked part time.

*Again, in Woolgongone LETS hub members tended to be unemployed, or self-employed. While several of these members had useful practical skills, what seemed to matter most was having time, plus the motivation to get deeply involved in LETS.*

*One member suggested that LETS worked best where people 'needed to need community', in other words, for those whose Sterling income was not enough to support them comfortably, and/or whose social network was lacking. Self-employment and unemployment meant several hub members had few social ties, especially when they lived in isolated rural locations. In addition, several hub members were childless couples, older people living alone, or people whose chosen values made them feel different from their neighbours.*

In short, it does not seem likely that hub members of either community system just happened to become hubs by chance, attracting further partners because they already had lots of partners. Instead, an individual was likely to become a hub if they both had the motivation to become highly involved in their community currency system (because of its economic and/or social benefits for them), *and* had the time to cultivate ties with a large number of partners. Thus hub members were likely to be unemployed, self-employed or retired.

This explanation and the data in the graph (p.201) are compatible with the idea that different members adopt different strategies (see p.79), with some members narrowing down to a few trusting partnerships (as Axelrod and Hamilton (1981) suggest), while others continue to trade widely (as predicted by Nowak and Sigmund (1998)).

Possibly this can also be linked to questionnaire responses: while 67% of respondents saw their activities within the time bank as 'friends/neighbours helping each other out', 21% saw time bank transactions as 'just like doing money, except you pay credits instead', and 8% saw their involvement as 'a form of charity, people helping others less fortunate than themselves'.

It would be interesting to find out whether these different attitudes corresponded to different ways of interacting with other members, and specifically to number of transactional partners.

### **SUMMARY:**

Social network analysis of transaction records suggests that direct reciprocity is a significant force in the evolution of co-operation within community currency systems.

Members engaging in direct reciprocity do not narrow down to a few trusted partners but continue to trade widely. In fact, the more transactions members carry out, the more partners they have, and the more partners with whom they engage in direct reciprocity. At the same time, members engaging in direct reciprocity tend to cluster together, forming ties with each other.

These processes give rise to a highly right-skewed degree distribution, with a few members (the 'hubs') having a great many transactional partners, while the majority have few partners. Whether or not a member is a system 'hub' appears to have little to do with how long they have been in the system, and more to do with how much time they have available to invest in system-related activities.

### **Section III: HIGHER ORDER FORMS OF INTERACTION**

Analysing community currency data in terms of dyad-level interactions, as in the previous section, suggests that co-operation has much to do with directly reciprocal transactions between pairs of individuals. However, in other contexts interactions between larger groups of individuals appear to play an important role. For instance, Sahlins (1972) and others have described indirect or 'generalized' reciprocity among hunter-gatherers (see 0).

The current study would not be complete without an attempt to find evidence of such higher order - or group-level - interactions in Steelwear Time Bank and Woolgone LETS. If such higher order interaction is found to be taking place, it is likely that interaction at the level of the dyad is much influenced by it.

Traditionally, in social network analysis, higher order analysis is restricted to the level of the triad. Larger configurations are supposed to have no additional properties or tendencies. As Faust and Wasserman put it, 'there are clear theoretical motivations for the study of dyads (tendencies toward and away from reciprocity), and triads (structural balance, transitivity and so forth). Such subgraphs allow us to study important structural properties. Very few, if any, formal structural properties have been proposed for  $k > 3$ ' (Wasserman and Faust, 1994:520).

Therefore my analysis of higher order structures is based upon the triad census. A fold-out sheet of the 16 possible triad types appears in the Appendices<sup>88</sup>.

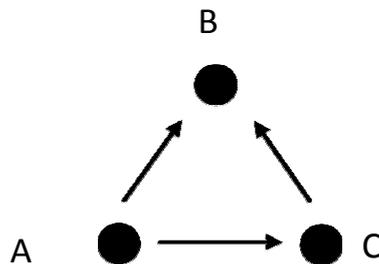
All calculations and analyses in this section have been carried out on the networks created by transactions between the individual members of the two community currency systems.

## 1. PREDICTIONS REGARDING HIGHER ORDER INTERACTIONS

I will be looking for evidence of clustering (or ‘transitivity’) in both groups, and also for evidence of indirect reciprocity. I begin by describing these concepts in more detail.

### 1.1 Looking for evidence of clustering, or transitivity:

According to Heider’s balance theory (1946), individuals tend to cluster together, so that whenever there are ties A to C, and C to B, there is also a tie A to B (cited in Wasserman and Faust, 1994). This idea is called ‘transitivity’, and is encapsulated in the saying ‘a friend of a friend is a friend’:



**Figure 34: Transitive triple:  
'a friend of a friend is a friend'**

Holland and Leinhardt (1972) analysed numerous real-life social networks, and found transitivity to be an important structuring force (cited in Wasserman and Faust, 1994:246). However, there is currently some disagreement about whether transitive triples arise through such triad-level processes, or whether processes at the dyad level - such as homophily (see p.50) - are sufficient to lead to their development (Goodreau et al, 2009).

<sup>88</sup> Each triad is named according to how many Mutual (or directly reciprocal) ties, Asymmetric (or one way) ties, and Null (absent) ties it has (remembered using the acronym MAN). In addition, U signifies asymmetric ties in which the arrows point up, D such ties in which the arrows point down, C describes cyclic triads and T describes triads which are transitive.

E.g. triad 111 has one mutual tie, one asymmetric tie, and a null tie:



There are a number of triads which incorporate the transitive triple above, and are therefore called ‘transitive’:

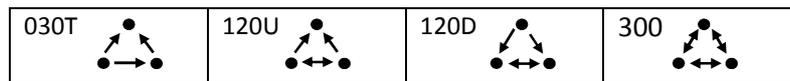


Figure 35: Transitive triads

Meanwhile, triads in which the tie A to B is absent are referred to as ‘intransitive’:

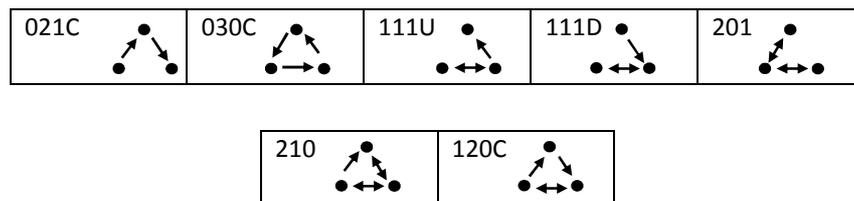


Figure 36: Intransitive triads

The remaining triads (see chart in Appendices) do not have enough ties to be considered either transitive or intransitive.

Returning now to the intransitive triads, according to de Nooy triads 021C, 030C, 111U, 111D and 201 ‘contradict all balance-theoretic models and the assumptions about symmetric and asymmetric dyads on which the models are based’ (de Nooy, 2005:209). These triads are often called the ‘forbidden’ triads.

The two intransitive triads which narrowly escape being included in de Nooy’s ‘forbidden’ list are triads 210 and 120C [see bottom row of intransitive triads above]. Wasserman and Faust explain that although triad 210 is also an intransitive triad, its presence should not be taken as strong evidence against the presence of transitivity, as only one of its six triples is intransitive (Wasserman and Faust, 1994:246), and suggest elsewhere that it may be seen as a simply a precursor to triad 300 (Wasserman and Faust, 1994:242). For a fuller explanation of transitivity and forbidden triads, please see *Social Balance Theory and Transitivity* document in the Appendices.

In terms of the data from the two community currency systems, it has already been shown that in both Steelwear Time Bank and Woolgone LETS members engaging in direct reciprocity tend to cluster together, and that the result is that there are some members with many more partners and transactions than others: the system hubs (see Ch.5, p.212).

## 1.2 Looking for evidence of indirect reciprocity

If indirect reciprocity is occurring, one might reasonably expect to observe a statistically significant number of cycles in which one member gives to another, who gives to another, who gives to the first again. Such a cycle can be represented graphically like this:

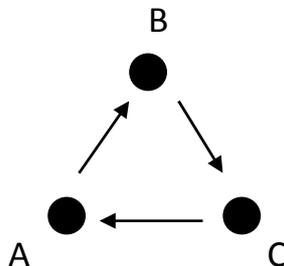


Figure 37: Indirect reciprocity triple: 'what goes around, comes around'

There are a number of triads which incorporate this triple:

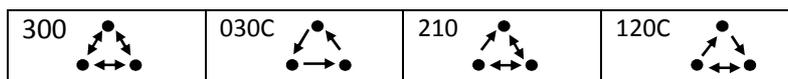


Figure 38: Triads incorporating indirect reciprocity triple

It is interesting that, according to balance theory, the indirect reciprocity triple should only appear in conjunction with direct reciprocity, as in triads 300, 210 and 120C. The 030C triad, the only triad in which indirect reciprocity appears on its own, is one of the 'forbidden' triads discussed in the preceding section.

Given the strong group values and norms present in Woolgone LETS (see p.134 and 149), and its 'small-world' characteristics (see p.188), I predict that there will be more evidence of indirect reciprocity within it than within Steelwear Time Bank. Thus there will be more evidence of individual's balances oscillating around zero (therefore not changing much over a period of time), *and* more examples of the indirect reciprocity triple, whether alone (as in triad 030C), or more embedded (as in triads 300, 210 and 120C).

***Given that Woolgone LETS members are free to choose who they interact with, I predicted that there would be more evidence of clustering (or 'transitivity') - and fewer so-called 'forbidden' triads - in Woolgone LETS than in the time bank network.***

## 2. RESULTS OF TRIAD CENSUS ON BOTH COMMUNITY CURRENCY SYSTEMS

First of all I compared the overall triad count for the Steelwear Time Bank and Woolgone LETS networks<sup>89</sup> using UCINET (Borgatti, Everett, Freeman, 1999). Then I looked at the distribution of triad types in both networks in relation to dyad-level characteristics such as size and density. Lastly, I compared the incidence of certain triad types in each network to what one would expect from randomly generated networks with the same dyad count.

### 2.1 Looking at the overall triad count in both networks:

As described earlier (see p.66), it was surprising to find that although the time bank network was smaller, it was less dense (a lower percentage of potential triads<sup>90</sup> were present):

**Table 5: Total triads (both potential and actual) for both systems.**

TRIAD COUNT	Steelwear Time Bank (113 individual members)	Woolgone LETS (150 individual members)
Potential:	234136	551300
Actual:	16882 (7.2% of potential triad count)	76209 (13.8% of potential triad count)

### 2.2 Number of triads of each type in the two networks:

For each organisation, I used PAJEK (Batagelj, Mrvar, no date) to calculate how many triads of each of the 16 possible types there were, as well as how many triads of each type one would expect to occur in a network of this size by chance alone, given the dyads present (see table overleaf).

de Nooy (2005) recommends the use of the Chi-Square statistic to determine whether a network has a triad distribution which differs significantly from one which might occur through random mixing, given the same dyad distribution. For *both* networks, the Chi-Square statistic was highly significant, suggesting that the triads present were not merely the result of chance arrangement of dyads. However, these results were unreliable because many of the expected frequencies in each network were less than 5 (after de Nooy, 2005:194).

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<sup>89</sup> Triad counts were performed on networks consisting of transactions between individual members only.

<sup>90</sup> The no. of potential triads is the no. of different combinations of three members. As network size increases, the number of *potential* triads increases at a much faster rate. For example, although the Woolgone LETS network is only about thirty percent larger than the time bank one, this has the effect of more than doubling the number of potential triads in it.

What I really wanted to do was to compare the two networks, to see if certain triads were present at significant rates in one, but not the other. de Nooy's statistic  $(n_i - e_i)/e_i$  is the difference between actual and expected counts, divided by the expected counts. It gives a rough idea of how unlikely the count for a particular triad is to have occurred by chance. For instance, in the Woolgone network there are 4.8 times as many of triad 030T as one would expect to occur by chance (after de Nooy, 2005). In order to find out which, if any, triads were occurring at statistically significant levels I would have to turn to motif analysis (see p.227).

**Table 6: Actual and expected triad counts for Steelwear TB and Woolgone LETS**

TRIAD TYPE	Steelwear Time Bank (113 individual members)			Woolgone LETS (150 individual members)		
	COUNT (ni)	EXPECTED (ei)	(ni-ei)/ei	COUNT (ni)	EXPECTED (ei)	(ni-ei)/ei
003	217309	215473.80	0.01	475143	458265.10	0.04
012	14575	18022.32	-0.19	57044	86019.86	-0.34
102	1363	125.62	9.85	10014	1345.55	6.44
021D	177	125.62	0.41	1375	1345.55	0.02
021U	263	125.62	1.09	1674	1345.55	0.24
021C	249	251.23	-0.01	2266	2691.10	-0.16
111D	93	3.50	25.55	1218	84.19	13.47
111U	53	3.50	14.13	1022	84.19	11.14
030T	22	3.50	5.28	488	84.19	4.80
030C	3	1.17	1.57	44	28.06	0.57
201	10	0.02	408.66	220	1.32	166.06
120D	5	0.02	203.83	228	1.32	172.13
120U	4	0.02	162.86	157	1.32	118.22
120C	5	0.05	101.42	169	2.63	63.16
210	4	0.00	5876.45	198	0.08	2401.94
300	1	0.00	632432.86	40	0.00	93101.00
<b>Total no. of triads:</b>	<b>234136</b>			<b>551300</b>		

### 2.3 Constraining effects of network size and density on distribution of triad types:

Dyad-level characteristics - such as size and density - have a huge influence on the distribution of triad types in a network, explaining about two thirds of the variance (Faust, 2006:203). As already stated, the bigger a network is, the less dense it tends to be (de Nooy, 2005:63; see p.182). In turn, having a low density tends to mean a much higher percentage of null triads, and very few of those triad types which include one or more mutual dyads (Faust: 2010:232).

Both the Steelwear Time Bank network and the Woolgone LETS network are relatively large and sparse. Purely as a result of these dyad-level characteristics, both have a large percentage of null (or empty) triads, a small percentage of triads with a single asymmetric tie, an even smaller percentage of triads with a single mutual tie, and an apparently negligible percentage of triads with more than one tie<sup>91</sup>:

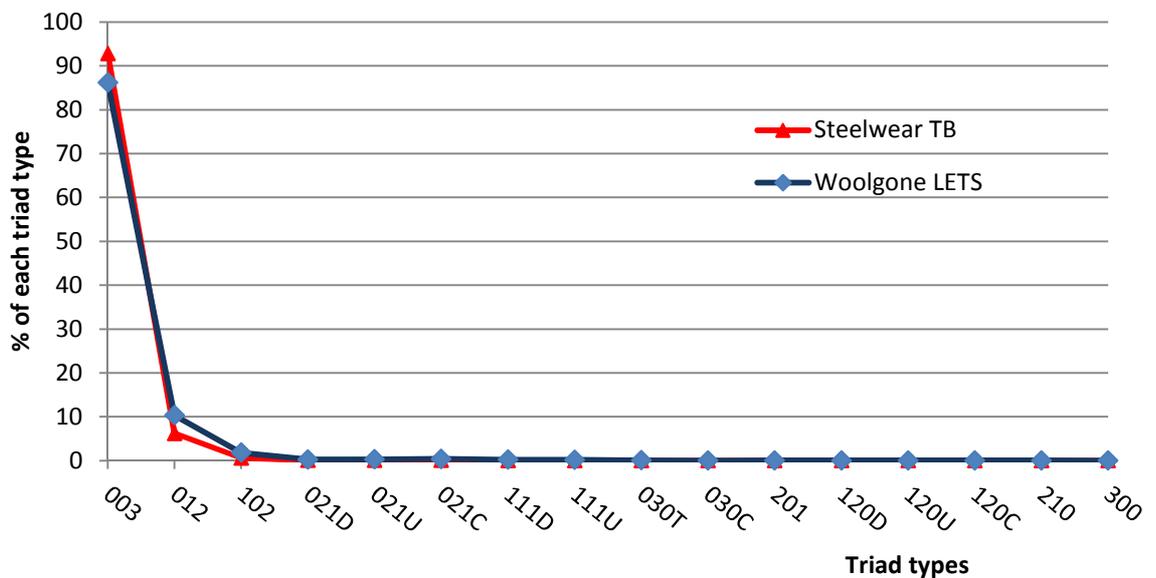


Figure 39: Percentage of triads of each type in Steelwear TB and Woolgone LETS

While this graph may give the impression that there are no significant differences between the two sub-networks, Faust goes on to explain that while the lower order features of a network (such as dyad census and density) strongly constrain the possible triads, this does not mean that it is not possible for networks with similar lower order features to have significantly different triad censuses, just that these differences are likely to fall within a very limited range (Faust, 2010:231).

<sup>91</sup> As the two sub-networks are of different sizes, in order to be able to compare their triad censuses it was necessary to calculate the percentage of each type of triad (after Faust, 2010:224).

In other words, the triad census is still a useful means of comparing networks of similar size and density, but one must expect triads with more than one tie to appear in very low numbers in large and sparse networks, and any difference between their incidence in one large and sparse network and another such network to be very tiny.

To give an example, triad type 300 only occurs with a probability of the network density to the power of 6 (Skvoretz et al, 2004; cited in Faust, 2006:204). Therefore in a large and sparse network it is extremely unlikely to occur. In the Steelwear Time Bank network the probability of one of these triads occurring by chance is only 0.000000000007, whereas in the denser Woolgone LETS network, the probability of this triad occurring is only slightly higher: 0.000000000774. Triad 300 occurs only once in the time bank sub-network. As it is one of 234136 triads (including null triads), it represents only 0.0004% of them. This same triad occurs 46 times in the Woolgone LETS network. As there are 551300 triads (including null triads) in this sub-network, it represents only 0.008% of them.

## 2.4 Focusing in on less frequent triad types:

The next thing I did, therefore, was to focus in on the less frequent triad types in both networks:

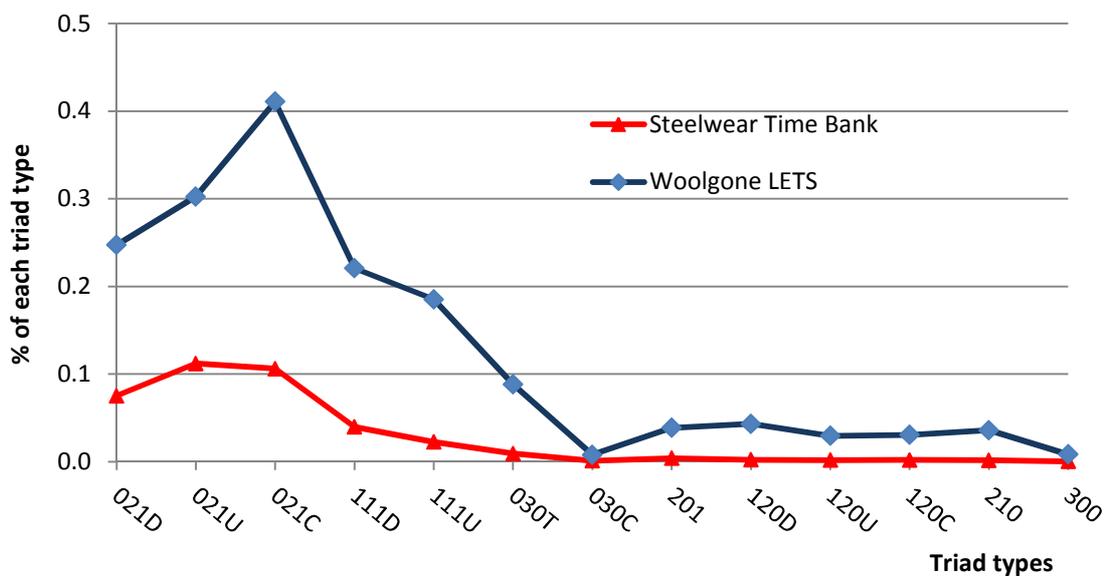


Figure 40: Percentage of less frequent triad types in both community currency systems

The overall shape of the two distributions presented in the chart above is due largely to the relative probability of different combinations of ties, with triad 300 being the most unlikely to occur by chance because it requires three mutual ties<sup>92</sup>. However, there are places where the graphs diverge. The Woolgone LETS distribution shows a definite peak for triad 021C which the time bank distribution does not share. In addition, there appear to be more 030T triads than 030C triads in the Woolgone network, a pattern which is not mirrored in the time bank network. Finally, the Woolgone LETS network appears to have more of triads 201, 120 and 210 than the time bank network.

Before attempting to draw any grand conclusions from the differences I had found, I would have to find out which, if any, of these differences were statistically significant. Unfortunately, standard statistical procedures cannot be used with networks (see p.71).

An alternative approach in this particular situation would be to generate a number of random networks, and then to compare these networks with the network one is looking at. This procedure is known as 'bootstrapping'. There is still a problem however. Random networks can be generated in many different ways, conditioning on different variables of the original network, and there is some disagreement about which features of the original network need to be retained in order to make the random versions have any chance of replicating the features of the real life network (Wasserman and Faust, 1994).

## **2.5 Finding out which triad motifs occurred at statistically significant levels:**

To overcome these problems, I turned from analysis of the triad census to motif analysis<sup>93</sup>, and away from looking at which differences between the networks were significant, to which triad motifs appeared at significant rates in either or both of the networks, using FANMOD (Wernicke and Raschke, 2006).

FANMOD generated 1000 random networks with the same number of directly reciprocal ties as the network I was looking at, and then calculated z-scores for each triad type (see overleaf):

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<sup>92</sup> For instance, the 021 triad types have two asymmetric ties, and are therefore more likely to occur by chance than the 111 triad types, which all have one mutual tie and one asymmetric tie.

<sup>93</sup> While a triad census is usually compared to a random distribution devoid of structure, in motif analysis 'the random graphs are generated from the original network by switching edges between vertices; the user may choose between different switching schemes in order to preserve certain graph properties (such as the number of bidirectional edges in directed networks) during the randomization' (Wernicke and Raschke, 2006).

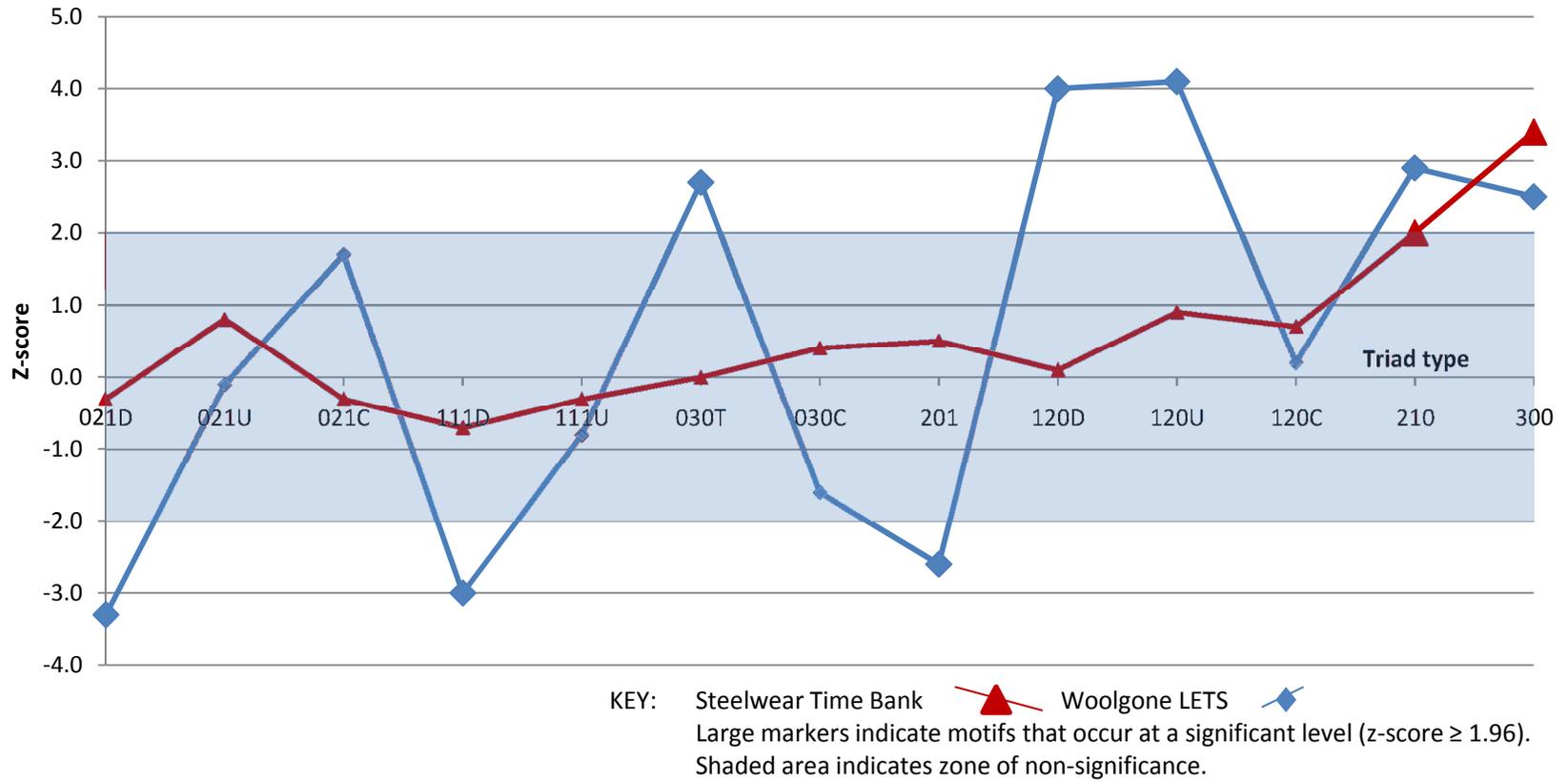


Figure 41: Comparing z-scores for triad motifs in Steelwear Time Bank and Woolgone LETS

In Steelwear Time Bank, only triads 300 and 210 occurred at a statistically significant rate, and even these triads appeared in very low numbers indeed: there was only a single occurrence of triad 300, and four examples of triad 210. As there were so few of these triads in the Steelwear network, despite the statistical significance of their presence, one might assume that they have little impact on the network<sup>94</sup> as a whole (but see p.219-220 where I suggest that the presence of these few triads in the time bank may represent the beginnings of a cluster of direct reciprocators, heralding the start of true social cohesion in that network).

*In the Woolgone LETS network, triads 300, 210, 120U, 120D, and 030T all occurred at statistically significant levels and in sizeable quantities. For instance, there were 40 examples of triad 300 and 198 examples of triad 210 (see p.225 for triad counts). Meanwhile, triads 021D, 111D and 201 occurred much less frequently than one would predict by chance.*

In both Steelwear Time Bank and Woolgone LETS, triad 030C did not appear at statistically significant levels.

### **3. INTERPRETING TRIAD CENSUS RESULTS**

#### **3.1 Evidence of transitivity:**

If transitivity is present at all in the time bank, it is at very low levels. Only 5 of 234136 triads showed evidence of members clustering together. All the other triads in this network could easily have occurred by random arrangements of the dyads present.

*In Woolgone LETS, however, there is strong evidence of transitivity. The triads which occurred at statistically significant levels are all transitive, except for 210 which - although intransitive - may simply be seen as a precursor to triad 300 (Wasserman and Faust, 1994; see p.222).*

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<sup>94</sup> Thus FANMOD gives the option of excluding motifs which occur fewer than five times.

*The triads which occurred at rates below what one would predict by chance are all intransitive, apart from 021D which is considered to have too few ties to be classified either way.*

*In other words, there appear to be forces within Woolgong LETS acting at level beyond that of the individual, or indeed the dyad: there is a tendency for the friends of friends to become friends, or at least for the transaction partner of one's transaction partner to become one's own transaction partner also.*

### **3.2 Evidence of indirect reciprocity:**

Triad 030C does not occur at significant levels in either network, which could be interpreted as evidence that indirect reciprocity does not play an important part in the evolution of co-operation in community currency systems. However, there are two reasons not to interpret the data in this way. Firstly, both LETS and Time Banks tend to describe and depict their members' activities as based upon indirect, rather than direct, reciprocity (see an example of the type of diagram often used in publicity materials on p.21). Secondly, the majority of individual time bank members had balances which did not change much over a period of time (see p.199), despite their being active, and despite their not engaging in much direct reciprocity (see p.207). How could this be explained other than in terms of indirect reciprocity?

Instead, it is necessary to think a little more creatively about indirect reciprocity and the forms it might take. There are three possibilities, outlined below:

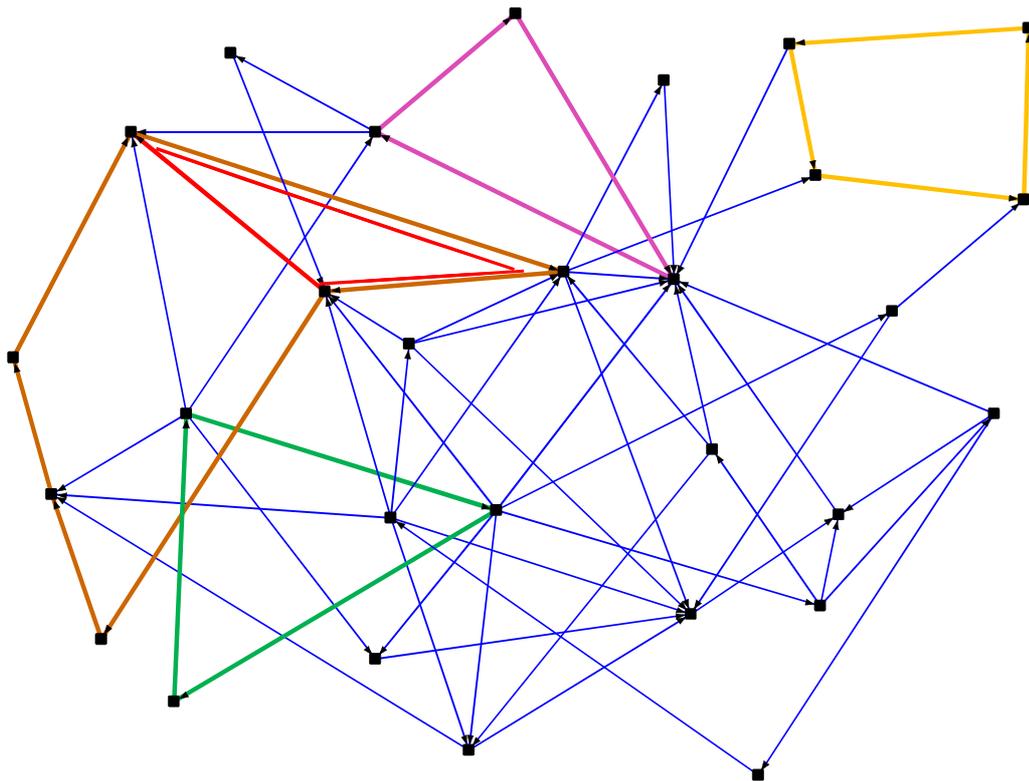
- 1) Indirect reciprocity plays an important part in the evolution of co-operation, but always in conjunction with direct reciprocity.**

Recently, Nowak, Tarnita and Antal have suggested that direct and indirect reciprocity commonly coexist, and that 'eventually, direct and indirect reciprocity must be combined' [along with the other frameworks Nowak et al present in the paper] 'in order to obtain a complete mathematical theory of social evolutionary dynamics of humans' (Nowak, Tarnita and Antal, 2010:27). It is possible that indirect reciprocity does play an important part in the evolution of co-operation, but always coexists with direct reciprocity. Certainly, in both community currency systems there were significant numbers of triads 210 and 300, which could be seen as consisting of 030C plus two or three directly reciprocal ties.

In order to investigate a possible relationship between direct and indirect reciprocity further, it would be necessary to look at how triads form over a period of time. Perhaps engaging in direct reciprocity with a number of trusted partners gives an individual the trust in group norms necessary to make the leap of faith involved in giving to someone who is not likely to reciprocate directly?

**2) Indirect reciprocity can exist independently of direct reciprocity, but one needs to look beyond the level of the triad (to larger cycles) to find evidence of this.**

It is possible that in a group of only three individuals, indirect reciprocity and direct reciprocity co-exist simply because the three individuals concerned are bound to get to know each other well. Therefore I decided to look for<sup>95</sup> larger cycles of indirect reciprocity in both systems. What I found was that in fact there were very few such cycles among the individual members of Steelwear TB:

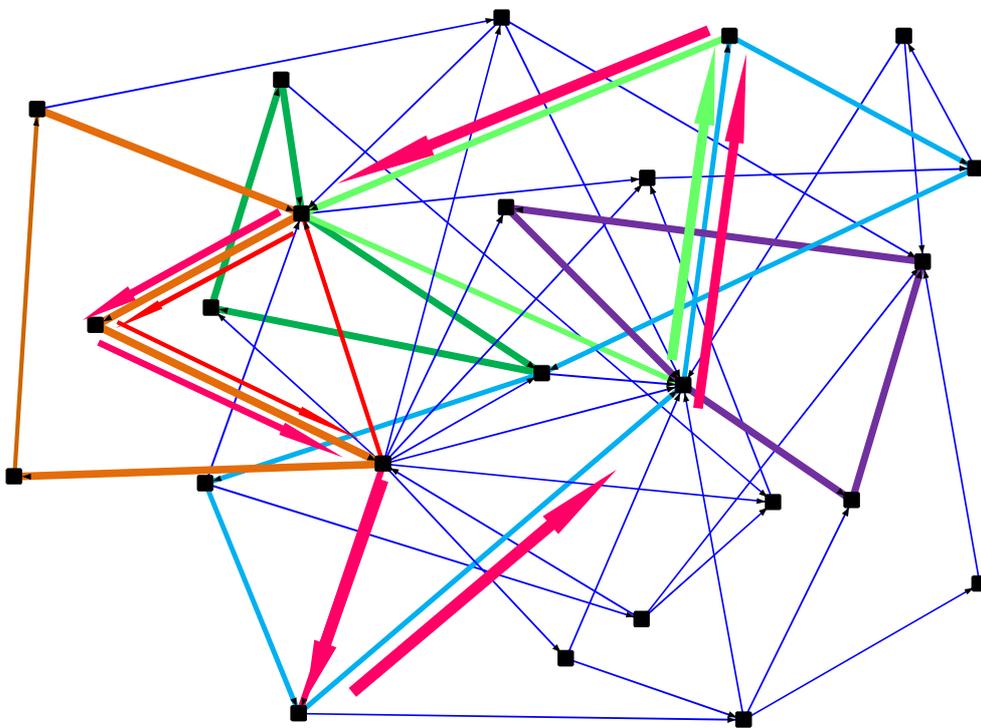


**Figure 42: The few cycles of indirect reciprocity present among individual members of Steelwear Time Bank.**

<sup>95</sup> To do this, I used Netdraw (Borgatti, 2002) and began by eliminating all directly reciprocal ties. Then I eliminated all members who either only gave, or only received, favours. Finally, I eliminated any members who had only one connection to another member. I was able to identify any cycles (e.g. A to B, B to C, C to D, D to A) among the few remaining members by eye.

In short, it appeared that in Steelwear TB neither direct nor indirect reciprocity figured greatly in interactions between individual members. In order to find out how individual members of the time bank were stabilising their balances I would have to look more closely at the role of organisational members (see Ch.7).

*Meanwhile, in Woolgone LETS, both direct and indirect reciprocity appeared to be flourishing. It was not possible to use the same method to detect indirect reciprocity in Woolgone LETS as I had with Steelwear TB, because of the sheer number of ties. However, I found that even when all ties which were based upon a single transaction were excluded, there were at least 7 indirect reciprocity cycles present:*



**Figure 43: Some of the many cycles of indirect reciprocity remaining among individual members of Woolgone LETS after ties consisting of a single transaction were excluded.**

*The presence of a large number of indirect reciprocity cycles in Woolgone LETS may have more to do with the sheer number of ties between individuals, than any kind of natural tendency for dyads to come together in particular combinations (unlike transitivity, which seems to be a true 'higher-order' phenomena, see p.229). In other words, it is possible that direct reciprocity, transitivity (clustering), and a continuing*



the presence of individuals who only give and those who only receive, is actually necessary for the continued stability of a community currency system?

### 3.3 Simmelian ties, and the possible significance of even small numbers of triad 300:

Triad 300 is less likely to occur by chance than any other triad (see p.226). However, this type of triad has been found to occur much more frequently in real data sets than is predicted by chance (e.g. David and Leinhardt, 1972, Holland and Leinhardt, 1970, Doreian et al, 1996; all cited in Krackhardt, 1998:27). Davis (1970) found that triad 300 'appeared statistically more frequently (relative to chance appearance) than any of the other 15 kinds of triads that might have existed' (cited in Krackhardt, 1998:27). Indeed, in my own data I found that triad 300 had the highest  $n_i-e_i/e_i$  value (see p.225).

In order to understand the possible significance of the appearance of these triads, both in terms of the overall structure of the network, and in terms of the sustainability of social cohesion, it is useful to explore the concept of Simmelian ties.

For Simmel (1908) the triad, not the dyad, was the basic social unit: if, for whatever reason, individuals formed a triad (or larger group), this triad would take on its own identity, strongly constraining the behaviour of individuals within it, and making it much easier to resolve conflict (which tended to escalate in isolated dyads) (cited in Krackhardt, 1998).

Krackhardt later invented the concept of the Simmelian tie, which he defined thus: 'People are Simmelian-tied to one another if they are reciprocally and strongly tied to each other and if they are each reciprocally and strongly tied to at least one third party in common' (Krackhardt, 1998:24). By definition Simmelian ties require a complete triad made up of reciprocal ties, in other words, triad 300:

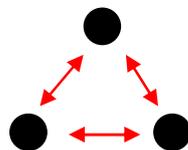


Figure 44: Triad 300 (made up of three Simmelian ties)

Krackhardt describes Simmelian ties as 'superstrong and sticky' (1998), by which he means that they are unusually long-lasting, and have an important structural function, clustering nodes

together into semi-permanent configurations. Over time, their great durability leads to greater and greater numbers of these ties.

In terms of the mechanism whereby such ties are created, Krackhardt does not see the idea of Simmelian ties as a contradiction of earlier work. For instance, he points out that Heider's idea of balance incorporates both symmetry and transitivity, and that it is the 300 triad in which both of these are *most fully* expressed (Krackhardt, 1998:26). However, while balance theory, and its central concept of transitivity, are based on the idea of underlying psychological forces, Krackhardt suggests that it is the durability of embedded reciprocal ties *alone* which, over time, leads to greater numbers of such ties (Krackhardt, 1998:26).

Evidence to confirm that Simmelian ties are much more likely to survive over time than more isolated reciprocal ties comes from Krackhardt's re-analysis of Newcomb's data on college dorm room-mates (Newcomb, 1961; cited in Krackhardt, 1998:31-34). Feld carried out further analysis of Newcomb's data, and found that the degree of embeddedness of a reciprocal tie was correlated with its likelihood of survival (whether or not it was actually embedded in a 300 triad) (Feld, 1997).

Turning now to the community currency system data, one might assume that cohesion in a network will be longer lasting if the network has ties which are not only densely clustered, but directly reciprocal, and deeply embedded.

In Woolgone LETS, there were 40 examples of triad 300, whereas in Steelwear Time Bank there was only a single triad 300. The higher proportion of triad 300s in the Woolgone LETS network data suggests that not only is social cohesion higher in the Woolgone LETS network (as described earlier), it is also likely to be longer-lasting.

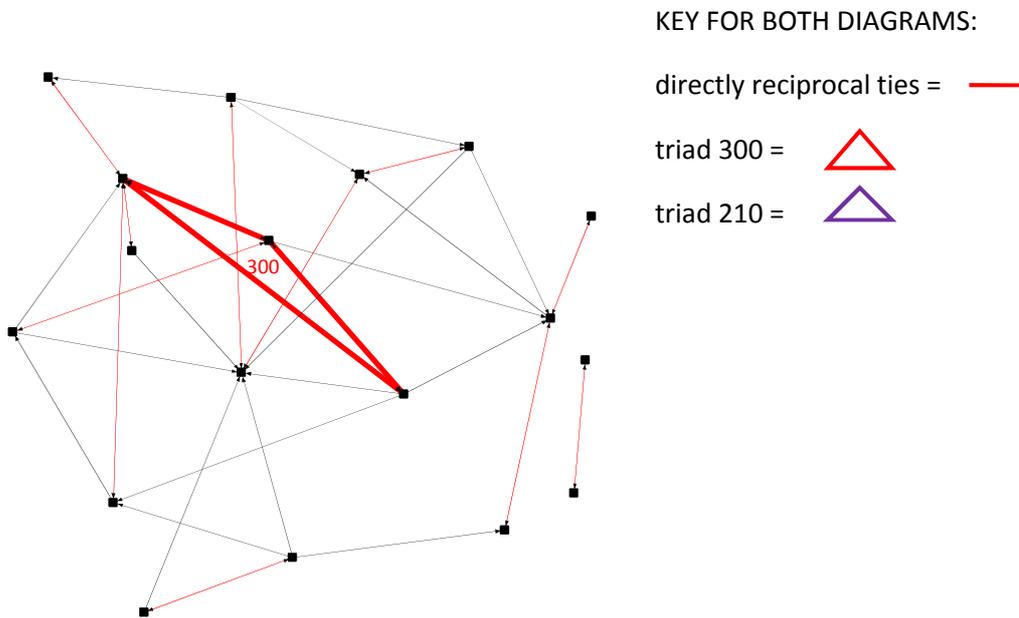
Feld's discovery that directly reciprocal ties are longer lasting, the more embedded they are, is also backed up by my data. The table below reveals that the relative frequency of different triad types in the two community currency system networks I studied was indeed positively correlated with the level of embeddedness of directly reciprocal ties:

**Table 7: Relative frequency of triads containing at least one directly reciprocal tie**

TRIAD	102	111U	111D	201	120C	120U	120D	210	300
Steelwear relative frequency	-0.1	0.5	1.6	1.8	10.7	20.1	24.8	49.4	506.3
Woolgone relative frequency	-0.2	0.8	1.1	1.0	11.6	23.4	34.7	38.3	149.5



Because Simmelian ties are very durable, they appear to have an important role in network structure. Here is the network of ties between individual Steelwear Time Bank members who carried out directly reciprocal transactions again, this time with Simmelian ties indicated:



**Figure 45: Simmelian ties, within network of transactions between individual Steelwear TB members who carried out directly reciprocal transactions**

It is very interesting that around the central triad 300, made up of Simmelian ties, there are several examples of triad 210:

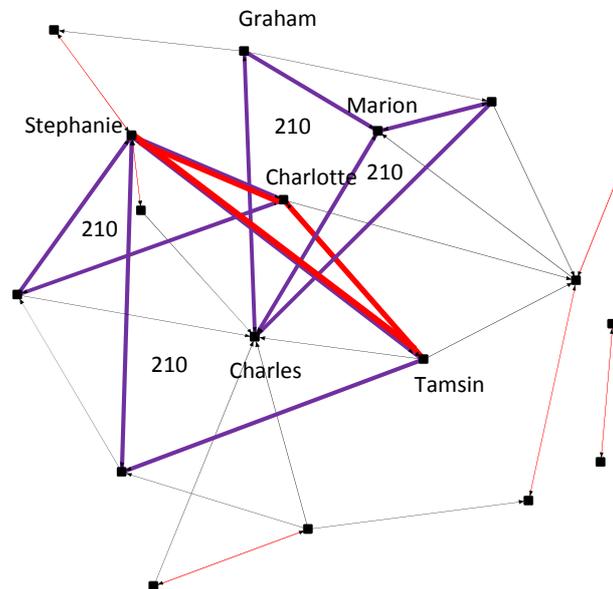


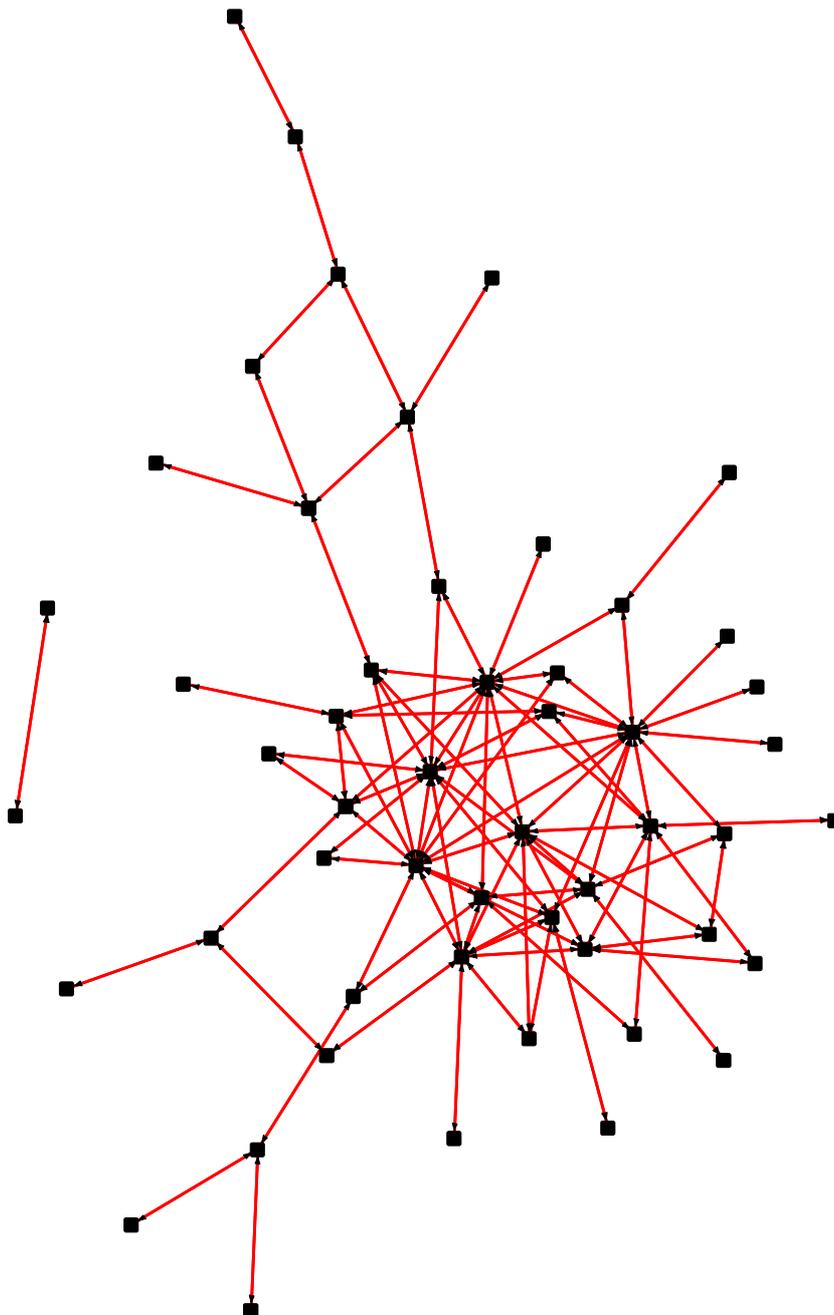
Figure 46: Examples of triad 210 in the same network as above.

As mentioned earlier, triad 210 is often seen as a precursor to triad 300, because it only requires one further tie to become it (Wasserman and Faust, 1994; see p.222). Thus the fact that the single Simmelian triad in this network is surrounded by triad 210s suggests that maybe Simmelian triads arise through the clustering together of individuals engaging in direct reciprocity, with triad 210 being an intermediary stage of triadic development.

Possibly, the presence of triad 300 in Steelwear Time Bank is still significant (despite it appearing in such low numbers), because even a single triad may act as the seed from which further such triads will promulgate through the network, given the right conditions (e.g. members being allowed to choose their own transactional partners).

However, it is interesting to note that the three members in the single example of triad 300 (Stephanie, Tamsin and Charlotte) are *not* the same three members earlier identified as system hubs (Stephanie, Charles and Anne, see p.215), and that in fact these latter three members are not directly connected to each other. This fact may be hindering the spread of co-operation through the system.

*Returning now to Woolgone LETS, surprisingly - apart from a single pair - all Woolgone LETS members engaging in direct reciprocity were connected to each other, not only by mere one-way ties, but by directly reciprocal ties. The resulting intricate structure suggests the end result of a kind of crystallization process, perhaps once seeded by a single example of triad 300:*



**Figure 47** Directly reciprocal transactions between those individual Woolgone LETS members who engaged in direct reciprocity

### 3.4 Core-periphery structure as the end-result of clustering of members engaging in direct reciprocity:

The result of all this clustering of directly reciprocal ties is an overall network structure in which there is a core (within which nodes are highly connected) and a periphery (where nodes are not connected to each other, but all have links into the core):

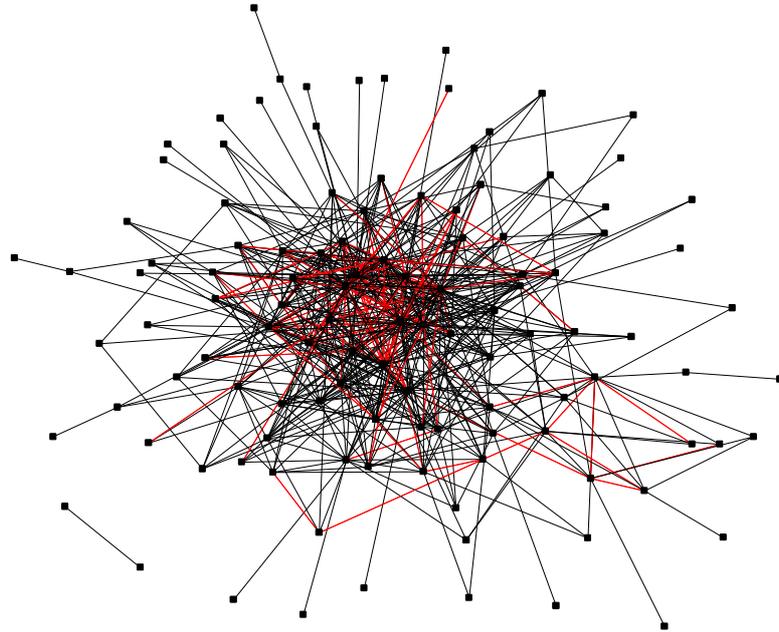


Figure 48: Ties between individual members of Woolgone LETS, showing clear core/periphery structure

For means of comparison, here is the equivalent Steelwear Time Bank network:

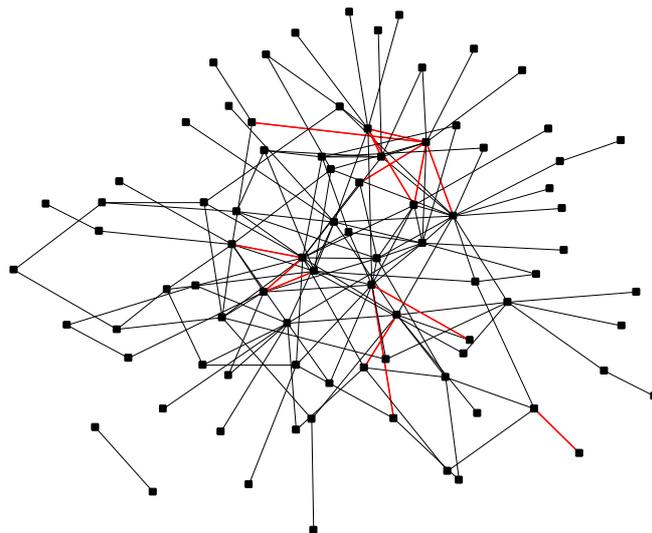


Figure 49: Ties between individual members of Steelwear Time Bank, showing much less clustering in centre of network than in previous diagram

Core-periphery structures are supposed to be especially stable and resilient to the loss of nodes. If a peripheral node is lost, the structure is unchanged; if a central node is lost, a peripheral node can easily move in to replace it (Borgatti and Everett, 1999).

Finally, it has been suggested that Simmelian ties, being 'superstrong and sticky' (Krackhardt, 1998), might act to constrain individuals, making organisations more stable but also less open to change (de Nooy, 1995). There does not appear to be any evidence of this in Woolgong LETS. Members with Simmelian ties appear to enjoy a stable support network of trusting partnerships with other members while continuing to trade widely, making new acquaintances and friendships.

#### **Section IV: EXPLORING THE IMPLICATIONS OF THESE FINDINGS FOR EVOLUTIONARY MODELS OF CO-OPERATION**

Axelrod and Hamilton's model of the evolution of co-operation (1981) might lead one to predict that community currency system members trade widely at first, then narrow down to a few trusted partnerships engaging in direct reciprocity.

According to Nowak and Sigmund's competing model of the evolution of co-operation (1998), image scoring allows individuals to co-operate by means of indirect - rather than direct - reciprocity. Thus members are likely to carry out one-way (rather than directly reciprocal) transactions, trading widely so as to spread their reputation throughout the network. (See Ch.1 Section II:1 for fuller descriptions of evolutionary models of co-operation).

The data I have presented in this chapter suggests that in both community currency systems there are a number of members for whom direct reciprocity is an important behavioural strategy. These individuals do not narrow down to a few trusted partnerships. They trade widely, while *at the same time* entertaining closer relationships – based upon direct reciprocity - with a trusted few. Indeed, the more transactions they carry out, the more partners and the more partnerships based upon direct reciprocity they have.

It is possible therefore that indirect reciprocity co-exists with direct reciprocity, with members trading widely to find more trusted partners, using the partners they already have as proof of their trustworthiness, and as a way of gaining further contacts: 'a friend of a friend is a friend'. Certainly, there were few examples of triads in which indirect reciprocity existed in the absence of direct reciprocity in either network.

Alternatively, it may be that indirect reciprocity is more likely to exist independently of direct reciprocity beyond the level of the triad. The combination of direct reciprocity, clustering, and

a tendency to continue to trade widely appear to result in a high density network in which the 'loops' of transactions associated with indirect reciprocity are a kind of epiphenomenon.

Returning to the members engaging in direct reciprocity, as they both have more partners and carry out more transactions than other members, they are more likely to interact *with each other* than with other members. In other words, they cluster together. As they start to cluster together, they gain access to further partners who are both fairly active in the system, and capable of sustaining longer term relationships based upon trust. The result is that a self-selecting community of trustworthy co-operators begins to evolve. Recently, such clustering has been linked to the success of cooperation as an evolutionary strategy: 'evolutionary dynamics...can favour co-operators, because they cluster in physical or other spaces' (Nowak, Tarnita and Antal, 2010:27).

This clustering together of members engaging in direct reciprocity leads to a few members - the system 'hubs' - having many more partners than other members of the system, and thus to the right-skewed, long-tailed degree distribution so typical of self-organising social systems (Barabási, 2002; see p.68).

Over time, as clustering continues, it leads to the formation of Simmelian ties (otherwise known as triad 300) at the centre of the network. As Simmelian ties tend to be long-lasting, once direct reciprocity has gained a foothold in the network, it is likely that it will begin to spread with a momentum of its own - but only if members trade widely and are able to choose their transactional partners. This may be why there is less evidence of transitivity in the time bank than there is in Woolgone LETS.

The result of members engaging in direct reciprocity both having many partners and clustering together is that the network as a whole develops a core/periphery structure, which has been found to be particularly resilient, retaining its form and level of connectedness even if a number of individual nodes are lost.

## **CONCLUSIONS:**

The majority of members of Steelwear Time Bank and Woolgone LETS managed to balance the number of favours they carried out for others against the favours they received, causing their balances to oscillate about a fixed point, changing little over time. This broadly supports the idea that interaction within community currency systems can be seen as a formalised version of mutual aid as practised within small-scale communities.

As predicted by evolutionary models of co-operation, in both community currency systems groups of individuals had different values and norms from each other, and followed different

behavioural strategies. For instance, in the time bank some individuals saw their activities as a form of volunteering, and tended to give more than they received.

Social network analysis of transaction records from both community currency systems suggests that direct reciprocity is a significant force in the evolution of co-operation, with individuals engaging in direct reciprocity clustering together to form stable higher order structures.

It appears that in order for directly reciprocal relationships to develop, individuals must have a large number of weaker and non-reciprocal ties, and be able to set up turn-taking sequences with partners of their choice. Thus the relative lack of direct reciprocity in Steelwear time bank may have much to do with the fact that members of the time bank carried out relatively few transactions, rarely encountered each other socially, and were discouraged from setting transactions up for themselves.

At triad level, there was little evidence of indirect reciprocity existing independently of direct reciprocity in either system. It is possible that indirect reciprocity always co-exists with direct reciprocity.

Looking beyond the level of the triad, there appeared to be much more indirect reciprocity in Woolgone LETS than in Steelwear Time Bank. It appears that the majority of individual members of the time bank used *neither* direct *nor* indirect reciprocity to stabilise their balances. In order to find out what they did instead, it is necessary to look more closely at the role of organisational members, which I shall do in the next chapter.

## Ch.7 SPHERES OF EXCHANGE IN STEELWEAR TIME BANK AND WOOLGONE LETS

### INTRODUCTION

Community currency systems - as islands in the midst of the national economy – are sites of constant negotiation about how individuals’ contributions to society should be measured and valued. In this parallel universe – a looking-glass realm in which people/activities/things are subtly transformed - there is apparent freedom to invent new ways of doing things, but in reality system members are constantly haunted by the spectres of capitalism: class division and inequality.

In order to exist at all (not merely to be subsumed by Sterling) community currency systems must insulate their currency and activities – at least to some extent - from those of the world outside. How different groups approach this task reflects both their underlying ideology - why they have chosen to create a currency within a currency - and their degree of awareness and efficacy. These, in turn, are in part a function of the structural constraints operating upon them. In other words, it is all very well having ideals, but an organisation also needs to have a structure and day-to-day practices which allow these ideals to be manifested in reality.

It is when one compares one community currency system with another that the range of possibilities becomes apparent. It becomes clear that there are very different ways of managing a community currency system’s position - somewhere between the spheres of economic and gift exchange - and that these different approaches have significant consequences.

In the following analysis I begin by describing how Steelwear Time Bank attempted to differentiate transactions involving time credits from those in the market economy, and yet advertised itself as a way for members to save money, thereby placing its activities in the sphere of the market. I then go on to explain how in reality some transactions benefited members economically, while others were of greater social significance. Meanwhile, despite espousing co-production, the time bank staff and members were still much influenced by the values and traditions of the market economy.

I then look at the role of organisational members in the time bank, and in particular at the practice of allowing some organisational accounts to pay out (or receive) large numbers of time credits, amassing high negative (or positive) balances in the process.

Next I look at data from Woolgone LETS to see if it supports the idea that different spheres of exchange are linked to different types of trading context, each of which encourages particular types of transaction (as suggested on p.101).

Finally, I examine the general question of whether it is desirable, or even possible, for community currency systems to completely insulate the spheres of market exchange and gift exchange from each other, given that the members of such systems must participate in both spheres to fulfil their needs and desires. Perhaps what is more important in any currency-based system is to attempt to balance the supply of currency, and that of goods and services.

## **Section I: STEELWEAR TIME BANK: ESCAPING THE MARKET?**

In Ch.2 Part III I suggested that community currency systems are perhaps best seen as situated somewhere between the spheres of the market economy and that of the gift economy, with one-off transactions involving things coming closer to the sphere of the market, ongoing sequences of reciprocal transactions between members belonging within the sphere of gift exchange, and all other sorts of transactions coming somewhere in between.

The majority of Steelwear Time Bank members see their time bank as primarily a social phenomenon; it is all about 'helping each other out' (see p.143). Although most of them do not carry out many transactions or have many transactional partners (see p.161), they have a feeling of belonging to a community, something 'bigger than myself' as one member put it. They like the fact that through the time bank they meet people from different backgrounds, people whom many of them would not normally socialize with. For many members, the opportunity to value others as equals, whatever their abilities, is something that has a deep appeal (see p.191). Perhaps most importantly, they see the time bank staff as friends they can trust, and rely upon them - and through them upon the time bank as a whole - to provide a social safety-net for them in a crisis (see p.147).

To emphasize the fact that members are engaging in mutual aid (rather than attempting to avoid taxes or commit benefit fraud) UK time banks have taken steps to ensure that transactions between members are differentiated from transactions within the market economy. As described earlier, in Steelwear Time Bank (and many other UK time banks) social favours are all valued equally at one time credit per hour, and transactions involving things are treated as 'donations', again all valued at one time credit (see p.150).

However, it would be an over-simplification to say that transactions within Steelwear Time Bank have nothing to do with the market economy. Steelwear Time Bank is in many ways, and at many different levels, deeply influenced by the market economy, as I shall explore below:

## 1. The material benefits of time bank membership:

In the UK, time banks have tended to set themselves apart from LETS by claiming to have a solely social agenda, so – as described earlier - I was surprised to find that Steelwear Time Bank marketed itself (to potential members and funding bodies alike) as a way for local residents to save money (see p.118).

It is true, however - despite all the hype about time banks being solely social institutions - that for many time bank members, time bank membership brought economic as well as social benefits. As mentioned earlier, 35% of questionnaire respondents mentioned tangible benefits to their membership, such as meals from the café, or lifts to work, and the economic impact of belonging to the time bank was especially significant for those who had very little money indeed (see p.143).

At the same time, the fact that material goods could only be exchanged for a single time credit doubtless reduced the number of transactions involving things (rather than social favours), and thus the extent to which the time-poor, money-rich and the time-rich, money-poor could help each other (see passage on Woolgone LETS below).

*Although helping each other out was seen as central to the identity of Woolgone LETS, 70% of transactions took place at the popular monthly Trading and Social meetings, and involved things rather than services (see p.150). This gave members who were relatively wealthy but had little time to spare the chance to participate in the LETS. They could exchange things they no longer needed, e.g. a second-hand wardrobe, for Curlies, in the process helping those members who were time-rich but money-poor (see p.165).*

*The economic impact of transactions involving things in Woolgone LETS should not be overstated however. Most of the things exchanged were not the basics everyone needs to survive, but non-essential or luxury items: goose eggs and second-hand novels, rather than potatoes. For many, the material benefits of being in the system were far outweighed by the social ones (Panther, 2000).*

*When it came to paying for things with Curlies, most items traded at the monthly meetings went for a token payment of a single Curlie (see p.146). If an item was home-made, a Woolgone LETS member might charge 5 Curlies per hour that it had taken to make. For a more valuable item (e.g. a second-hand wardrobe), the two members involved in the transaction would simply make up a price in Curlies which both parties were happy with. This was often the occasion for the strange phenomenon of what I*

*called 'reverse haggling': the member selling the item trying to lower the number of Curlies being offered, and the member wishing to acquire the item trying to raise the price! It was usually clear that both members involved in such a deal valued their continuing personal relationship with the other member over any economic considerations (Panther, 2000).*

*Meetings provided LETS members with the opportunity to renew their social ties, and to arrange to carry out tasks for each other. It could be argued that bringing things to trade was primarily an excuse for members to socialize, fostering further social interaction between meetings.*

## **2. Carrying out transactions: professionals or friends?**

It was often impressed upon me by the time bank staff that members were expected to carry out exchanges in a professional manner, as if carrying out paid work in the Sterling economy. Hence they were expected to arrive on time, to carry out tasks to a good standard, and not to expect any kind of payment, gift, or food in return for their services (apart from time credits). I was even told that it would not be appropriate for me to be present at exchanges, because members were just there to get the job done, and would not have time to chat to me, or indeed to each other (see p.107).

Surprisingly, at other times - with no hint of there being any element of contradiction - I was told that one of the best things about the time bank was the friendships members made with each other (see p.143).

My fieldwork suggested that some members were more open to friendship than others. Certainly, some time bank members seemed to feel most comfortable carrying out transactions as if they were professional employees. For instance, I remember one particular member arriving at someone's block of flats to carry out some decorating, and announcing himself over the intercom with 'Time Bank here!', rather than giving his name. Another member sorted out people's gardens for them, but never accepted the offer of a cup of tea because he didn't feel he could go inside someone's house to use the toilet. When Anne had a couple of fellow members round to clean her cooker, the two girls chatted away to each other in a foreign language rather than trying to engage with her, and she did not offer them tea. She did keep an eye on the work they were doing though, making sure they did not waste any of her cleaning materials (see p.146 for a fuller account of this transaction).

However, there were also members who saw exchanges as an opportunity to meet new people and to get to know their fellow members better. For a few members, help with computer or housework was largely a pretext to get someone round for a chat. In cases where a member lived alone or was housebound, the time bank staff recognised their need for social contact and would set up exchanges accordingly.

Sometimes, however members' different expectations led to disappointment: one lady told me she'd asked for someone to come and put up shelves and expected to chat to the person while they were carrying out the work, but he'd just wanted to get the job done and leave.

Tellingly, few members had ever complained about services they received from other time bank members, and those few questionnaire respondents who admitted having done so said that it had made them feel guilty. This is evidence that most time bank members see their fellow members as friends, rather than as professionals, and view their activities as within the sphere of mutual aid, rather than as just like paid work.

An unplanned side-effect of tying the community currency used in Steelwear Time Bank to time is that members are discouraged from taking their time over a transaction, and making it into a social occasion: if a transaction goes on a little bit into the next hour, the person receiving the favour has to pay out an additional time credit.

*When one Woolgone LETS member carries out a task for another, it is seen as a favour being carried out by a friend, rather than as a professional service. Members treat each other as equals, often carrying out the task together, and usually turn the encounter into a social occasion, sharing some food or at least a cup of tea.*

*When a task is complete, Woolgone LETS members agree how many Curlies will change hands, and both sign a paper cheque for this amount to send to the transaction recorder. There is little or no haggling over the amount of currency to change hands. As in the time bank it is rare for one member to complain about the quality of another's work as members are unwilling to 'look a gift horse in the mouth' (Panther, 2000).*

### **3. The influence of a Sterling-based value system on how time credits flowed through the system:**

Time bank members enthusiastically explained that being in the time bank was all about helping each other, rather than economic gain. However, when it came to time credit balances both members and staff showed a tendency to cling on to values which they had acquired

through their experiences within the Sterling economy. For instance, staff encouraged members to earn time credits before they spent them so as to avoid having a negative balance (see p.144).

This fear of having a negative balance is likely to have limited how many transactions members carried out, especially as members did not receive statements of their balances. For instance, one member told me she didn't want to ask the time bank for help, because she believed (incorrectly) that her balance was quite low and might become negative.

*In Woolgone LETS, the core group went to considerable lengths to persuade members that Curlies were not Sterling, and that they should be spent freely (see p.144).*

#### **4. The impact of relying upon Sterling funding**

Finally, relying on large amounts of Sterling funding had massive implications for Steelwear Time Bank, both in terms of organisational culture, and in terms of day-to-day practices.

For a start, this meant that the time bank needed to employ someone who had funding expertise, which not only put the job out of reach of most local people, but meant a larger amount of funding was needed (to fund this post).

As described earlier (see p.119), in order to receive funding the time bank had to become much more inclusive, and to prove to funders that it was benefiting the wider community, not just its own members. This led to a shift away from transactions between individual members and towards projects which would enhance the local area.

Tamsin explained that the time bank had to continually reinvent itself in order to compete successfully in the highly competitive, and ever-changing, funding marketplace. Thus she had to spend much of her time developing funding applications, instead of actually running the time bank.

Every time the time bank approached new potential funders, they had to sell themselves in a different way, and often to change the emphasis of their work<sup>96</sup>. For instance, in the past targets have included getting a certain number of people into paid work. Currently, projects with an environmental emphasis go down well, so the time bank has created a number of projects around improving the local environment, e.g. encouraging members to grow vegetables in street planters.

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<sup>96</sup> Unfortunately, one of the real strengths of the time bank - its ability to bring together many *different* groups of people – was rarely of interest to funding bodies, many of whom were set up to support one particular group of people, e.g. older people.

Unfortunately, funders usually made their payments conditional upon a certain number of time credits being exchanged, apparently seeing this as equivalent to the Sterling turnover of a conventional business. This greatly influenced how the time bank operated. The time bank staff had to do all they could to generate time credits, and sometimes the end was felt to justify the means. Thus, as discussed in the next section of this chapter, organisational accounts were often used to generate time credits, despite this leading to their spiralling negative balances.

A knock-on effect of success being measured in terms of how many time credits have been generated is that activities which do not directly generate time credits (e.g. social events) are considered low priority (see p.122).

As I have described earlier (see p.155), having paid community workers means members feel less of a sense of ownership of time bank projects, e.g. leaving the care of plants destined for Hanging Basket Day to community workers. A vicious cycle develops in which members are not relied upon, and hence prove themselves to be unreliable.

There is a danger that, in becoming dependent on Sterling funding, time banks lose sight of why they came to be in the first place. As one Time Bank broker put it, 'I am worried that these days time banks are about providing services to funders, who don't really care how those services are provided, as long as they are. This means the original concept behind time banks, the idea of co-production, tends to go out the window' (Sue Holden, personal communication, 2009).

Tamsin, the time bank project manager, dreamed of a future when time banks were centrally funded: 'Nobody expects a doctor's surgery to become self-sufficient. Like a surgery, we are doing a really important job locally, and should be receiving ongoing funding from the government' (personal communication). Long-term governmental funding would certainly make it easier for time bank staff to concentrate on running their organisations, rather than having to constantly hunt for new funding sources. However, with centralised funding there might come the expectation that all time banks should operate in a certain way, and it might become even harder for time banks to respond to local circumstances, and the needs and wishes of their members.

*Woolgone LETS received a small amount of funding from the council, but were basically self-sufficient (see p.119), paying the members who ran the system in Curlies rather than in Sterling.*

## Section II: THE ROLE OF ORGANISATIONAL TIME BANK MEMBERS

Up to this point I have concentrated on the individual members of the time bank, focusing on the bonds of trust and friendship between them. However, it was largely through its organisational members that the time bank attempted to fulfil the targets of its funders, and - as I shall describe in this section - transactions involving organisational members had significant implications for the system as a whole.

I begin by comparing the overall activity of Steelwear Time Bank and Woolgone LETS members, looking at what proportion of transactions involved individual, and what proportion organisational, members in the two groups. I go on to examine how particular organisational members of the time bank operated, before turning to the issue of how organisational members influenced the individual members of the time bank.

### 1. Virtual currency use in Steelwear Time Bank and Woolgone LETS

Superficially, Steelwear Time Bank and Woolgone LETS appear rather similar, despite the dramatic difference in their Sterling incomes (see p.119). Both organizations are situated in the midst of the Sterling economy, and yet use a local virtual currency to measure and record transactions between members. Both organizations operate system and community pool accounts, and incorporate a food co-operative run by one of their members. At first glance, the two groups even appear to be similarly active:

**Table 8: Transactions, and currency units exchanged, in one year.**

	<b>STEELWEAR TB (130 members)</b>	<b>WOOLGONE LETS (154 members)</b>
<b>TRANSACTIONS IN ONE YEAR</b>	1680 (2.2 per member per month <sup>97</sup> )	1651 (1.8 per member per month)
<b>CURRENCY UNITS EXCHANGED</b>	4670 time credits (up to 4670 hours of activity <sup>98</sup> , or 3 hours per member per month)	22161 Curlies (roughly 4432 hours of activity <sup>99</sup> , or 2.4 hours per member per month)

<sup>97</sup> Transactions per member per month = total transactions/(no. of members x 12 months), all doubled because each transaction involves two members, one as giver and one as receiver.

<sup>98</sup> Time bank members earn a time credit for any *part* of an hour that they spend helping out another member. Many transactions last considerably less than a full hour.

<sup>99</sup> As described on p.135, Woolgone members often chose to use a standard rate of 5 Curlies per hour.

However, when transactions between individual members are separated out from those involving organisational members, it becomes clear that in Steelwear Time Bank the majority of transactions are between organisations, or organisations and individuals, whereas in Woolgone LETS the majority of transactions are between the individual members themselves:

**Table 9: Transactions between individual members vs. transactions involving organisational members**

TRANSACTIONS IN ONE YEAR	STEELWEAR TB (130 members)		WOOLGONE LETS (154 members)	
	BETWEEN INDIVIDUAL MEMBERS (N=113)	INVOLVING ORGANISATIONAL MEMBERS (N=17)	BETWEEN INDIVIDUAL MEMBERS (N=150)	INVOLVING ORGANISATIONAL MEMBERS (N=4)
	404 (24% of all transactions)	1276 (76% of all transactions)	1164 (71% of all transactions)	487 (29% of all transactions)

On average, the individual members of Woolgone LETS carried out slightly more than twice as many transactions with each other as the individual members of the time bank (see p.160).

## **2. Investigating the role of organisational members in the time bank**

As described in Ch.4 (p.134), there were seventeen organisational accounts in Steelwear Time Bank. Two of these - the System and Community Pool accounts - were operated by the time bank itself. In addition, there were two cafes with accounts, a food co-op run by a member, and several local community groups with accounts, many of which represented either specific ethnic groups, or particular residential areas.

### **2.1 Limited involvement of local community groups:**

Potentially, belonging to the time bank meant that local community groups could use time credits to reward members for engaging in their projects. For instance, one such group rewarded local residents for their help with improving the appearance of the streets where they lived.

However, there was a problem. As Tamsin, the time bank project manager, explained, many local community groups had time bank accounts, but found it hard to grasp that they had to earn time credits as well as spend them. She felt that in the voluntary sector the culture exists that if the money is available, the services are there to be taken advantage of. For instance,

one local group was happy to send one of its members for English tuition from a time bank member, but after a few lessons the time bank had to say no further lessons could take place until the group had found ways to give back to the time bank.

In terms of spheres of exchange, as the community groups' view of the world was based solely on Sterling, they found it hard to adapt to the idea of a separate sphere based upon trust and co-production<sup>100</sup>. This probably had much to do with the fact that they were involved as organisations, rather than as individuals. As organisations they would have had to justify all their actions to their own funders, who might have found it hard to understand the need to pay back actions performed for time credits.

*Woolgone LETS had few organizational accounts: the system and community pool accounts, the LETS food co-op, and St Claire's (a community group working with people with mental and physical handicaps, organized by the local church). Woolgone LETS had come to an arrangement with Woolgone Council whereby the Council earned Curlies for hiring out halls and the St Claire's minibus to Woolgone LETS, and doing photocopying for them. They then used these Curlies to reward LETS members who worked with the St Claire's group, e.g. driving their minibus.*

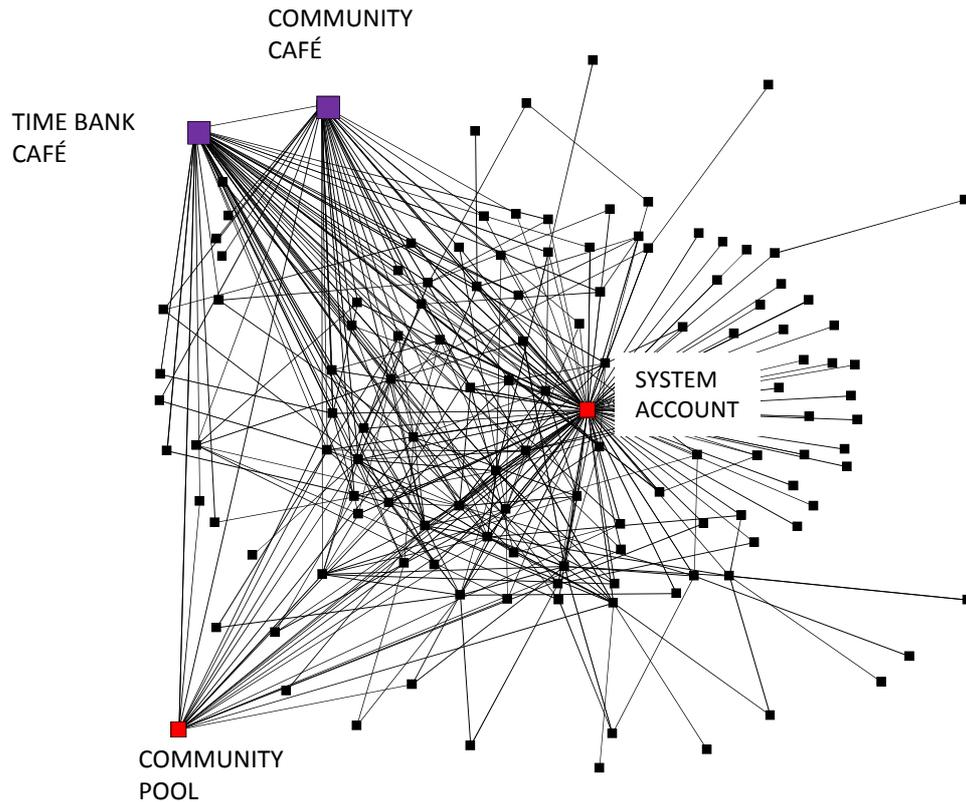
*It was much simpler to set up a mutually beneficial relationships between Woolgone LETS and St Claire's because both organizations were operated by volunteers, rather than by paid staff whose time had to be accounted for in Sterling.*

## **2.2 The significant impact of the system, community pool and café accounts:**

Four organisational accounts – the time bank system and community pool accounts, and the two café accounts – had a considerable impact on the availability and flow of time credits, and thus upon the value of time credits for members. Here is a network diagram illustrating their impact on the system as a whole:

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<sup>100</sup> This is similar to the problem faced by economically-motivated community currency systems which try to get local businesses involved, but find these businesses' suppliers will not accept community currency.



**Figure 50: All transactions in Steelwear Time Bank, illustrating the influence of the four most active organisational accounts.**

Below I describe each of these organisational members in turn, before going on to look at their overall impact:

**1) Steelwear Time Bank’s System account:**

The system account was used to reward time bank members for carrying out work for the time bank itself: members who belonged to the board and attended board meetings, members who worked to improve their local environment by engaging in litter picking and looking after street planters, and the member (Charles) who edited the newsletter. 75% of all members carried out transactions with Steelwear Time Bank’s system account in the course of the year Oct 2007-8.

Although the system account received some credits from the Community Pool, and occasional credits for letting individual and organizational members use the photocopier and other office facilities, over time it became very negative, with a balance of -500 time credits in October 2008. The system account is discussed further on p.252.

*In Woolgone LETS, the system account was used to reward core group members for the work they did to keep the system running. In 2000, a total of 1400 Curlies was paid out to core group members, with most core group members receiving a LETS salary of 180 Curlies annually (some slightly more, some slightly less, than this).*

*Payments in Curlies to core group members were to a large extent balanced out by the Curlie component of annual membership fees (see p.119). In 1999, 1020 Curlies were raised through membership fees, leaving a shortfall of about 400 Curlies.*

*System accounts often become negative in LETS, and there is some disagreement in LETS circles about how much it matters (e.g. Lang, 1994). To be on the safe side, the Woolgone LETS core group decided to hold an 'Auction of Promises' at the AGM each year. At these auctions, members bid on each other's goods and services, with all Curlies raised going to the system account. In 2000, the Auction of Promises raised 1850 Curlies, ensuring that there were plenty of Curlies in the system and community pool accounts to reward members for their services without the system accounts acquiring high negative balances.*

*In Woolgone LETS these additional Curlies were backed by the goods and services which members offered to provide on the system's behalf for the auction. Thus no inflation was created by the auction.*

## **2) Steelwear Time Bank's Community Pool account:**

The Community Pool account was used to reward any action which was deemed to be in the common good, and would not otherwise be recorded in time credits. For instance, if a member did not turn up to carry out an exchange with another member, the member who did turn up would be rewarded with a time credit from the Community Pool account, to compensate for their wasted time, keeping the member in question happy, while at the same time generating yet another credit to report to funders. In addition, members were able to donate time credits to the Pool, which could then be used by other members.

However, neither of these things happened very often, and several members confessed that they were not sure what the Community Pool was. Only 15% of questionnaire respondents had ever donated credits to the Community Pool account, and only 8% had ever (knowingly) received credits from it. It was much more common for a member to donate credits directly to another member.

I was surprised, therefore, that in October 2008 the time bank's Community Pool account was even more negative than the System Account, with a balance of -2412 time credits. When I asked about this, Tamsin the project manager explained<sup>101</sup> that the Community Pool was 'just a dummy account to show [funders] what we're doing for the wider community' (meaning non-members). Apparently the Community Pool was being used to measure and record the time the time bank staff put into providing advice, practical and emotional support to members (and indeed non-members) who dropped into the office. The staff had realized that this was what they spent the greatest part of their time doing, and wanted to ensure that this time was recorded in credits, so that it would contribute to the overall time credit turnover of the system. Whenever they spent time with someone who had dropped into the office, they would earn a credit from the Community Pool. Because staff members were employed by the time bank, the credits they earned went directly into the system account.

While I could see that the advisory and supportive work the time bank staff carried out was very important, to my mind they were being paid twice - first in Sterling and then in time credits - for the same work.

Over time the Community Pool account had become more and more negative because it rarely earned time credits from anywhere, but regularly passed them to the system account.

*In Woolgone LETS, Curlies from the Community Pool were used to reward members who helped the system on an occasional basis, e.g. by writing articles for the newsletter, baking, or washing up for one of the monthly meetings. In 2000, the community pool paid out 992 Curlies to members for such help. The Community Pool accumulated Curlies in a number of ways: the Curlies which members paid for refreshments at monthly meetings went into the Pool, as did Curlies paid for the hire of system equipment (e.g. a garden shredder). In addition, the member running the food co-op also gave the Community Pool a certain proportion of the Curlies he earned. Occasionally, the Community Pool account received donations from members who had a positive balance when they left the system. In 2000, the community pool earned a total of 548.50 Curlies in these ways. Again, the Auction of Promises (see p.253) provided a source of Curlies from which the Community Pool could be replenished.*

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<sup>101</sup> At first I thought that Tamsin meant that credits from the community pool were used to reward those who carried out activities improving the local area, like litter picking and caring for street planters. But Tamsin told me that in fact such activities are rewarded with credits from the system account: 'the time bank asks members to do this kind of work, so the time bank pays for it out of the system account'.

### **3) The Time Bank Café:**

The most active organisational member was the Time Bank Café. This café used the premises of the Community Café every Wednesday evening, and was mainly frequented by time bank members, their relatives and families.

Time bank members could purchase a full three course meal at the café for a single time credit, or for £1.50, while non-members had to pay £3 for a meal. Time bank members could also help with shopping, food preparation and washing up at the café, earning themselves time credits in the process.

The café was only popular with a small subgroup of members (see p.122). Some of these members only ever spent their time credits at the café, rather than in transactions with other individual members (see p.202). As a result the café received far more time credits than in paid out, and by October 2008 had accumulated a very high positive balance of 1002 time credits.

In effect, the Time Bank Café was taking Sterling - in the form of ingredients, and more importantly staff and community workers' wages - and transforming it into meals sold for time credits. Thus while the café sold meals to members for one time credit or £1.50, the real Sterling cost (to the system) of each meal was much, much higher.

### **4) The Community Café:**

The Community Café was operated by a neighbouring charitable organisation, and was open to the public on a daily basis, selling meals to the public in exchange for Sterling. Despite the café having no source of time credit income, time bank members who volunteered there earned time credits for doing so. By October 2008, the Community Café's balance was -1598 time credits.

Several time bank members (e.g. Katie, Mat and Sue) earned credits working at the Community Café, which they then spent on meals from the Time Bank Café (see diagram on p.258). Thus there was a steady flow of credits from the Community Café to the Time Bank Café.

Over time the Community Café (which had few ways of earning time credits) amassed a larger and larger negative balance, while the time bank members working in it, and the Time Bank Café (where several of these members spent their credits) acquired very high positive balances.

***The diagram overleaf shows the flows of social favours, time credits and Sterling in Steelwear Time Bank, as well as the balances (in time credits) of key organisational members:***

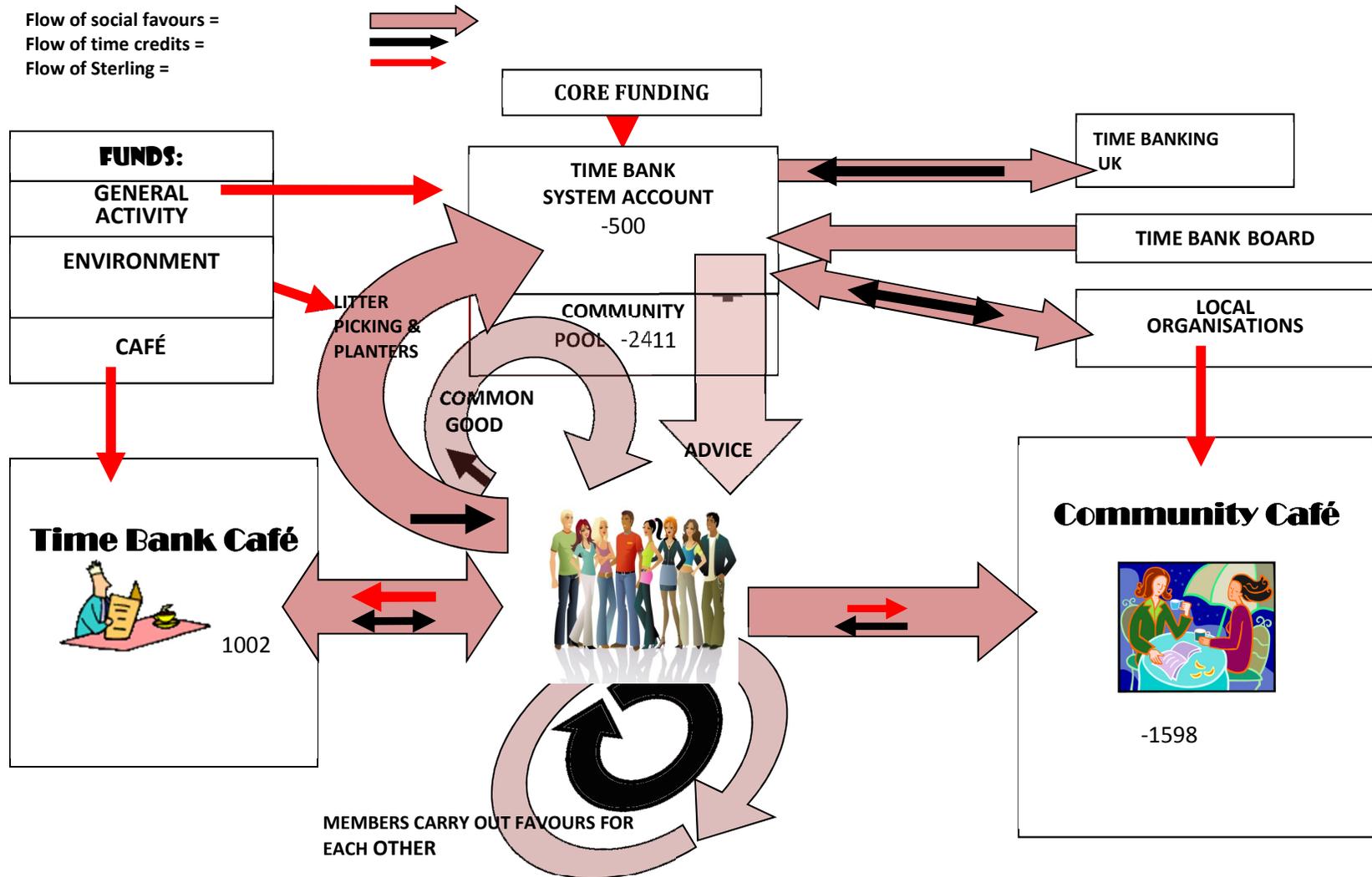
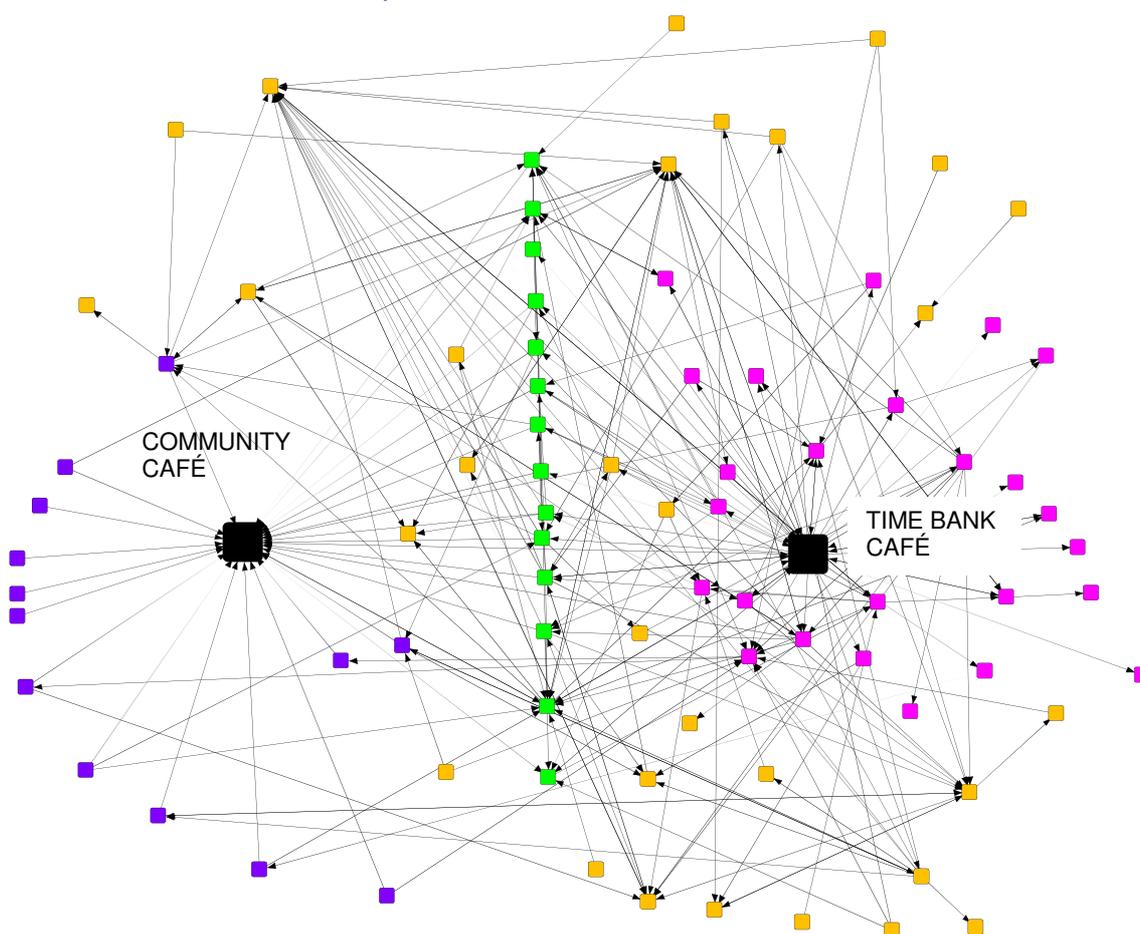


Figure 51: Steelwear Time Bank: currency flows, and organisational balances in time credits (as of Oct 2008).

### 2.3 Influence of organisational time bank members on the time credit balances of individual time bank members:

As described in Ch.6, the majority of individual time bank members managed to stabilise their time credit balances around a fixed point, despite rarely engaging in either direct or indirect reciprocity. Social network analysis revealed that in this, organisational members - and especially the two cafes - played a major role. 84 of the 113 individual members of the time bank (74%) carried out transactions<sup>102</sup>, or with another individual member who carried out transactions with one of the cafes:

**Figure 52: Individual time bank members who carried out transaction(s) with one or both cafes, or with another individual member who did so.**



KEY: Members who carried out transaction(s) with both cafes ■  
 Members who carried out transaction(s) with Community Café ■  
 Members who carried out transaction(s) with Time Bank Café ■  
 Members who carried out transaction(s) with a member who carried out transaction(s) with one or both cafes ■

<sup>102</sup> Although a high proportion carried out transactions with one of the cafes at some point in the year, as described earlier (p.116) few members used the cafes on a regular basis. Still their impact on the system as a whole was considerable.

Meanwhile, 86 individual members carried out transaction(s) with the time bank's System Account (eg. earning credits by litter-picking), and 24 with the Community Pool account.

These connections to organisational members (whether direct or indirect) provided individual time bank members with a way of maintaining their (usually positive) balances. However, over time the organisational members involved amassed higher and higher balances, which were often negative. The implications of this are discussed in the next section.

## **2.4 Spheres of exchange: economic and social, or national and local?**

If one defines the relevant spheres of exchange as market economy (economic) and gift economy (social), then Steelwear Time Bank appears to lie somewhere between the two (see Ch.2 Part III:4). Certain types of transaction came closer to the sphere of market exchange, while others were more clearly a form of social, or gift, exchange (see diagram on p.93). This was partly a matter of how the individual members concerned saw, and carried out, the said transactions: 'It ain't what you do. (It's the way that you do it)', as the song goes. For instance, for one member getting help with their computer from a fellow member might be primarily an excuse for social interaction, while for another it might be primarily a way of saving money, or of acquiring the skills necessary to find a job.

Another way of looking at the situation is in terms of national and local forms of currency. The national currency system is primarily economic (in that transactions often occur between people who do not know each other, and have no intention of forming social bonds through their transactions), while the time bank currency system is primarily social (in that transactions often involve individuals who have learned to know and trust each other, and for whom transactions are a way of cementing social relationships further).

## **2.5 Organisational members: breaching the spheres leads to inflation**

At one level, having the cafés and the support of office staff was highly beneficial to the time bank and its members. The Time Bank Café provided food, a material good that every person needs to survive, for time credits. This gave time credits - at least in this context - some real value, and was especially important for those who had lots of ways of earning time credits, but found few ways of spending them. Meanwhile, the Community Café made it possible for several members to spend their time usefully serving their community, when otherwise (as one of these members observed) they would have been stuck at home with nothing to do.

Finally, the support the time bank staff gave people<sup>103</sup> who dropped into the office was incredibly valuable to them, both on a practical level and in terms of how they felt about living in the area. To give an idea of the significance of this support to local people, when Harry<sup>104</sup> fell gravely ill, it was time bank staff who brought his elderly friends to his hospital bedside, and later held a collection to pay for a tombstone for what would otherwise have been an unmarked grave.

At a deeper level, however, the role of organisational members in the time bank was much more problematic. The fact that the time bank had Sterling funding pressured the staff into generating high numbers of time credits through organisational members, often with little regard for preserving the balance between the supply of time credits, and the supply of goods and services one could obtain for them.

For instance, the time bank system account became very negative (see p.245) because of all the credits it paid out to members for their litter-picking and gardening efforts. In effect, this account was being used to breach the spheres, converting Sterling (paid to the time bank for environmental projects), into time credits (used to 'pay' members to pick up litter and look after street planters):



**Figure 53: Turning Sterling into time credits, via an army of helpful time bank litter-pickers**

This proved not to be a sustainable approach to dealing with the problem of litter in the area. There was some initial enthusiasm for the project, and at first members turned up in droves to rid their area of litter. However, day after day the litter would reappear, and several of the members involved found they earned more credits than they could easily spend.

An alternative way of encouraging members to look after their local area would be to invite members who wanted such work to be carried out to donate time credits to the Community Pool for this purpose. Then, as long as the Pool still had a positive balance, these credits could

<sup>103</sup> Members and non-members alike.

<sup>104</sup> Harry never actually joined the time bank, but was a regular in the office and the café and very much part of the community of the time bank.

be used to reward those members who carried out this work. Once the pool had run out of credits, more would have to be donated before any more could be paid out. While this method would not generate so many time credits, it would provide members with high positive balances with a worthwhile way of spending their credits, making it more likely that they continued as active members of the time bank.

Over time, practices such as this<sup>105</sup> meant that the number of time credits in circulation in the time bank increased, without any concomitant increase in the quantity of goods and services available to members, resulting in inflation<sup>106</sup>. As Jeremy, one of the founding members of the group, put it: 'they [time credits] seem to come from nowhere and everyone has loads'.

While the time bank staff felt that time credits were merely a kind of gimmick to attract funders' attention, the way virtual currency was used in Steelwear Time Bank had very real results: the majority of time bank members had credits to spend, but there were few members with negative balances who - as a result - were keen to earn time credits by helping fellow members. Those who did have negative balances were often physically unable to earn many credits. Thus when a member asked if someone could do their gardening or decorating for them, often the broker could find no one willing to do it, and the staff would eventually end up carrying out the task themselves. As described earlier (see p.211), members with valuable skills and very high positive balances would often receive some token of thanks - for instance, a bag of home-grown vegetables - out of recognition that the time credits themselves were of little value to them.

Members who did continue to help fellow members - despite having healthy positive balances - often did so out of a simple desire to help their neighbours, and/or out of loyalty to the time bank staff themselves. While this kind of behaviour may have been facilitated by the existence of the time bank, very few individuals behaved in this way, and arguably there are less expensive and less convoluted ways of promoting what is essentially traditional volunteering.

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<sup>105</sup> In a similar way, the Community Café paid out many hundreds of time credits to the members who worked there, with the result that its time credit balance became hugely negative (-1598 time credits by Oct 2008). Unlike the Time Bank Café, this cafe only sold meals for Sterling, so was unable to earn any time credits.

<sup>106</sup> Luckily for the time bank, the member who worked the longest hours in the Community Café and had over 800 time credits in her account had no interest in spending these credits. The other individual member with more than 800 time credits in his account died shortly after I started my fieldwork. Thus over 1600 time credits were effectively taken out of circulation, making the remaining ones in active members' hands much more valuable than they would otherwise have been.

### Section III: LINKING SPHERES OF EXCHANGE TO GAME THEORY: DOES INTERACTIONAL CONTEXT INFLUENCE TRANSACTIONAL TYPES?

In Chapter 2 it was suggested that different individual members of a community currency system might tend toward particular behavioural strategies, and thus toward particular transaction types. Furthermore, it was suggested that different spheres of exchange might be linked to certain interactional contexts. Therefore one might expect to see the same individuals carrying out different types of transaction depending on context, and/or individuals with particular strategies and dominant transaction types tending to frequent particular contexts.

More specifically, the prediction made near the end of the chapter was that at market-like social gatherings, transactions were more likely to be one-off and one-way, like most transactions within the market economy. However, between these monthly gatherings, when members met on a one-to-one basis at each other's houses, transactions were more likely to be directly reciprocal - like transactions within the gift economy - and might even involve an element of turn-taking (see p.101).

In Steelwear Time Bank, the majority of transactions were set up by a broker and took place on a one-to-one basis at a member's house or in the time bank office, so it was not possible to test out these predictions using data from this system. Instead, I used data from two of the contexts in which transactions between Woolgone LETS members took place: the monthly market-like trading and social meetings, and members' houses, where the majority of transactions took place on a one-to-one basis between meetings.

The table (see overleaf) reveals that there was a 10% higher proportion of one-off transactions at market-like trading meetings, which fits with the idea that at such meetings individuals carry out transactions within, or close to, the sphere of the market economy.

More surprising was the finding that levels of direct reciprocity were not much higher between meetings than at them<sup>107</sup>. However, it is delayed direct reciprocity which requires participants to form a trusting bond and therefore characterizes transactions within the gift economy, and upon further examination it turned out that there was much more delayed direct reciprocity between meetings than at them.

It is possible that the direct reciprocity occurring at meetings is simply due to individuals being at the same place, at the same time, with goods to trade, whereas direct reciprocity

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<sup>107</sup> It should be noted that these categories are not mutually exclusive. Where one individual helped another only once, and was helped by them only once in return, these transactions would be classified as **both** directly reciprocal **and** one-off.

between meetings is the result of members selecting particular partners to interact with on a repeated basis, and choosing to reciprocate favours they have received from these partners. This interpretation is supported by the fact that between meetings many directly reciprocal transactions form a turn-taking sequence, whereas when one looks at transactions taking place at meetings such sequences are much rarer.

**Table 10: Transaction types of Woolgone LETS members in two different interactional contexts**

	<b>AT MARKET-LIKE TRADING MEETINGS</b>	<b>BETWEEN MEETINGS, AT MEMBERS' HOUSES</b>
<b>Total members carrying out transactions</b>	76	112
<b>Total transactions<sup>108</sup></b>	581	560
<b>Members engaging in one-off transactions</b>	75	108
<b>One-off transactions</b>	309 (53% of all transactions at meetings)	239 (43% of all transactions between meetings)
<b>Members engaging in direct reciprocity</b>	30	43
<b>Transactions in a directly reciprocal pair</b>	106 (18% of all transactions at meetings)	120 (21% of all transactions between meetings)
<b>Transactions involving immediate direct reciprocity</b>	52 (49% of all directly reciprocal transactions at meetings)	20 (17% of directly reciprocal transactions between meetings)
<b>Transactions involving delayed direct reciprocity</b>	54 (51% of all directly reciprocal transactions at meetings)	100 (83% of directly reciprocal transactions between meetings)
<b>Transactions forming a turn-taking sequence</b>	15 (3% of all transactions; 14% of directly reciprocal ones)	61 (11% of all transactions; 51% of directly reciprocal ones)

<sup>108</sup> Not including transactions generated by the annual Auction of Favours or by the LETS Food Coop.

The network structure of transactions at meetings appears broadly similar to that of transactions between them:

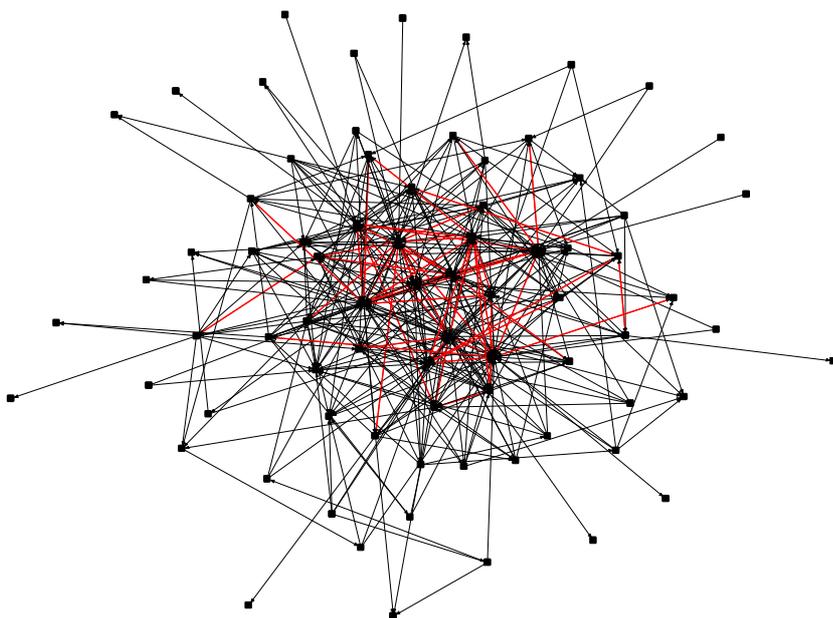


Figure 54: All transactions at market-like trading meetings in Woolgong LETS.

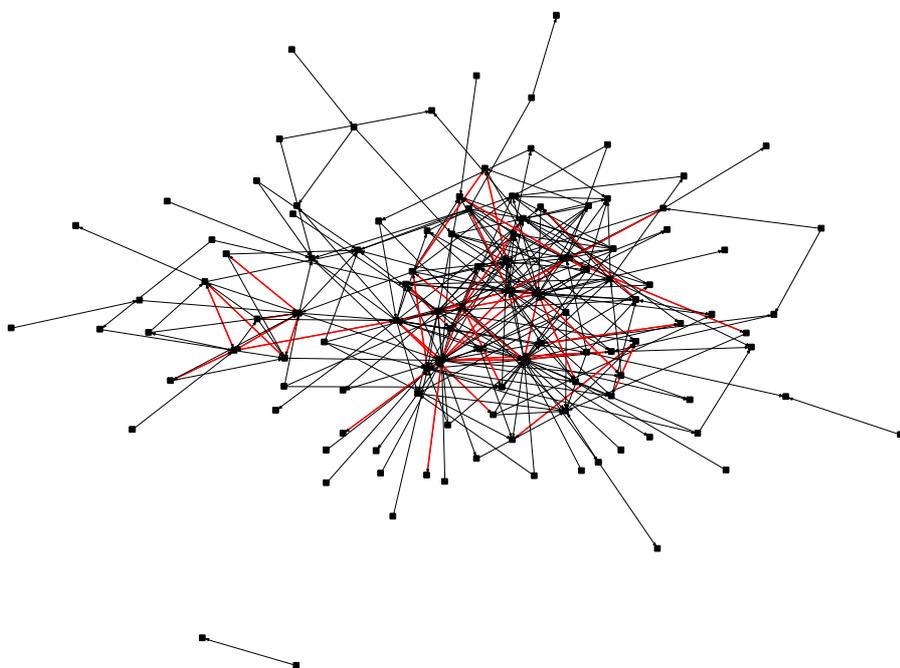


Figure 55: All transactions between meetings in Woolgong LETS.

In both contexts, the majority of members carrying out directly reciprocal transactions are directly connected to each other. However, in the between meetings network, there is considerably more fragmentation, with a number of pairs being separate from the main component:

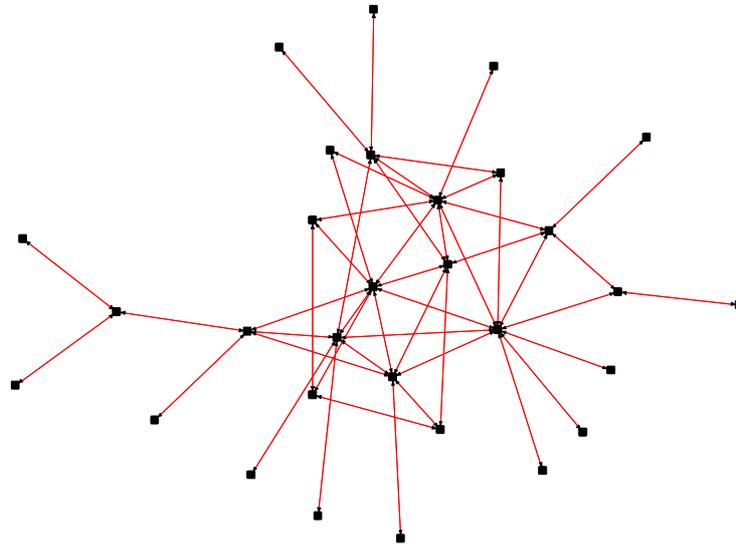


Figure 56: Directly reciprocal transactions at market-like trading meetings in Woolgong LETS.

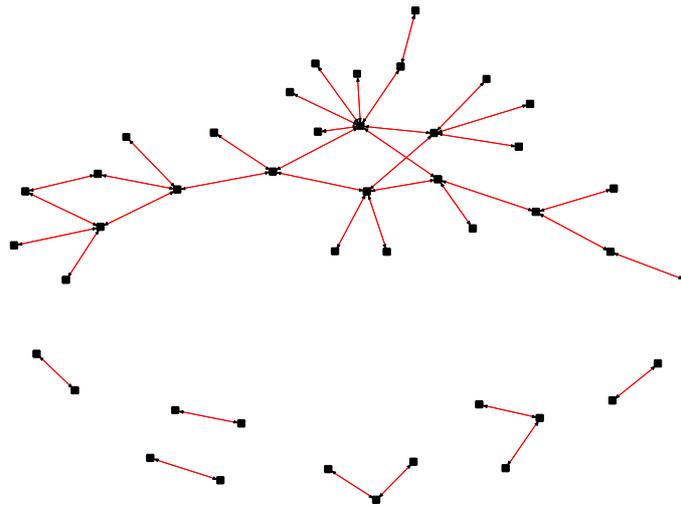


Figure 57: Directly reciprocal transactions between meetings in Woolgong LETS.

It appears that meetings have an important role, holding the system as a whole together, connecting individuals who otherwise would not be connected, thus increasing the social reach of individuals. Meanwhile, between meetings, members have the opportunity to build and then deepen trusting relations with each other, increasing social cohesion. Thus, the effectiveness and health of the system is apparently increased by allowing members to interact in a variety of ways and in a variety of contexts (only two of which have been explored here).

## CONCLUSIONS:

At this point it is helpful to remember that the idea of separate spheres of exchange is merely a way of thinking about the world, a human construct. People are social animals who have long combined social interaction with the exchange of services and material goods. Even within the so-called market economy, transactions have an important social component (Belshaw, 1965). While in certain circumstances it may be beneficial for societies to make a distinction between economic and social, to differentiate market from gift exchange, as individual beings we have to maintain social relationships *while* keeping a roof over our heads and food in our stomachs; in other words, we have to function in both/many spheres at once.

It appears that certain types of transaction within a community currency system are more market-like, while others have more of a social agenda. When national currency is very scarce, community currencies are likely to overlap more with the sphere of market exchange, with people being forced to use local currencies so as to be able to exchange essential goods and services. As the national economy recovers, community currencies will naturally slip back towards the sphere of gift exchange, enabling people to build and sustain the social ties we need to keep ourselves mentally and physically healthy, but which are commonly under-valued within the market economy.

Thus it is not sensible to attempt to design community currency systems which are either purely social or purely economic. The role of community currency systems is to exist somewhere *between* the spheres, creating a space in which time-poor money-rich, and time-rich money-poor can interact with one another on an equal footing. Analysis of transaction networks suggests that a variety of interactional contexts is essential for a healthy network, giving members the opportunity to both trade widely and deeply (as in forming strong relationships with particular individuals).

Finally, it may be hazardous to allow breaching of the spheres between the national Sterling economy and the local community currency-based one, because the value of currency in both systems depends on there being a balance between supply of currency, and supply of goods and services. Where currency from one system is used to generate currency in the other system without a concomitant increase in goods and services, inflation will ensue.

In short, while local and national must be kept apart, it is not possible - or indeed desirable - to keep economic and social apart.

## THESIS CONCLUSIONS:

In this conclusion, I return to each of the main themes of the thesis in turn, outlining my main findings, looking at the broader implications of my research and - in some cases - suggesting where further research is needed.

### 1. SOCIAL COHESION AND REACH

Instead of the both over-used and under-defined concept of social capital, I recommend the use of two distinct concepts: social cohesion, a group-level concept referring to the nature, strength, density and arrangement of ties within a network, and social reach, an individual-level concept referring to the number and strength of ties a particular individual has to others within, or outside, their immediate social network.

My research suggests that within different contexts, the members of community currency systems interact in different ways. One-to-one encounters allow members to establish and deepen trusting relationships with each other, thus increasing social cohesion in the group as a whole. Meanwhile, social gatherings - and perhaps especially those at which members are encouraged to trade goods with each other - enable members to widen their social circles, thus increasing their social reach.

**Implications and future research:** The fact that both of social cohesion and social reach can be measured using social network analysis should make it much easier to ascertain whether development projects have been successful in achieving their aims, which typically include ideas like 'encouraging community cohesion' and/or 'increasing access to employment opportunities'. Community currency systems are particularly amenable to analysis using social network software as all transactions between members are already recorded in electronic form. It is important to combine this quantitative work with qualitative research, ideally with the two approaches feeding off and informing each other (rather than first using one approach, then the other).

### 2. RECIPROCITY AND CO-OPERATION

In terms of the evolution of co-operation, my work with community currency systems suggests that individuals engaging in direct reciprocity cluster together at the centre of the network, forming long-lasting Simmelian ties, while continuing to trade widely with other individuals.

Members who carry out directly reciprocal transactions tend to be the most active members of the group, both carrying out many more transactions, and having many more partners, than other members. While this level of activity alone may be enough to cause clustering of direct reciprocators, alternatively, clustering may occur through direct reciprocators engaging preferentially with other individuals who have directly reciprocal ties.

Either way, the result is a highly right-skewed degree distribution, and an overall core/periphery network structure, resilient to the random removal of nodes (as might occur when community currency members cease to be active members, or leave the area).

There is no evidence of indirect reciprocity in the form of a closed cycle (or loop) at triad level with no directly reciprocal transactions within this cycle. It appears that if indirect reciprocity exists at all, it is in combination with direct reciprocity, *or* in cycles including more than three individuals, *or* in unfinished chains (in which the majority of members give and receive equally, but at the start of the chain there is an individual who only gives, and at the end of the chain an individual who only receives).

**Implications and future research:** This latter possibility - that indirect reciprocity does occur, but rarely in the form of a closed loop - would perhaps fit with Winterhalder's idea that the co-existence of individuals with different behavioural strategies - perhaps Layton's 'fier', 'fou' and 'gentil' types (Layton, 2000) - is necessary for co-operation to be sustained (Winterhalder, 1996a). This can be related to ideas from game theory: over time the proportion of different types will cycle, but in the long run variety gives the best chance for co-operation to prevail, whereas a monoculture of unconditional co-operators would all too easily be overcome by a few unexpected free-riders.

My own research reveals that within each community currency system, individual members often view their involvement in completely different ways, acting accordingly. For instance, in Steelwear Time Bank, some members preferred to see their activities as similar to professional work, while others saw them as a form of volunteering, and yet others valued the idea that it was important for everyone to have opportunities both to give and to receive. Perhaps this apparent confusion over values is actually necessary for the stability of a community currency system?

In order to find out more about how direct reciprocators come to cluster together, and to better understand the role and form of indirect reciprocity in a network, further research is necessary, possibly using software (such as SIENNA) which allows for the longitudinal analysis of social networks.

### 3. SPHERES OF EXCHANGE

In both community currency systems studied in this thesis, individual members' balances tended to oscillate around a fixed point, suggesting that such systems are better seen as examples of formalised mutual aid than as economic institutions.

However, it would be an over-simplification to claim that *all* transactions within community currency systems belong in the sphere of social exchange, rather than that of the market. In both systems, some transactions had market-like qualities, while others were more clearly socially motivated. For instance, in Woolgone LETS, transactions between meetings often involved delayed direct reciprocity and sequences of turn-taking and led to friendship, whereas transactions involving things at the monthly meetings were more likely to be one-off, or to involve immediate direct reciprocity, and were often (relatively) impersonal.

**Implications and future research:** It appears that community currency systems exist somewhere between the spheres of the market economy and gift exchange, with certain transactions coming closer to one or the other sphere. Providing a variety of contexts, for members to interact in in different ways, increases social reach and cohesion, at the same time making a community system more resilient and flexible; better able to meet its members' needs, which may well change in response to changes in the surrounding political and economic climate. In the future, it would be interesting to look at a large number of community currency systems and to identify whether the ones which survive in the long term are those which allow their members to engage across the spheres, or those which attempt to limit them to a narrow range of transaction types and contexts.

### 4. THE SIGNIFICANCE OF CULTURE

Community currency systems share the same basic concept, that of using a local currency to both measure and record members' helpful acts towards each other. However, my comparative study reveals that different community currency systems may have quite different organisational cultures and practices. It appears that - even within this limited context (groups using a local currency to measure and record transactions), culture matters: 'It ain't what you do (It's the way that you do it)'.

**Implications and future research:** It would be interesting to cast the net wider and to look at a large number of community currency systems, comparing them both in terms of cultural ideology and in terms of how values and norms are created and sustained, and in particular at the role of social events as an arena for members to observe each other's interactions and establish ways of behaving.

## **5. PRACTICAL IMPLICATIONS FOR THE MANAGEMENT OF COMMUNITY CURRENCY SYSTEMS**

In terms of the management of community currency systems, my data suggests that in order to maximise social cohesion and reach it is necessary to encourage members to carry out a large number of transactions with a wide range of partners, forming and breaking ties with other members at will until they have found those people with whom they are able to form relationships based upon direct reciprocity.

While the support of a broker may be essential for some members (and may benefit others at times), in order to ensure that members get to know each other and trade frequently and widely it is important to arrange regular social gatherings, and to encourage members to set up their own transactions, both at these gatherings and between them.

Talking about each other - as well as to each other - at such meetings allows members to promulgate system norms, and to gently self-police, discouraging free-riding. This is especially important in groups in which balances are not published, but establishing a culture based upon equality, trust and transparency (rather than hierarchy and dependence on central authority) is important in all grassroots organisations.

Encouraging community currency members to pass on unwanted objects to each other at such gatherings makes it easier for who are time-poor and money-rich, and those who are time-rich and money-poor, to support each other. However, the economic side of such gatherings should not be over-stressed: while the mainstream economy is still functioning at all, community currency system members will tend to sell things of value to it, within it.

Finally, given the increasing popularity of community currency systems and the concept of co-production, a word of warning seems in order. Since people exchange their labour for community currencies in good faith, a community currency should not be treated as merely the latest fad with which to impress funders, but as a tool which requires careful and skilful use to create better lives for system members. A person running a community currency system is in a position of trust, and therefore must do all he or she can to ensure that the community currency keeps its value. While there may occasionally be situations in which it is beneficial to

all concerned to breach the barrier between Sterling and local currency, such a step must only be taken after careful consideration of the long-term implications. Allowing community currency units to be created without a concomitant increase in the availability of goods and services within the system will lead to inflation. If community currency units lose their value, members who have many of these units because their time and/or skills are in demand within the system may well be the first to leave, and will be sorely missed.

The underlying problem is that currently funders often demand evidence of a high turnover of system currency as evidence that a community currency system is functioning effectively, and this leads system organisers to focus on providing ways for individual members to earn system currency, rather than on ensuring that the system as a whole is in balance.

**Implications and future research:** Social network analysis provides valuable tools with which the effectiveness and sustainability of community-based organisations can be measured, and hopefully will help move evaluation of such groups away from approaches and techniques better suited to profit-driven institutions. Co-production - the idea that we all deserve opportunities to both give and take - is a valuable concept. However, in our target-driven culture, it is important to find ways to measure it in concrete terms, possibly by relating it to different types of reciprocity within a social network.



## **APPENDICES**

1. Questionnaire administered to Steelwear Time Bank members.
2. Introduction to Social Balance Theory and Transitivity.
3. List of triad types with diagrams.



1. Questionnaire administered to Steelwear Time Bank members.



## WHAT'S IT LIKE BEING IN... STEELWEAR TIME BANK?

If you can spare 20 minutes to fill in this questionnaire, you can help the Time Bank become even better AND earn yourself a Credit doing so! Your answers will also help me with my research at Durham University (please see Project Information Sheet attached). I will keep your data securely and confidentially, and in any reports I will ensure it is not possible for others to identify you personally.

**Julia Panther**

**ABOUT YOU:** Full name: \_\_\_\_\_ Male / Female

**How old are you?** Under 18   18-24   25-34   35-44   45-54   55-64   65 or more  
                 

**Do you live in Steelwear?** Yes / No / Don't know

**If yes, how long have you lived here?** \_\_\_\_\_

**If you don't know, please tell me which road you live in** \_\_\_\_\_

**and how long you have lived there** \_\_\_\_\_

**Do you live...** *Please circle as many categories as you need to.*

On your own   With friends   With relatives   In a couple   In a family with children   Other: \_\_\_\_\_

**How do you spend your time?** *Please circle as many categories as you need to.*

At school   Unable to work for health reasons   Looking after children   Unemployed   Full time job

Self-employed   Retired/pension   Part time job(s)   Student   Other: \_\_\_\_\_

If you are employed, what job(s) do you do? \_\_\_\_\_

If you are not employed at the moment, what was your most recent job?

\_\_\_\_\_

If your partner works, what is their job? \_\_\_\_\_

*Please only circle one for each question..*

**How often do you chat with your neighbours (people who live nearby but are not relatives) ?**      Never    Hardly ever    Sometimes    Often    Always

**How often do you and your neighbours (people who live nearby but are not relatives) help each other out?**      Never    Hardly ever    Sometimes    Often    Always

**Do you have any particular health or support needs which might affect your role within the Time Bank and what you want from it?**

-----  
-----

<b>Ethnic background:</b>	White:	British	<input type="checkbox"/>
		Irish	<input type="checkbox"/>
		Other white background	<input type="checkbox"/>
	Black or Black British:	Caribbean	<input type="checkbox"/>
		African	<input type="checkbox"/>
		Other black background	<input type="checkbox"/>
	Asian or Asian British:	Indian	<input type="checkbox"/>
		Pakistani	<input type="checkbox"/>
		Bangladesh	<input type="checkbox"/>
		Chinese	<input type="checkbox"/>
		Other Asian background	<input type="checkbox"/>
	Mixed:	White and Black Caribbean	<input type="checkbox"/>
		White and Black African	<input type="checkbox"/>
		White and Asian	<input type="checkbox"/>
		Other mixed background	<input type="checkbox"/>
	Other ethnic background:		<input type="checkbox"/>

**Outside the Time Bank, do you tend to mix socially with others from the same ethnic background (eg. Chinese) as yourself?**

*Please circle one only.*

No, I mix socially with people from many different ethnic backgrounds

I tend to mix more with people of a similar ethnic background to myself

I only mix socially with people from a similar ethnic background to myself

**Outside the Time Bank, do you tend to mix socially with others from the same social background (eg. working class) as yourself?**

*Please circle one only.*

No, I mix socially with people from many different social backgrounds

I tend to mix more with people of a similar social background to myself

I only mix socially with people from a similar social background to myself

**Outside the Time Bank, do you tend to mix socially with others from the same age group (eg. older people) as yourself?**

*Please circle one only.*

No, I mix socially with people of many different ages, from children to older people

I tend to mix more with people of a similar age to myself

I only mix socially with people of a similar age to myself

**Please describe any volunteering you do and/or positions of responsibility in the community:** \_\_\_\_\_

**If you *started* doing any of these AFTER you joined the Time Bank, please**

**CIRCLE them in your answer above.**

**Is there anything else you want to say about yourself?**

\_\_\_\_\_

## **ABOUT THE TIME BANK:**

**How long have you been a member of the Time Bank?** \_\_\_\_\_

**Have you used the Time Bank in the last year?** Yes / No

**How often do you usually earn or spend credits on the Time Bank?:**

*Please circle one only.*

Every week      A couple of times a month      Once every few months      A few times a year      Hardly ever      Never

**What do you like best about the Time Bank?**

*Please tick as many as you like:*

Helping each other out

Using credits instead of money

Chance to help less fortunate members of your community

Building a local community

Other: \_\_\_\_\_

**If you earn credits, how do you usually EARN them?**

\_\_\_\_\_

**If you spend credits, what do you usually SPEND them on?**

\_\_\_\_\_

**How did you find out about the Time Bank?** *Please tick as many as you need*

Friend was already a member

Walked/drove past office

Another organisation/counsellor suggested I join

Other: \_\_\_\_\_



**When you contact the Time Bank, do you ever ask for a particular person to carry out an exchange for you?** Yes / No

**Do you ever ask that a particular person should NOT carry out an exchange for you?** Yes / No

**Have you ever asked to exchange with someone of a particular ethnic background/gender/social class/age?** Yes / No

**Has anyone ever asked you directly if you would like to exchange with them (rather than going through the Time Bank office)?** Yes / No

If yes, what did you feel about this and why? \_\_\_\_\_

\_\_\_\_\_

If no, how would you feel if someone did ask you directly? \_\_\_\_\_

**At present do you mainly give help to other members or receive help from other members – or do you do both?**

Mainly give

Mainly receive

Do both about equally

**If you mainly give or receive, please explain why this is:**

\_\_\_\_\_

**Do you think it matters if some members give more than they receive, or receive more than they give? Please explain...**

\_\_\_\_\_

**Have you ever donated credits to the Community Pool/another member?** Yes / No

**Have you ever received a donation of credits from the Community Pool or another member?** Yes / No

**Would you like to be...** *Please just tick one box.*

more involved in the Time Bank than you are   
less involved in the Time Bank than you are   
involved as much as you are now

**Which of these (if any) would help you become a more active member of the Time Bank?**

*Please tick as many boxes as you like.*

- |   |                          |
|---|--------------------------|
| having more free time   | <input type="checkbox"/> |
| having different skills to offer  | <input type="checkbox"/> |
| being in better health  | <input type="checkbox"/> |
| knowing more of the other members   | <input type="checkbox"/> |
| being able to get hold of the broker more easily                                      | <input type="checkbox"/> |
| being able to arrange exchanges directly with other members                           | <input type="checkbox"/> |
| more skills (eg. typing, plumbing) on offer   | <input type="checkbox"/> |
| more things (eg. furniture, vegetables) on offer                                      | <input type="checkbox"/> |
| being able to get more credits for things, (e.g. 4 credits for a secondhand wardrobe) | <input type="checkbox"/> |
| more social events  | <input type="checkbox"/> |
| other: _____  | <input type="checkbox"/> |

**Some members of the Time Bank are more active than others - why do you think this is?**

---

**What Time Bank social events have you attended in the last year...**

- |                     |                          |
|---------------------|--------------------------|
| None                | <input type="checkbox"/> |
| Café on a Wednesday | <input type="checkbox"/> |
| Xmas party          | <input type="checkbox"/> |
| Hanging basket day  | <input type="checkbox"/> |
| Other: _____        |                          |

**If you don't attend Time Bank social events, why not? \_\_\_\_\_**

---

**How could Time Bank social events be made even better?** \_\_\_\_\_

---

**When Time Bank members do things for other members, do you see it as...**

*Please only tick one box.*

just like doing work for money,  
except you pay credits instead

friends/neighbours helping each other out

a form of charity, people helping others  
less fortunate than themselves

other: \_\_\_\_\_

**Have you ever complained about the standard of work  
carried out for you by a member of the Time Bank?** Yes / No

If yes, who did you complain to, how did this feel and why?

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**Your values:** *Please circle one of these.*

I feel it is fair that all Time Bank members  
receive one credit for an hour of work,  
whatever that work is. Agree Don't know Disagree

I feel it is fair that when a member gives  
something to another member, eg. a piece of  
furniture or a book, that they always  
receive a single credit. Agree Don't know Disagree

I tend to respect people with paid jobs  
more than those without. Agree Don't know Disagree

Unpaid work (eg. looking after children, helping other Time Bank members) is as valuable as paid work.      Agree    Don't know    Disagree

Unpaid work (eg. volunteering, helping other Time Bank members) is just a step on the ladder to getting a proper job.      Agree    Don't know    Disagree

We all have something to give, it is important that everyone gets to both give and receive.      Agree    Don't know    Disagree

**Please CIRCLE any of the ideas/values below that you think *most* Time Bank members would agree with:**

we are all equal

it is important that we all have chances to both give and receive

unpaid work is just a step on the ladder to a proper, paid job

paid work is as valuable as unpaid work

**Are there any other ideas/values like these that you feel most Time Bank members share?**

**Please describe them if you can.** \_\_\_\_\_

**Do you trust your neighbours more since joining the Time Bank?**      Yes    Don't know    No

**Do you trust Time Bank members more than non-members?**      Yes    Don't know    No

**Has anyone ever been negative or even aggressive about your being a Time Bank member, or carrying out activities with the Time Bank?**      Yes / No

If yes, please describe: \_\_\_\_\_

**Do you feel that, over time, the Time Bank has changed?**      Yes / No

If yes, has it got BETTER or WORSE, and why? \_\_\_\_\_

\_\_\_\_\_

**Is there anything you don't like about the Time Bank?**    Yes / Don't know / No

**How could the Time Bank be improved?** \_\_\_\_\_

***AND FINALLY...***

**Is there anything else you would like to add?**

---

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Thank you ever so much for filling in the questionnaire. Please post it to me or seal the envelope and hand in at the Time Bank office.

It would be really helpful if I could meet or phone you for a chat about your experiences as a Time Bank member. If this is possible, please give me your phone number and/or email address:

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If you want to contact me, please leave a message on XXXXXXXXXXXXX , or email me on XXXXXXXXXXXXXXXXXXXX, or leave a message for me with someone in the Time Bank office.

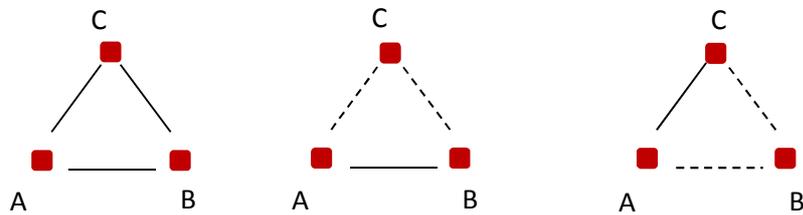
**END OF QUESTIONNAIRE**

### 3. AN INTRODUCTION TO SOCIAL BALANCE THEORY AND TRANSITIVITY.

In the early twentieth century there was great interest in the idea of social groups having a structure. Given that World War II was about to break out, it is not surprising that many eminent social scientists – including Evans-Pritchard (1929), Homans (1950), Levi-Strauss (1949), and Radcliffe-Brown (1940) (cited in Wasserman and Faust, 1994:221) – were particularly interested in looking for ways to understand conflict and balance between subgroups. These early ideas have had a lasting influence on the study of social networks.

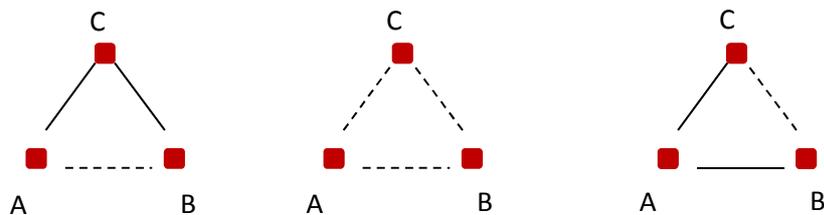
The use of graph (or network) theory to investigate social structure dates back to Heider's cognitive balance theory (1946), of which transitivity (as discussed briefly in this thesis) is a special case. The essence of cognitive balance theory is that two individuals who are friendly with each other are likely to share the same attitude towards a third individual (or indeed an object), and vice-versa (Faust and Wasserman, 1994:220). Thus, if A and B are both friends with (or indeed both dislike) C, they are likely to be friends with each other too. If, however, A is friends with C and B is not, A and B are unlikely to be friends. All three of these triples are said to be balanced:

KEY:    positive relation (eg. friends)        \_\_\_\_\_  
           negative relation (eg. not friends)    - - - - -



adapted from Faust and Wasserman (1994:224)

On the other hand, Heider predicts that if A and B are friends, *and* one likes C and the other does not, A and B will feel uncomfortable. This phenomenon he called 'cognitive dissonance' (Faust and Wasserman, 1994:220). Similarly, if A and B both like/dislike C, *but* do not like each other, this too will create cognitive dissonance. Such triads are said to be unbalanced:



adapted from Faust and Wasserman (1994:224)

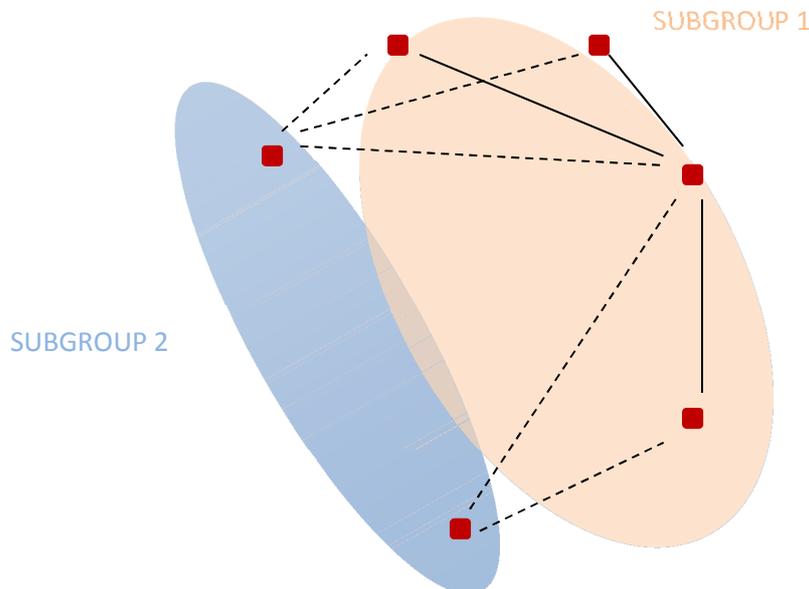
According to Heider, in order to prevent cognitive dissonance, A and B will either stop being friends, or one of them will change their attitude towards C. Thus triads tend to be balanced

rather than unbalanced, and balance theorists refer to unbalanced triads as forbidden triads<sup>109</sup>. Depending on the particular balance theory model one is using, certain unbalanced triads are even referred to as ‘forbidden’ triads.

The concept of cognitive balance was soon extended to cover whole groups of people, giving rise to the concept of structural balance, a structurally balanced group being defined as one in which all cycles (or groups of connected nodes) are themselves balanced<sup>110</sup>.

An important discovery was that any structurally balanced group can be divided into two subgroups, all ties within each group being positive, and all ties between the two groups being negative (Harary, 1953; cited in Wasserman and Faust, 1994:227). According to proponents of structural balance theory, such a group would lack ‘intrapersonal psychological “tension”’ (Wasserman and Faust, 1994:226).

Balanced network:



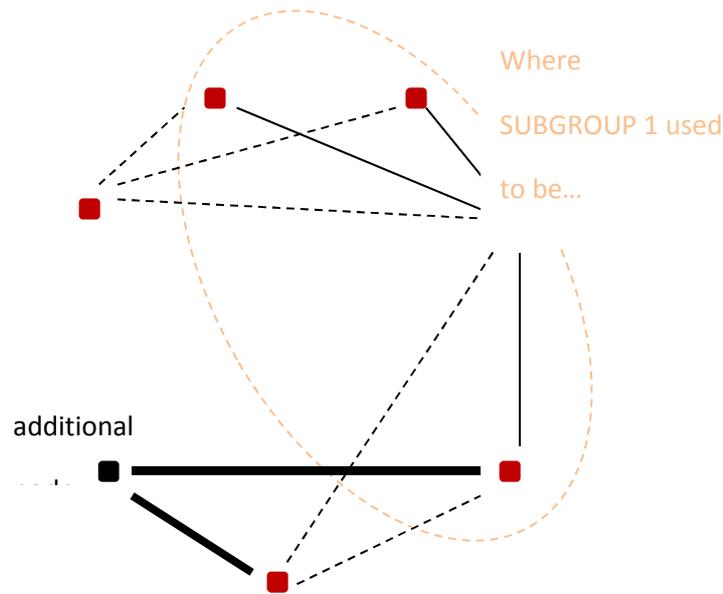
adapted from Faust and Wasserman (1994:228)

By contrast, in an unbalanced group, it is not possible to identify separate clusters within which individuals are in agreement. The addition of a single node has transformed the balanced group above into the unbalanced group on the next page:

<sup>109</sup> Exactly which unbalanced triads are referred to as ‘forbidden’ depends on the particular balance model the theorists are using. The earliest models were the most restrictive (only allowing two different types of triads), but over time models have come to include more and more different types of triads.

<sup>110</sup> A cycle can be of any size (eg. a triple is a 3-cycle). To determine whether or not a cycle is balanced, one calculates the product of the signs of the lines. Eg. (-)(-)(+) gives a cycle with a positive sign, whereas (-)(-)(+)(-) gives a cycle with a negative one. A cycle must have a positive sign to be balanced (Wasserman and Faust, 1994:225).

Unbalanced network:



adapted from Faust and Wasserman (1994:227)

### **Transitivity: a generalisation of structural balance theory.**

Up until this point, the diagrams presented have been of non-directional networks with signed (i.e. positive or negative) ties. However, it is unusual to collect data of this type (Wasserman and Faust, 1994:239), so it was a significant breakthrough when Holland and Leinhardt (1970; cited in Wasserman and Faust, 1994) realised that by concentrating on positive relations and ignoring negative ones, Heider's ideas could also be used to investigate directional, and unsigned, ties.

If a directional but unsigned network is to conform to balance theory, it may only have triad types 102 and 300 in it, and the result will be that there are two distinct subgroups in the network (de Nooy, 2005:207).

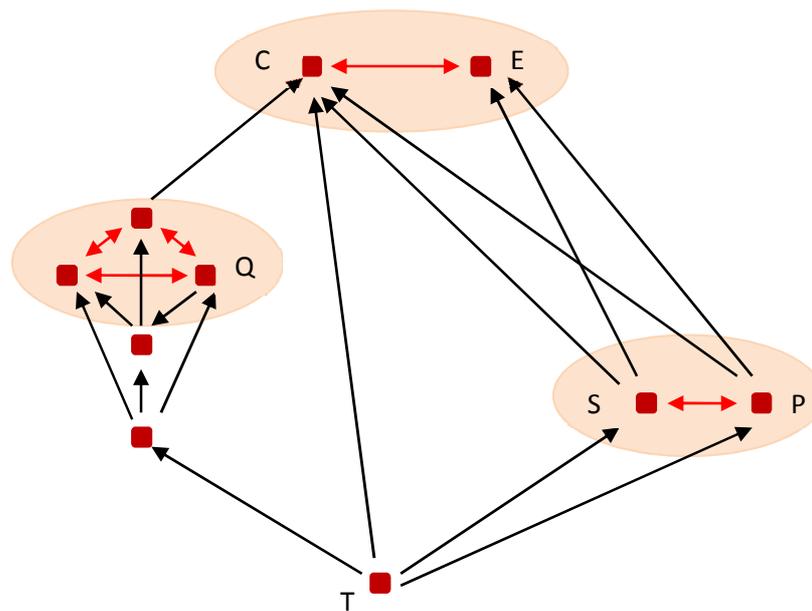
In real life networks, many other triad types and greater numbers of clusters are often found to be present (e.g. Davis and Leinhardt, 1972; cited in Wasserman and Faust, 1994). Other models have been developed from the original balance theory model, in order to account for this.

While the clusterability model is more inclusive than the balance model in that it allows triad 003, and places no restriction on the number of subgroups (or clusters) present, the ranked clusters model additionally allows triads 021D, 021U, 030T, 120D, and 120U, by permitting social networks in which the clusters themselves are ranked, with asymmetric ties between one rank and the next (de Nooy, 2005:209).

The next most inclusive model is that of transitivity. The transitivity model is of a network in which individuals self-organize into clusters, based on some kind of similarity (or perceived

similarity<sup>111</sup>) between them. Like the clusterability model, the transitivity model allows ranked clusters, but it is more inclusive than clusterability model because it allows for null ties between ranks<sup>112</sup>, and thus for the existence of triad 012 (de Nooy, 2005:208).

In other words, according to the transitivity model, if A is friendly with C and C is friendly with B, it is likely that A is friendly with B (as in the original structural balance model). Where the transitivity model differs from the original structural balance model is that there may be many more than two clusters in the network, and these clusters may be hierarchically ranked<sup>113</sup>, as in the diagram below:



adapted from de Nooy (2005:206)

 = cluster (in which nodes are linked by mutual ties)      

In this example, there are three clusters. Within each cluster, the nodes are linked by mutual (or directly reciprocal) ties, suggesting that they are of equal rank. The asymmetric (or one-way) ties in the network suggest an element of hierarchy. There are asymmetric ties from node T to two of the clusters, indicating that node T is ranked below nodes A and P, and nodes C and E. Additionally, the asymmetric ties from one of these clusters to the other suggests that nodes S and P are themselves ranked below nodes C and E. Finally, there are many 012 triads in this

<sup>111</sup> It is possible that – at least in certain contexts - the clusters lead to the perception of similarity, rather than the other way around!

<sup>112</sup> The example de Nooy gives is that ‘boys and girls may have separate rank systems that are perfect ranked clusters but boys may ignore girls and vice-versa’ (de Nooy, 2005:208).

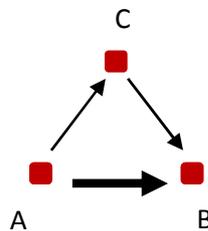
<sup>113</sup> The transitivity model differs from the ranked clusters model in that it ‘does not require that all ties between ranks are asymmetric’ (de Nooy, 2005:211).

network (triads with a single asymmetric tie). One example is the triad consisting of nodes T, Q and C. Such triads occur when there are no direct links<sup>114</sup> between one rank and another.

Holland and Leinhardt (1972) have provided strong statistical evidence, based upon empirical data, that 'transitivity is a very important structural tendency in social networks' (Wasserman and Faust, 1994:246).

### Triads which are 'forbidden' by the transitivity model:

Even the transitivity model does not allow all triad types. A transitive triple (see p.5) is one in which whenever there are ties  $A \rightarrow C$  and  $C \rightarrow B$ , there is also a tie  $A \rightarrow B$  (Wasserman and Faust, 1994:243):

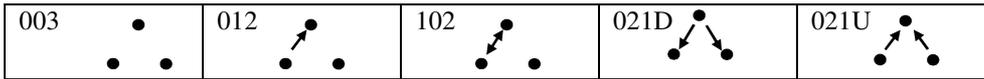


For a triad to be regarded as transitive, it must consist of only transitive and/or vacuously transitive triples (those which do not have enough ties to be either transitive or intransitive). A single intransitive triple is enough to make a whole triad intransitive. Therefore, of the 16 possible triad types, 5 are vacuously transitive, 4 are transitive, and the remaining 7 are intransitive (1994:245):

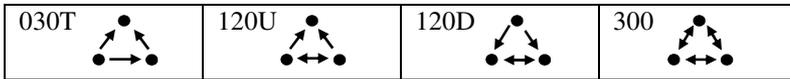
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<sup>114</sup> Another way of saying there is no direct link between clusters or nodes is to say there is a null tie between them.

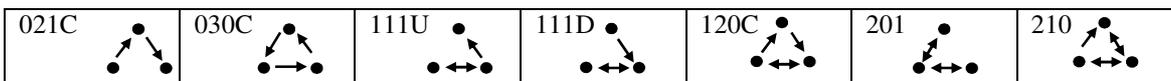
Vacuously transitive triad types:



Transitive triad types:



Intransitive triad types:



According to de Nooy, the intransitive triads 021C, 030C, 111U, 111D and 201 ‘contradict all balance-theoretic models and the assumptions about symmetric and asymmetric dyads on which the models are based. If these triads occur often [more often than predicted by chance], we ought to doubt whether we can cluster and rank the data according to balance-theoretic principles’ (2005:209). In effect, these triads are forbidden by balance theory.

It is particularly interesting that triad 030C is included in this list of forbidden triads. If indirect reciprocity is one of the underlying mechanisms by which co-operation is maintained in these networks, one might expect that the 030C triad (and other cyclical formations) will occur at statistically significant levels.

The two intransitive triads which narrowly escape being included in de Nooy’s ‘forbidden’ list are triads 210 and 120C. Wasserman and Faust explain that although triad 210 is also an intransitive triad, its presence should not be taken as strong evidence against the presence of transitivity, as only one of its six triples is intransitive (1994:246). It suggested elsewhere that it may be seen as a simply a precursor to triad 300 (1994:242). 120C is not forbidden by de Nooy because it is allowed by the hierarchical clusters model, which is very similar to the transitivity model, except that it depicts a social structure in which clusters may have some asymmetric dyads - and thus some ranking - within them.

#### 4. LIST OF TRIAD TYPES WITH DIAGRAMS

There are sixteen possible triads. Each triad is named according to the number of Mutual, Asymmetric and Null ties it has, eg. the 102 triad is so called because it has 1 Mutual tie, 0 Asymmetric ties, and 2 Null ties. In addition, the letter U signifies asymmetric ties which point up, D such ties which point down, C describes ties which are cyclic, while T describes ties which are transitive.

003	
012	
102	
021D	
021U	
021C	
111D	
111U	
030T	
030C	
201	
120D	
120U	
120C	
210	
300	



## BIBLIOGRAPHY

- Ahn, T. K., J.-K. Choi, and Y. Sohn. 2011 Core-Periphery Segregation in Evolving Prisoner's Dilemma Networks In *ArXiv e-prints*: Seoul National University.
- Aked, J., N. Marks, C. Cordon, and S. Thompson. 2008. Five ways to wellbeing: a report presented to the Foresight Project on communicating the evidence base for improving people's well-being. Centre for Well-Being, New Economics Foundation.
- Aldridge, T., J. Tooke, R. Lee, A. Leyshon, and N. Thrift. 2001. 'Recasting work: The example of local exchange trading schemes'. *Work Employment and Society* 15 (3):565-579.
- Andreoni, J. 1990. 'Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving'. *Economic Journal* 100 (401):464-477.
- Axelrod, R., and W. D. Hamilton. 1981. 'The Evolution of Cooperation'. *Science* 211 (4489):1390-1396.
- Barabási, A.-L. 2002. *Linked : the new science of networks*. Cambridge, Mass.: Perseus Publishing.
- Barabási, A.-L., and R. Albert. 1999. 'Emergence of scaling in random networks'. *Science* 286 (5439):509-512.
- Barth, F. 1967. 'Economic Spheres in Dafur' In *Themes in Economic Anthropology*. London: Tavistock, 149-174.
- Belshaw, C. S. 1965. *Traditional exchange and modern markets*. Englewood Cliffs, N.J.: Prentice-Hall.
- Bentley, R., P. Ormerod, and M. Batty. 2011. 'Evolving social influence in large populations'. *Behavioral Ecology and Sociobiology* 65 (3):537-546.
- Bentley, R. A., C. P. Lipo, H. A. Herzog, and M. W. Hahn. 2007. 'Regular rates of popular culture change reflect random copying'. *Evolution and Human Behavior* 28 (3):151-158.
- Bentley, R. A., and S. J. Shennan. 2005. 'Random Copying and Cultural Evolution'. *Science* 309 (5736):877-879.
- Berkman, L. 1983. 'The assessment of social networks and social support in the elderly'. *Journal of the American Geriatrics Society* 31 (12):743-749.

- Berkman, L. F., and T. Glass. 2000. Social integration, social networks, social support, and health. In *Social Epidemiology*, edited by L. Berkman and I. Kawachi. Oxford: Oxford University Press.
- Blau, P. M. 1964. *Exchange and power in social life*. New York: J. Wiley.
- Bohannan, P. 1963. *Social anthropology*. New York: Holt, Rinehart & Winston.
- Bohannan, P., and L. Bohannan. 1968. *Tiv economy*. Harlow: Longmans.
- Borgatti, S., and M. G. Everett. 1999. 'Models of core/periphery structures'. *Social Networks* 21:375-395.
- Borgatti, S., C. Jones, and M. G. Everett. 1998. 'Network Measures of Social Capital'. *Connections, INSNA* 21 (2).
- Borgatti, S. P. 2005. 'Re: scale-free exponent' (message sent to on-line discussion group for users of UCINET, May 18, 2005; available at <http://tech.groups.yahoo.com/group/ucinet/message/1023>).
- Bott, E. 1957. *Family and social network*. London: Tavistock.
- Bourdieu, P. 1984 *Distinction: A Social Critique of the Judgement of Taste*. Transl. by R. Nice. Cambridge, Massachusetts: Harvard University Press.
- Bourdieu, P. 1990 (1980). *The Logic of Practice*. Translated by R. Nice. Stanford, CA: Stanford University Press.
- Boyle, D. 2009. The coming time banks moment: the new world of volunteering. In *Time Banking UK conference*. Blackpool.
- Buchanan, M. 2002. *Nexus : small worlds and the groundbreaking science of networks*. 1st ed. New York: W.W. Norton.
- Burt, R. 2005. *Brokerage and Closure: An Introduction to Social Capital*. New York: Oxford University Press.
- Cahn, E. S. 1999. 'Time dollars, work and community: from "why" to "why not?"'. *Futures* 31:499-509.
- Cahn, E. S. 2000. *No More Throw-Away People: The Co-Production Imperative* Washington: Essential Books.
- Cahn, E. S. 2001. 'On LETS and Time Dollars'. *International Journal of Community Currency Research* 5 (2).
- Cahn, E. S. 2009. Speech made at *Time Banking UK conference* Blackpool.
- Cahn, E. S. 2010. no date [cited 2010]. Available at <http://www.timebanks.org/faqs.htm#keepingtrack>.

- Campbell, R., and L. Sowden. 1985. *Paradoxes of rationality and cooperation: prisoner's dilemma and Newcomb's problem*: University of British Columbia Press.
- Carrier, J. G. 1995. *Gifts and commodities : exchange and western capitalism since 1700*. London ; New York: Routledge.
- Coleman, J. S. 1988. 'Social Capital in the Creation of Human Capital'. *American Journal of Sociology* 94, S95-S120. Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure, The University of Chicago Press.
- Coote, A. 2010 '21 hours: Why a shorter working week can help us all to flourish in the 21st century', New Economics Foundation.
- De Blanc, J. 2011. 'Classifying "CCs": Community, complementary and local currencies' types and generations. '. *International Journal of Community Currency Research* 15 (D ):4-10.
- de Nooy, W., A. Mrvar, and V. Batagelj. 2005. *Exploratory Social Network Analysis with Pajek*. Vol. 27: Cambridge University Press.
- Dobson, R. V. G. 1993. *Bringing the economy home from the market*: Black Rose Books.
- Douglas, M. 1967 *Primitive Rationing: A study in controlled exchange* London, New York: Tavistock Publications, 119-148.
- Douthwaite, R. J. 1996. *Short Circuit: Strengthening Local Economies for Security in an Unstable World*, Dartington, Totnes: Green Books.
- Dunbar, R. I. M., and M. Spoor. 1995. 'Social networks, support cliques, and kinship'. *Human Nature* 6 (3).
- Elster, J. 1989. *The cement of society : a study of social order*. Cambridge: Cambridge University Press.
- Erasmus, C. J. 1965. The occurrence and disappearance of reciprocal farm labour in Latin America. In *Contemporary cultures and societies of Latin America*, edited by D. B. Heath and R. N. Adams. New York: Random House, 173-199.
- ERS Research and Consultancy, ed. 2008. NDC report: Fortismouth Time Bank. (pseudonym used).
- Everett, M. (2011) Personal email communication on 29/9/2011.

- Fairshares Time Bank. no date [cited 2009]. Available from  
www.fairshares.org.uk.
- Faust, K. 2010. 'A puzzle concerning triads in social networks: Graph constraints and the triad census'. *Social Networks* 32 (3):221-233.
- Faust, K., and J. Skvoretz. 2006. 'Comparing networks across space and time, size and species'. *Metodološki Zvezki (Advances in Methodology and Statistics)* 3 (2):185-216.
- Fehl, K., D. J. van der Post, and D. Semmann. 2011. 'Co-evolution of behaviour and social network structure promotes human cooperation'. *Ecology Letters* 14 (6):546-551.
- Feld, S. L. 1997. 'Structural embeddedness and stability of interpersonal relations'. *Social Networks* 19 (1):91-95.
- Fine, B. 2001. *Social Capital versus Social Theory: Political Economy and Social Science at the Turn of the Millennium*. London: Routledge.
- Firth, R. W. 1939. *Primitive Polynesian economy*. London: Routledge.
- Fowler, J. H., and N. A. Christakis. 2010. 'Cooperative behavior cascades in human social networks'. *Proceedings of the National Academy of Sciences of the United States of America* 107 (12):5334-5338.
- Fukuyama, F. 1995. *Trust : the social virtues and the creation of prosperity*. London: Hamish Hamilton.
- Goodreau, S. M., J. A. Kitts, and M. Morris. 2009. 'Birds of a Feather, or Friend of a Friend? Using Exponential Random Graph Models to Investigate Adolescent Social Networks'. *Demography* 46 (1):103-125.
- Granovetter, M. S. 1973. 'The Strength of Weak Ties'. *The American Journal of Sociology* 78 (6 (May)):1360-1380.
- Hanifan, L. J. 1916. 'The Rural School Community Center'. *Annals of the American Academy of Political and Social Science* 67 (New Possibilities in Education):pp. 130-138.
- Hanneman, R., and M. Riddle. 2005. *Introduction to social network methods*. Riverside, CA: University of California, Riverside.
- Hardin, G. 1968. 'Tragedy of Commons'. *Science* 162 (3859):1243-&.
- Hart, K. 2006. IE + IT = ED?: Is informal economy plus information technology a path towards economic democracy? In *Rethinking Economies*. Bologna, p.1-34.

- Henrich, J., and R. Boyd. 2001. 'Why people punish defectors: conformist transmission stabilizes costly enforcement of norms in cooperative dilemmas'. *Journal of Theoretical Biology* 208:79-89.
- Henrich, J., and F. Gil-White. 2001. 'The evolution of prestige: freely conferred status as a mechanism for enhancing the benefits of cultural transmission'. *Evolution and Human Behavior* 22:1-32.
- Henrich, J., R. McElreath, A. Barr, J. Ensminger, C. Barrett, A. Bolyanatz, J. C. Cardenas, M. Gurven, E. Gwako, N. Henrich, C. Lesorogol, F. W. Marlowe, D. Tracer, and J. Ziker. 2006. 'Costly punishment across human societies'. *Science* 312 (5781):1767-1770.
- Jacobs, J. 1972 (1961). *The death and life of great American cities*. Harmondsworth: Penguin.
- Komter, A. E. 2005. *Social solidarity and the gift*. Cambridge: Cambridge University Press, xi, 234 p.
- Kopytoff, I. 1988. The cultural biography of things: commoditization as process. In *The Social Life of Things: Commodities in Cultural Perspective*, edited by A. Appadurai: Cambridge University Press.
- Krackhardt, D. 1998. Simmelian Ties: Super Strong and Sticky. In *Power and Influence in Organisations*, edited by R. Kramer and M. Neale. Thousand Oaks, CA: Sage, 21-38.
- Krebs, V. and Holley J. 2002. Building smart communities through network weaving. <http://www.orgnet.com/buildingnetworks.pdf>.
- Kun, A., G. Boza, and I. Scheuring. 2010. 'Cooperators Unite! Assortative linking promotes cooperation particularly for medium sized associations'. *BMC Evolutionary Biology* 10.
- Lang, P. 1994. *LETS work: rebuilding the local economy*: Grover Books.
- Lasker, J., E. Collom, T. Bealer, E. Niclaus, J. Young Keefe, Z. Kratzer, L. Baldasari, E. Kramer, R. Mandeville, J. Schulman, D. Suchow, A. Letcher, A. Rogers, and K. Perlow. 2011. 'Time banking and health: the role of a community currency organization in enhancing well-being'. *Health Promot Pract* 12 (1):102-115.
- Layton, R. 1997. *An introduction to theory in anthropology*: Cambridge University Press.

- Layton, R. 2000. *Anthropology and history in Franche-Comté: a critique of social theory*. Oxford University Press.
- Lee, R. 1979. *The !Kung San: Men, Women and Work in a Foraging Society*. New York: Cambridge University Press.
- Leimar, O., and P. Hammerstein. 2001. 'Evolution of cooperation through indirect reciprocity'. *Proceedings of the Royal Society of London Series B-Biological Sciences* 268 (1468):745-753.
- Leonard, R., and J. Bellamy. 2010. 'The Relationship Between Bonding and Bridging Social Capital Among Christian Denominations Across Australia'. *Nonprofit Management & Leadership* 20 (4):445-460.
- Lotem, A., M. A. Fishman, and L. Stone. 1999. 'Evolution of cooperation between individuals'. *Nature* 400 (6741):226-227.
- Mace, R. 2000. 'Human behaviour - Fair game'. *Nature* 406 (6793):248-249.
- Malinowski, B. 2002 (1922). *Argonauts of the western Pacific : an account of native enterprise and adventure in the archipelagoes of Melanesian New Guinea*. London: Routledge.
- Marsden, P. V. 1987. 'Core Discussion Networks of Americans'. *American Sociological Review* 52 (1):122-131.
- Mauss, M. 1954 (1923). *The gift : forms and functions of exchange in archaic societies*. London: Cohen & West.
- Moore, S. 2011 [cited July 2011. Available from <http://thebigsociety.co.uk/the-big-society-in-action/bsn-a-convenor-a-curator-and-a-narrator>].
- Morris, L. 1995. *Social Divisions: economic decline and social structural change*. London: UCL Press
- Morrow, V. 1999. 'Conceptualising social capital in relation to the well-being of children and young people: a critical review'. *Sociological Review* 47 (4):744-765.
- New Economics Foundation. February 2002. Keeping the GP away: A NEF briefing about community time banks and health: New Economics Foundation.
- Newman, M. E. J., and D. J. Watts. 2006 *The structure and dynamics of networks*: Princeton University Press
- [www.maps.police.uk](http://www.maps.police.uk) [no author or date, cited 2009]

- North, P. 2010. *Local Money: How to make it happen in your community*. Totnes, Devon: Transition Books, an imprint of Green Books'.
- Nowak, M., C. Tarnita, and T. Antal. 2010. 'Evolutionary dynamics in structured populations'. *Phil. Trans. R. Soc. B* 365:19-30.
- Nowak, M. A., and K. Sigmund. 1998. 'Evolution of indirect reciprocity by image scoring'. *Nature* 393 (6685):573-577.
- Office for National Statistics. 2001. 2001 Census: Standard Area Statistics (England and Wales).
- Office of National Statistics. 2008. Social Trends, edited by A. Self, Basingstoke.
- Ohtsuki, H., C. Hauert, E. Lieberman, and M. A. Nowak. 2006. 'A simple rule for the evolution of cooperation on graphs and social networks'. *Nature* 441 (7092):502-505.
- Ostrom, E. 1990. *Governing the commons: the evolution of institutions for collective action*: Cambridge University Press.
- Ostrom, E. 1996. 'Crossing the great divide: Coproduction, synergy, and development'. *World Development* 24 (6):1073-1087.
- Ozanne, L. 2010. 'Learning to Exchange Time: Benefits and Obstacles to Time Banking'. *International Journal of Community Currency Research* Vol.14:1-16.
- Pacheco, J. M., A. Traulsen, and M. A. Nowak. 2006. 'Coevolution of Strategy and Structure in Complex Networks with Dynamical Linking'. *Physical Review Letters* 97 (25):258103.
- Panchanathan, K., and R. Boyd. 2003. 'A tale of two defectors: The importance of standing for the evolution of indirect reciprocity'. *Journal of Theoretical Biology* 224:115-126.
- Panther-Brick, C. 1993. 'Seasonality of energy expenditure during pregnancy and lactation for rural Nepali women'. *American Journal of Clinical Nutrition* 57:620-628.
- Panther, J. 2000. 'Woolgone Local Exchange Trading System, a co-operative success?'. Taught MA Dissertation, Anthropology, Durham, Durham.
- Paxton, P. 1999. 'Is Social Capital Declining in the United States? A Multiple Indicator Assessment.'. *American Journal of Sociology* 105 (1):88-127.
- Pearce, J. 1993. *At the heart of the community economy : community enterprise in a changing world*. London: Calouste Gulbenkian Foundation.

- Portes, A. 1998. 'Social capital: its origins and applications in modern sociology'. *Annual Review of Sociology* 24:1-25.
- Portes, A., and P. Landolt. 1996. 'The downside of social capital '. *The American Prospect* 26:18-23.
- Portes, A., and P. Landolt. 2000. 'Social capital: Promise and pitfalls of its role in development'. *Journal of Latin American Studies* 32:529-547.
- Prell, C. 2009. ' Linking Social Capital to Small-worlds: A look at local and network-level processes and structure '. *Methodological Innovations Online* 4:8-17.
- Puniyani, A. R., R. M. Lukose, and B. A. Huberman. 2001. 'Intentional Walks on Scale Free Small Worlds'. *CoRR (online Computing Research Repository)*.
- Putnam, R. 1993. *Making Democracy Work*. Princeton, NJ Princeton University Press.
- Putnam, R. D. 2000. *Bowling alone : the collapse and revival of American community*. New York: Simon & Schuster.
- Roberts, G. 1998. 'Competitive altruism: From reciprocity to the handicap principle'. *Proceedings of the Royal Society Series B: Biological Sciences* 265:427-431.
- Roberts, S. G. B., R. I. M. Dunbar, T. V. Pollet, and T. Kuppens. 2009. 'Exploring variation in active network size: Constraints and ego characteristics'. *Social Networks* 31 138-146.
- Rockenbach, B., and M. Milinski. 2006. 'The efficient interaction of indirect reciprocity and costly punishment'. *Nature* 444:718-723.
- Rushey Green Time Bank. No date [cited 2010]. Available from <http://www.rgtb.org.uk>.
- Sahlins, M. 1972. *Stone-Age Economics*. Chicago: Aldine-Atherton Press.
- Santos, F. C., and J. M. Pacheco. 2006. 'A new route to the evolution of cooperation'. *Journal of Evolutionary Biology* 19 (3):726-733.
- Santos, F. C., J. M. Pacheco, and T. Lenaerts. 2006. 'Cooperation prevails when individuals adjust their social ties'. *Plos Computational Biology* 2 (10):1284-1291.
- Seyfang, G. 2001. 'Working for the Fenland Dollar: An Evaluation of Local Exchange Trading Schemes (LETS) As An Informal Employment

- Strategy To Tackle Social Exclusion'. *Work, Employment and Society* 15 (3):581-593.
- Seyfang, G. 2002. 'Tackling social exclusion with community currencies: learning from LETS to Time Banks'. *International Journal of Community Currency Research* 6.
- Seyfang, G. 2003. "'With a little help from my friends". Evaluating time banks as a tool for community self-help'. *Local Economy* 18 (3):257-263.
- Seyfang, G. 2004. 'Working Outside the Box: Community Currencies, Time Banks and Social Inclusion'. *Journal of Social Policy* 33 (1 ):pp.49-71.
- Seyfang, G. 2009. *The New Economics of Sustainable Consumption: Seeds of Change*. Basingstoke: Palgrave Macmillan.
- Sillitoe, P. 2006. 'Why spheres of exchange?'. *Ethnology* 45 (1):1-23.
- Slay, J. Oct 2011. Paper read at first meeting of Time4Research network, at NESTA, London.
- Smith, A. 1950 (1776). *An inquiry into the nature and causes of the wealth of nations*. London Methuen.
- Steelwear Time Bank (a pseudonym). 2000. *Guidelines for Members*.
- Stiglitz, J., A. Sen, and J. Fitoussi. 2009. Commission on the Measurement of Economic Performance and Social Progress Paris: Commission of the Government of France.
- TimeBanking UK. No date [cited 15 Nov 2011]. Available from [www.timebanking.org](http://www.timebanking.org)
- TimeBanks USA. No date [cited October 2009]. Available from [www.timebanks.org/neighbor-to-neighbor.html](http://www.timebanks.org/neighbor-to-neighbor.html)
- TimeBanks USA. no date [cited 2010]. Available from <http://www.timebanks.org>.
- TimeBanks USA. no date [cited 2010]. Available from [www.timebanks.org/faqs.htm#keepingtrack](http://www.timebanks.org/faqs.htm#keepingtrack)
- Trivers, R. L. 1985. *Social Evolution*. Wokingham and Menlo Park, California: Benjamin/Cummings.
- Van Vugt, M., G. Roberts, and C. Hardy. 2007. Competitive altruism: Development of reputation-based cooperation in groups. In *Handbook of Evolutionary Psychology*, edited by R. D. L. Barrett: Oxford University Press.

- van Wijk, B., C. Stam, and A. Daffertshofer. 2010. 'Comparing Brain Networks of Different Size and Connectivity Density Using Graph Theory'. *Plos One* 5 (10).
- Wasserman, S., and K. Faust. 1994. *Social network analysis: method and applications*: Cambridge University Press.
- Watts, D. 1999. 'Networks, Dynamics, and the Small-World Phenomenon'. *The American Journal of Sociology* 105 (2).
- Wernicke, S., and F. Rasche. 2006. 'FANMOD: a tool for fast network motif detection'. *Bioinformatics* 22 (9):1152-1153.
- Williams, C. C. 1996. 'Local exchange and trading systems: A new source of work and credit for the poor and unemployed?'. *Environment and Planning A* 28 (8):1395-1415.
- Williams, C. C. 2000. 'Are local currencies an effective tool for tackling social exclusion?'. *Town and Country Planning* 69 (11):323-325.
- Williams, C. C. 2001. 'Bridges into Work? An Evaluation of Local Exchange and Trading Schemes (LETS)'. *Policy Studies* 22 (2):119-132.
- Williams, C. C., and J. Windebank. 2001. *Revitalising deprived urban neighbourhoods: an assisted self-help approach*: Ashgate.
- Wilson, D. S., and E. Sober. 1994. 'Reintroducing Group Selection to the Human Behavioral-Sciences'. *Behavioral and Brain Sciences* 17 (4):585-608.
- Winterhalder, B. 1996a. 'Social foraging and the behavioral ecology of intra-group resource transfers'. *Evolutionary Anthropology* 5:46-57.
- Winterhalder, B. 1996b. 'A marginal model of tolerated theft'. *Ethology and Sociobiology* 17 (1):37-53.
- Woodburn, J. 1982. 'Egalitarian Societies'. *Man* 17 (3):431-451.
- Woolcock, M., and D. Narayan. 2000. 'Social Capital: Implications for Development Theory, Research, and Policy'. *World Bank Research Observer* 15 (2).
- Yang, K. 2007. 'Individual Social Capital and Its Measurement in Social Surveys'. *Survey Research Methods (European Survey Research Association)* 1 (1):19-27.
- Zahavi, A. 1975. 'Mate Selection - Selection for a Handicap'. *Journal of Theoretical Biology* 53 (1):205-214.

### **Network analysis software used:**

Batagelj, V. and Mrvar, A. 1998 PAJEK: Program for large network analysis. *Connections*, 21 (1998) 2, 47-57.

Software available at: <http://vlado.fmf.uni-lj.si/pub/networks/pajek/>

Borgatti, S.P., Everett, M.G. and Freeman, L.C. 2002. *Ucinet for Windows: Software for Social Network Analysis, and NETDRAW: Graph Visualization Software*. Harvard, MA: Analytic Technologies.

Software available at: <https://sites.google.com/site/ucinetsoftware/home>

Wernicke, S. and Rasche, F. 2006. FANMOD: a tool for fast network motif detection. *Bioinformatics*, 22(9):1152–1153.

Software available at:

<http://theinf1.informatik.uni-jena.de/~wernicke/motifs/>