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Title:-

EDUCATION IN EGYPT BEFORE BRITISH CONTROL.

Thesis submitted for the M. Ed. Degree, Durham.

by

JAMES WILLIAMS.

OXFORD, 1934.

"Fortunate is the scribe that is skilled in his calling, a
master of education."

Pap. Anastasi iii. Translated by Griffith.

PREFACE

I wish to express my appreciation of the assistance I received from Professor W.G. Waddell , of Armstrong College , Newcastle-on- Tyne , who was my supervisor , and John Walker Esq. M.A. Assistant Curator , Arabic Coins Department , British Museum , London .

The former showed the most unwearied courtesy in giving advice , and the latter , great willingness in lending me his own MS. translations from the Arabic .

OXFORD

James D. Williams....
14 Feb. 1934 .

BY WAY OF INTRODUCTION

I once asked a learned friend of mine what should be included in an Introduction, and he replied, "Everything you have forgotten to put elsewhere!" I shall not attempt such a task, but it will be my endeavour in these few pages to make the Introduction worth the reading for the sake of the light it may shed upon the remainder of the Thesis.

From 1924 to 1932 I was in the service of the Egyptian Government as English Master in the Secondary Schools. The leave given was liberal, and so at the beginning of each holiday there was a regular ecdysis of all matters scholastic, and then away to the deserts we would go. They were traversed to the east as far as the Euphrates, and to the West until the Oasis of Siwa was reached, where Alexander once invoked the oracle at the temple of Jupiter Amōn. The desert of Sinai was crossed several times on the way to Palestine,

Syria and beyond. It gave me great pleasure once to jog along from Constantinople - across the dusty tracks of Anatolia to Iconium, which in Roman times was only a police post. The route over the Taurus was extremely rough, but I could not help thinking of those who had used that route in the past. Probably the Hittites had done so about 2000 B.C. and it is certain that the 'ten thousand Greeks', among whom was Xenophon, had crossed from north to south in 401 B.C. Later, about 333 B.C. also from the north Alexander the Great came to win the Battle of Issus. St. Paul, in 50 A.D. on his second missionary journey passed northward through the Cilician Gates, and reached Iconium. The pageant swells, for in 1097 Godfrey and his Crusaders marched south to Antioch from Asia Minor, and in 1832 Ibrahim Pasha, the brilliant soldier son of Mehemet Ali used this route to reach Iconium where he inflicted a crushing defeat upon the Sultan's forces.

I often came across beautiful names, full of poetry. For example, to cross the Jordan from Palestine into Syria by road on the east side one has to use El-Coubri El-Binat El-Yacoub (The Bridge of the

Daughters of Jacob). Long ago Sterne burst out with, "I pity the man who can travel from Dan to Beersheba and cry 'Tis a barren waste'". Most interesting of all are the people. From mud hovels and magnificent mansions came the boys whom we taught, and they were schoolboys or students first and Egyptians afterwards. They were genuinely interested in their studies, but the proximity of an examination would change them into frenzied mutterers along canal banks, book in hand - hard at work memorizing each set-book from cover to cover. Such is their heritage - for is it not their first task in life to memorise the Koran?

* * * * *

In the transliteration of Arabic words no ligatures or logotypes have been employed, since, as John Walker aptly remarks,¹ "the student of Arabic can dispense with such aids, while the general reader, unacquainted with the phonology of the language, is not materially assisted by their presence on the printed page". Other Arabic scholars have expressed similar

1. Preface to Bible Characters In The Koran, Paisly^e, 1931.

sentiments, but none has done so in a more joyful manner than T. E. Lawrence, who on p.7 of Revolt In The Desert answers a series of queries presented to him by a conscientious publisher's proof-reader, who objected strongly to the inconsistencies that he found. One of Lawrence's answers is as follows:- "Arabic names won't go into English exactly, for their consonants are not the same as ours, and their vowels like ours vary¹ from district to district. There are some 'scientific systems' of transliteration; helpful to people who know enough Arabic not to need helping, but a wash-out for the world. I spell my names anyhow, to show what rot the systems are". In answer to this query, "Slip 20 Nuri Emir of the Ruwalla, belongs to the 'chief family of the Rualla', and Slip 33 'Rualla horse', and Slip 38, 'killed one Rueili'. In all later slips 'Rualla'." Lawrence writes, "Should have also used Ruwalla and Ruala." A little colloquial English is often so effective.

All the dates in the Arab period are of the Hejira unless otherwise marked.

1. And certain consonants too.

The Thesis has been divided into four Sections -

Education in Egypt during	{	A. The Ancient Egyptian Period.
		B. The Graeco-Roman Period.
		C. The Arab Period.
		D. The Modern Period (<u>Epilogue</u>).

Altogether a period¹ of over four thousand years is dealt with, but there is a certain harmony and relationship between the different sections. When Arthur Weigall, the Egyptologist, wrote his History of Events in Egypt from 1798 to 1914 he justified himself by stating in the Preface "It has lately been definitely proved that the ancient and modern Egyptians are one and the same people. Anthropologically there is no real difference between them, and it would seem that neither the Arab nor any other invasion materially affected the purity of their blood. They have suffered a certain nervous deterioration, and have perhaps lost some of their initiative and strength of purpose, just as any individual in his lifetime may, after a long illness, find himself not so energetic as once he

1. No less an authority than Edward Maunde Thompson has stated (p.2, Handbook of Greek And Latin Palaeography, Lond., 1893) -

"We may without exaggeration allow a still longer period and be within bounds, if we carry back the invention of Egyptian writing to six or seven thousand years before Christ."

was; but physically and mentally the modern Egyptians are not different from their ancestors of the days of the Pharaohs.

"This being so, I do not see how an Egyptologist can hope to understand the ancient inhabitants of the Nile Valley unless he makes some study of their modern descendants. ... There must be a constant interchange of suggestion between the past and the present, and both in the study of the distant ages and in that of modern days, we must not lose sight of the fact that the long road of Time stretches in one unbroken line from the far past into the far future, and that the traveller upon that road is indeed a lost wanderer if he sees not from whence it comes and into what direction it seems to go."

We find in modern Egypt the same games being played, the same reluctance to consign anything to the scrap-heap and the same veneration for the printed word, as obtained in ancient Egypt. The modern Egyptian 'scribe' never forgets his goal - a Government post. Even the ancient regard for onions and garlic still persists in the country. The Israelites, pathetically,

licked their lips and said,¹ "We remember the fish, which we did eat in Egypt freely; the cucumbers, and the melons, and the leeks, and the onions, and the garlick."

Promotions of officials is another point of similarity. In ancient Egypt we have the example Amten who became a scribe under the Superintendent of the Storehouse. Next he became chief crier to the civil governor of the Xoite district and was promoted director of the King's flax. Then in turn he became governor of a town, chief huntsman and finally governor of the Fayoum district.

One of my first experiences in Egypt was to work with a man who had high qualifications in Forestry, but whom the Government had 'promoted' to the teaching of matriculation English!

When one is dealing with a period festooned by the mists of antiquity, there is a tendency to become less critical of faults and more lavish of praise. However, in dealing with ancient Egypt - sufficient evidence of first-class quality has survived to make it an injustice to withhold praise. There is a definite

1. Numbers XI.5.

tendency among Egyptologists to put the Old Kingdom (c. 2980 - 2475 B.C.) as the Golden Age of Egyptian culture. Professor Peet¹ has no doubt that, "some of the literary papyri have their roots in this era, as for example the Proverbs of Ptahhotep, and the antiquated constructions of the medical papyri make it possible that the science of medicine, such as it was, had its spring in the Old Kingdom." Weigall once said that the archaeologist in Egypt was like a man who had come late to the play, and beholds before him the great spectacle of the second act, but did not know what had gone before, except in so far as the bald and brief statements upon his programme served to enlighten him.

And what do we find in the second act? From what has survived of Egyptian literature, what was enacted covered the whole field of thought and experience; tales that are fragrant with the breezes that blow from fairyland; and songs of love nowise inferior to the

1. p.9, Rhind Mathematical Papyrus.

Song of Solomon.¹ When we come across passages like this we are in the presence of a living, vital, people:- "Thereupon Isis came, and she drew nigh into Anti, the ferryman, as he sat anigh his boat, and she had changed herself into an aged woman, and she went along bowed down, and a little ring of gold was on her finger. And she spake unto him: I have come unto thee that thou may'st ferry me across to the Island-in-the-midst, for I have come with this jar of flour for the little lad. He has been looking after some cattle in the Island-in-the-midst for five days unto today, and he is hungry. And he spake unto her: It was said unto me, Do not ferry across any woman. And she spake &c. &c."² And again³

"When I see her, then am I well;

Openeth she her eye, then my limbs become young again;

Speaketh she, then I am strong,

And when I embrace her, she banisheth evil from me.

But she hath gone from me for seven days."

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1. In comparison with ancient Egyptian literature the Song of Solomon is a song of yesterday. Cf. T. Eric Peet, p.1, A Comparative Study of the Literatures of Egypt, Palestine and Mesopotamia:
 "... it may be good for us sometimes to remind ourselves that little in the Old Testament is more than a century or two earlier than the Homeric poems, that Herodotus was contemporary with Malachi and Obadiah, and that Theocritus was singing in Sicily while the Song of Songs was being compiled in Palestine."
 2. See pp.17 ff., Description of a Hieratic Papyrus &c., Alan H. Gardiner, 1931.
 3. Ibid., p.34.

The ancient Egyptians seem to have achieved happiness and contentment. Their educational system functioned like a well-oiled machine.

It was only when the 'foreigners' coveted the fertile valley of the Nile that trouble began.

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Before this Thesis could have been written, a heartbreaking number of books had to be read. But I found that to travel hopefully was so much better than to arrive; one encountered such interesting people - and learnt strange things about them. Usually the information thus acquired could not be incorporated into the Thesis, but nevertheless it filled in the background. For instance, I was thrilled with the sciurine antics of that redoubtable saint - Athanasius. He bobbed in and out of the picture with the athletic ease and grace of a Douglas Fairbanks. With his theology I was not concerned, but as a man he excited my warmest admiration.

And on reading the Mimes of Herondas¹ a realization of the eternal charm and attraction of Egypt, was borne afresh upon me. In this mime Metriche is a young wife whose husband has gone to Egypt, and in his absence she has been faithful. Gyllis, a foster-mother to Metriche says, "But, my dear child, what an awful time you've been here growing old in solitude, pining away on a lonely couch! How long is it? Why, it is ten whole months since Mandris went off to Egypt, and never a word from him. Ah! he has forgotten you completely and has drunk the love-goddess's draughts. There, you know, the whole land is one temple to Aphrodite. Everything - as much as is, or has been, anywhere - is in Egypt, riches, wrestling, power, peace, fame, goddesses, philosophers, fair, young pages, gold plate, the precinct of the two god-monarchs, (Ptolemy II and his wife Arsinoe) the noble sovereign, the museum, wine, every good thing you lack here, and women - oh! the quantities of them. By the queen of Hades, the sky can't boast of having as many stars as Egypt can women - women, in appearance, like the goddesses who

1. The Match-Maker.

hastened to Paris to be judged in beauty - may they not overhear me name them."

Alexandria at this time was the scene of tremendous literary activity. Texts were purged of their corruptions, and 'cacoethes scribendi' became a handmaid to Reason. Such was the clear-eyed Greek genius. As F. L. Lucas¹ says, "The Gods of Hellas had a very able scientist among them, called Hephaestus. They did not tremble before him; they found him useful, but something of a joke; he was lame, for one thing, and sooty; yet they married him, some say, to Charis, who is Grace; or, as others tell, to Aphrodite, who is Loveliness."

The Greek devotion to the cult of 'mens sane in corpore sano' has been described concisely by Edwyn Bevan,² "The gymnasiums were as much of the essence of a Greek State as the political assemblies. They expressed fundamental tendencies of the Greek mind - its craving for harmonious beauty of form, its delight in the body, its unabashed frankness with regard to everything natural,

1. p.27, The Criticism Of Poetry, Warton Lecture On English Poetry, British Academy, 1933.

2. p.35, Jerusalem Under The High Priests, 1904.

we might say that unsuspiciousness concerning nature, which if man is indeed a double being, spirit and flesh at war, hardly corresponds to the maturer view, but which still today marks the Hellenic strain in our civilization. The gymnasiums also served other by-ends beside the one of bodily training; they were the social centres, in which the life of a Greek youth got those interests which go with companionship, the spur of common ambitions, and esprit de corps. From the days of Alexander and his successors we find as a regular institution in Greek cities guilds of young men, called epheboi attached to the gymnasiums, and organized under state control."

Like the Britisher abroad today, who tries to make the place where it's his lot to be, a piece of England, so the Greek in Alexandria lived as he would in a Greek city of his homeland. Thus it is small wonder that Egypt in general was not influenced much as a result of the Greek occupation.

* * * * *

When the time came for me to write about the Arab Period, I experienced the comfortable feeling that my foot was once more upon my native heath. Like one who had been a stranger in a strange land, I was glad to be back among faces I knew.

Here we have a system of education, bigoted, narrow, intensely religious and well-nigh impervious to change. Such were its glory and its bane. It was part of a religious crusade that swept like a tornado over half the civilized world. It was highly successful - it prospered and in the fifteenth century perished as a result of its own prosperity. It lay like an incubus on Islam until Mehemet Ali came and forcibly injected new life and change into it. But it was a well-organized corporate system, admirable in many respects, supported by the masses of the people, and in a way an end in itself, for it aimed at enriching the mind without eternal damnation to the soul. It gave to millions of poor peasants complete satisfaction of spiritual cravings, and made them happy and contented with their lot in this world. There is much to condemn in it, but there is also so much to commend. Like the old system of education in China,

it was based largely on memorizing the classics - in this case the Koran and the Traditions. The result was not altogether deplorable, for it produced a highly-educated class of people, who, while knowing next to nothing of science in general, were nevertheless highly-trained humanists. But it left the masses uneducated in the best sense of the word. Illiteracy did not necessarily mean ignorance, for most of those who could not read or write had memorized most of the Koran, and could appreciate its beauties.

* * * * *

Then came Mehemet Ali with his modern ideas. He thrust his scheme of education like a wedge of cold steel into the old system which had been sanctified by custom and tradition. He met opposition from the vested interests, and also from the parents of the children whom he desired to educate. They had little or no faith in his schemes, believing with reason that his sole purpose in educating and subsidising their children was to supply his army with officers. So, many a doting mother maimed her male issue, preferring

to have her sons alive and crippled, rather than dead in the uniform of the warlike Pasha's bodyguard. But a new orientation had been given to Egyptian education, and henceforth there were to exist side by side two different systems of education, the ancient and the modern. The decadent system of Islam had been leavened, and so its teachers and sponsors had to set to, and put their house in order. The result was that certain reforms were instituted, with good results in the schools and colleges of Islam.

* * * * *

In order to supply a background for this history of education in Egypt, a summary of the political history of Egypt has been supplied. It may or may not be read according to the whim of the reader, but it is a sufficiently short historical summary for a period of so many thousands of years, to need no further apology for its inclusion here.

* * * * *

A Brief Survey of the History of Egypt down to 1882 A.D.

The history of Egypt, like that of all countries seen through the field-glasses of posterity, resembles less an unfaltering progression, than an eddying-round, a spiral movement with a repetitive rise and fall: every golden age was a "climax", having its natural complement, every period of sloth and fatness was succeeded by a renaissance, a stirring of energy and enterprise. A second general observation which emerges from the "long view" is that the history of Egypt is essentially the outcome of its geography: that its earliest civilization arose out of its intrinsic qualities, and that its later was the result of its relative ones; that is to say, its primitive conditions, like those of all other primitive countries were due to the formation of the land itself; when its natural boundaries were also the mental limits of its people. In later times Egyptian history is like a waxen tablet showing the imprint of all with which it came into contact. "The boundaries of the country", writes

Newberry, "lay open to influences from every side: from the West by the coast, from Central Africa across the deserts, from the South down the upper reaches of the Nile, from the South-east by the natural roadways leading from the Red-Sea to Upper Egypt. On the east again the continuous strip of land that joins the continents, and on the north the waters of the Eastern Mediterranean, made direct contact easy between Lower Egypt and the early civilizations of Western Asia. The subsequent history of the country shows that through all time these influences were active, varying only in intensity from their various sources ..."

The history of earliest Egypt (before 3000 B.C.) is that of a tribal civilization, the product of its deep valleys and confining mountains, where in primitive times little unity could be achieved. This was followed equally naturally in time, by the gradual welding of the tribes under one leader: a tribal Chief The Scorpion, is the first known "King" who united under his sway the tribes of Upper Egypt. His country extended from Gebel Silsileh in the South to the Fayum in the North. A later chieftain of Upper

Egypt, Narmar or Bezau, after great bloodshed, united by conquest his province with the South, and laid aside his white crown to assume as conqueror the red crown of the vanquished country in the presence of the defeated.

Under Mena the Fighter, Narmar's successor, came the first Egyptian golden age of which there is any record. He established the first dynasty, founded Memphis, strengthened his country's fortifications, and conquered Ta-khent. There followed a period of peace when the land was drained and reclaimed, and in crafts aesthetic rather than utilitarian much exquisite work was accomplished. To this period belong lovely carvings in crystal, diorite, marble and alabaster.

After the reign of Den, 4th king of the dynasty, a period of decline set in: records are scanty, and there is little to clarify the history of the time. Contemporary tombs, however, shew a decadence in art, a lack of inspiration and imagination, which in Egypt always betrayed a weakness in the general condition of the country.

Three hundred years later, before 2500 B.C., with the coming of the 4th dynasty, Egypt entered into a dynamic phase: an age of visible progress and development, a time not of peace but of action. The wars of Pepy brought her into contact with the more enlightened civilizations to the north and east, (Babylonia and Syria); here for the first time Egypt felt external influences which moulded her thought and customs. She was no longer self-sufficing and primitive; the Archaic period was at an end and she had entered into relations with the rest of Asia, a step which was to affect her future to an ever increasing extent.

The result of the wars of Pepy are to be seen first in the architecture of the period, and in the development of sun-worship. Tombs, from being simple, became lavish in design. Mural paintings were vivid with scenes from everyday life. The statues of the time have remained unsurpassed in Egyptian art. A freedom and ease inspired all this artistic work which was probably a subconscious reflection of the expansion which had taken place in the Egyptian world. It is a little like the stimulus to English art and literature

give much later by the exploring fervour in the reign of Elizabeth. The Egyptians came into a great familiarity with ships and ship-building and explored by water the upper reaches of the Nile, bringing back with them, besides their travellers stories, a knowledge of a country rich in gold, ebony, ivory, and myrrh. In the Mediterranean they developed relations with Crete and the coasts of Asia Minor, a "brave new world" to tantalize the imagination and stimulate creation in the realm of art.

This age of progress in art, thought, and foreign relations, was followed inevitably in the history of Egypt, by a time of slackness and disintegration. The monarchy (after Pepy) seeking in its weakness to make assurance doubly sure, loaded its nobles with riches and power in return for the most perishable of merchandise, loyalty to the crown. A position arose like that in mediaeval England later or in France at the time of the Fronde: decentralization complete, city warring against city, province against province, followed by the overthrow of the Monarchy, about 2200 B.C. There are few records which can throw any light upon this period:

it is conjectured that about five or six generations later, through discord and bloodshed the crown of Egypt passed to the line of Thebes.

Mentuhetep, first of the line of Thebes, re-established the Monarchy: a strong policy of centralization tightened up the Kingdom, restored the balance of power and crushed the strength of Feudalism in its vice. As with the establishment of the 4th dynasty under Pepy, so with this, the 11th, a radical change in government and a progressive foreign and domestic policy, brought a stimulus to the art of the time. The tombs of these kings show great beauty of sculpture and a vigorous realism in mural decorations which declare the awakened mental and spiritual energy of the artists, and a land thrilling with new life. The Sphinx, near the great pyramids of Gizeh, dates from this time: huge, carved out of the natural rock, it remains one of the wonders of the ancient world. In literature this age was very fertile and many are its works of science, mathematics and philosophy.

About 1600 B.C. Egypt first seems to have experienced conquest: little can be gathered from records, save that the country was over-run and dominated by a people moving westwards from Asia, the Hyksos (or Hittites) who, intermarrying with the Kings of Egypt, from the 13th to the 17th dynasties, a space of several centuries, ruled the country, under the title of Hek-Khaskhetu, or rulers over foreign lands. Tradition has it that Apepy, a Hyksos King, tried to enforce the worship of his gods on the Egyptians, who, rebelling, under the leadership of Aahmes, of the house of Thebes, cast off the yoke of the foreigners.

Aahmes, the redeemer of his country, was founder of the line of Pharaohs under whom Egypt advanced in prosperity and glory, passing as it were out of the limbo of tradition into the clear daylight of history. By the Pharaohs the potential dangers of Feudalism were crushed and the monarch towered alone in splendour and godlike majesty above the bowed heads of his people. The spirit of the Pharaoh dynasty is well illustrated by the Proclamation of Thothmes the First to his people in 1541 B.C. which is quoted by Percy E. Newberry in his Short History of Ancient Egypt.

From 1500 to 1200 B.C., under the Pharaohs, Egypt was prosperous and glorious. It was a time of warfare and conquest: under Amenhetep the Third the Empire of Egypt embraced the whole valley of the Euphrates, reaching north up the Tigris to Mesopotamia and Assyria, spreading over Western Asia, and stretching to the upper reaches of the Nile. As before during her dynamic periods, Egypt was moulded and changed by contact with her neighbours. In intercourse with Babylon she traded gold, oil, painted wood and images for precious stones, copper, lead, elephants and slaves. By sea she traded with Greece, Asia Minor, Crete, and Cyprus. At home the effect of this was seen in a higher standard of comfort, in luxury and the cultivation of beauty and art. To this period belong Egypt's loveliest woven tapestries, the wall pictures of her houses and gardens, and her splendid palaces and temples.

The years 1250 to 750 B.C., show the inevitable decline: the successors of Rameses bore his name and a vain mockery of his majesty. They ate of the Lotus, while at home order and security fell into chaos, and abroad the provinces of Syria and the whole Egyptian Empire fell away like over-ripe fruit. The face of the

ancient world was changing. Egypt's supremacy under Rameses the First was the apex of Pharaonic accomplishment - the climax of her ancient history. Now new powers were rising, that of Assyria on the West, and those of other civilizations across the Mediterranean. Egypt now more than ever seemed "a feather for each passing wind that blows". 850 to 650 saw her disintegration. First came the Ethiopian conquest under Piankhy, accepted with little resistance, 20 years later a brief flicker of the old spirit was seen in Tefnekht's vain attempt to wrest the country from the southern invaders. About 662 one Psamtek, exchanging one sovereignty for another, with the aid of Assyria, threw off the Ethiopian rule. For a brief while Egypt had peace, but Western Asia was shaken with wars and c. 580 B.C. Nebuchadnezzar, in retaliation for her stand against Babylon, marched into Egypt plundering as far as the southern frontier.

A brief space divided the Babylonian from the Persian Conquest (535 B.C.) and Egypt became one of the Persian Satrapies. Her fleet took part with those of Syria, Asia Minor and the Islands, in the battles off Artemesium and Salamis (480 B.C.) at Myrcale (479 B.C.)

off Cyprus and at the mouth of the Eurymedon (470 B.C.) against the Greeks. Two centuries after the Persian conquest Alexander entered Egypt. With his death in the year (323 B.C.) the province fell to Ptolemy, one of his generals who founded his dynasty there, and his empire extended over Egypt, Lybia, Cyrenaica, Arabia Petraea, Judea, Phoenicia, Coelesyria, and Cyprus. This century and the next was a time of Egyptian prosperity. The navy of the Ptolemies dominated the Eastern Mediterranean, giving them control of all its coastline, and of European commerce to the far East.

In 273 B.C. Ptolemy II Philadelphus sent a friendly embassy to Rome, and from this date there was mutual support between the two countries. The third century saw the rise of the Roman Empire and the wane of Greece and Carthage. The command of the Mediterranean meant the command of the world then as it had always done in earlier history. The Romans had supreme control of the Western Mediterranean, the Ptolemies, their allies held the Eastern part of the sea, but gradually they became rather the trusted managers of a branch of the great Firm, than honoured co-partners with its

Chief. The subjugation of Egypt was at first essentially peaceful, but it was the embrace of love becoming ever imperceptibly a strangle-hold.

After a weary century of civil wars the Roman Empire established its integrity and subdued its many provinces to a uniformity and "wise passiveness". It was inevitable that the pride of Egypt should bend at last beneath the Roman fasces; her commercial value was too alluring, her lonely independence on the Meriterranean coast too dangerous, to admit of her continued autonomy in the first century B.C.; a little passion and some unwisdom merely hastened the steps of Necessity when Anthony and the last of the Ptolemies, rare Cleopatra, at Actium "kissed away kingdoms".

The Roman Empire stood unassailed until the Gothic invasions of the third century B.C. Yet these affected only the western part; in the east, Egypt, Syria, Asia Minor, Greece, and the Balkan peninsula defended themselves and clung to their independence until the seventh century when, between 620 A.D. and 640 A.D. the Arabs and Saracens gained sovereignty over Egypt, Mesopotamia, and Syria. Between the 4th

and the 12th centuries Egypt swayed under the dissensions in the Arab Empire: she passed from the Kalifates to the Fatimites, and from these to the Ayubites. Under Salah ed-Din (Saladin) founder of the Ayubite dynasty, she gained a brief glory as the stronghold of the Infidel, the granary and treasure house which Louis IX the Saint of France could not take.

After the fall of the Ayubites Egypt was ruled for three centuries (thirteenth to sixteenth) by the Mamelukes. In the sixteenth century her fortunes were at low ebb: her commercial assets had been considerably diminished by the discovery of America and the opening up of a new trade-route to the East via Cape Horn. She fell an easy prey to the Ottomans and in 1517 was a Turkish Pashalik.

The struggle between East and West, which had been sanctified in the Crusades, after the twelfth century kept up but a low rumble of strife until the late sixteenth century, when, in the words of Chesterton "Don John of Austria was arming for the wars". The Battle of Lepanto decided in 1571 the supremacy of the allied powers of Christian over Infidel as the Crusades had never done, but it did much more.

In an age no longer mediaeval, when political values were more intelligible than mystical ones, it decided again, as long ago the Battle of Actium had decided, the question of world-empire. Lepanto struck the death-blow to the Turkish menace in Europe; from 1571 dates the lingering decadence of the Ottoman Empire.

In the meantime Egypt became the arena of yet another struggle for supremacy. Napoleon, dreaming himself a second Alexander, thinking of world-empire, went first (1798) to the East to take Egypt on his way to India. His aim was, Lacroix writes, "to reopen the roadway of the ancient world, to explore a country rich in memories, to go to mark his place amongst the most illustrious conquerors, and to plant the tri-coloured flag upon the ruins of Thebes." To Egypt he was followed by Nelson and the English fleet, and the Battle of Abukir (1801) drove the French out of the Orient.

In the Sultan's Army, side by side with the English forces at Abukir, fought one Mehemet Ali, an Albanian. The English after their victory turned their attention again to Napoleon's manoeuvres in Europe. They were

not as yet concerned with the fate of Egypt. Mehemet Ali, in the meantime, established himself by force of arms as the Sultan's Pasha in Cairo: at first much against the will of his master. In the years that followed it was Mehemet Ali's aim first to consolidate his position in Egypt, and then to win an Empire. He exterminated the Mamelukes, ancient rulers of Egypt who lingered there disloyal to the Porte, then turned his attention to the Sudan, where he hoped to find gold for his Treasury. From 1820 to 1823 he devastated this country and thoroughly subjugated it. His ambition was to make himself independent of his master, and for this he required much wealth. He fostered native industries in the hope of becoming independent of Europe, he built up a navy to protect his commerce. But it was of little avail; time after time the Sultan called upon his loyalty. His first Navy was destroyed at Navarino (1827) against the Greek rebels, supported by England, France and Russia. Then in 1829 he was commanded to send his fleet and 20,000 men to Stambul to invade Syria. In 1832 Acre fell but disasters followed this victory, and by the Treaty of London

(1840) he was forced to evacuate Syria. In consolation, as it were, Palmerston allowed him the hereditary possession of Egypt, but his hope of Empire gone, he died some years later broken with disappointment. His treatment of Egypt had been harsh and despotic, but he considerably extended its frontiers and raised it to the rank of a first-class State.

Mehemet Ali was succeeded in the Pashalik by two good rulers who unfortunately for Egypt lived only a few years. Abbas the first died in 1854 and Said, his successor died nine years later, worn out, it is said, by his hard work and honest endeavour. Said was followed by Ismail "the prodigal Pasha" whose career, Sir Alfred Milner remarked, was a "carnival of extravagance and oppression". He squandered fortunes in amusement, and although when he came to power Egypt's revenue was sufficient for all practical purposes, yet by 1876 he had involved her in a debt of 89 millions, and an increase of taxation amounting to half as much again. At length in this year (1876) he was forced to put his tangled finances in the hands of European controllers that they might be unravelled. The task

of keeping Egypt "straight" was undertaken at first by France and England, and as a preliminary measure Ismail was deposed (1879). Between this date and 1882 fresh trouble broke out in Egypt: the Arabi rebellion, in the quelling of which England and France disagreed. France refused to interfere in support of the Khedive, although she was responsible for Egypt by the agreement of 1876. In 1882, therefore, England was forced to accept the sole responsibility for Egypt. British Control had become a reality.

The following Chronological data may be of some assistance. Only from 2000 B.C. can the dates be regarded as being fairly accurate. Until a better method be disclosed we must retain the usual division into Dynasties and Kingdoms (See Ch. XI, Hist. of Egypt, Vol. I, Flinders Petrie, 5th ed., London, 1903 for Notes on Chronology).

Dynasty I (8 Kings)	} c. 3400-2980 B.C.
Dynasty II (9 Kings)	
Dynasty III (9 Kings)	c. 2980-2900 B.C. (We know very little about this period).
Dynasty IV (8 Kings)	c. 2900-2750 B.C. (The Pyramid Builders).
Dynasty V (10 Kings)	c. 2750-2625 B.C. (Art, and possibly literature flourished mightily).
Dynasty VI (6 Kings)	c. 2625-2475 B.C. (Political collapse - obscurity).
Dynasties VII-X	c. 2475-2160 B.C.

First Intermediate Period

(Separate States - until XI Dynasty in Thebes gains the upper hand)

- Dynasty XI (7 Kings) c. 2160-2000 B.C.
- Dynasty XII (8 Kings) c. 2000-1788 B.C.
(High attainment all round)
- Dynasties XIII-XVIII c. 1788-1580 B.C.
(Overthrown by the Hyksos from Asia).

Second Intermediate Period, which includes the Hyksos

- Dynasty XVIII (12 Kings and 1 Queen) c. 1580-1350 B.C.
(Period of highest attainment. Capital Thebes)
- Dynasty XIX (8 Kings) c. 1350-1205 B.C.
(Capital now in the Delta)
War with Hittite empire for possession of Palestine.
- Dynasty XX (11 Kings) c. 1200-1090 B.C.
(Period of brief revival - then downfall).
- Dynasty XXI (10 Kings) c. 1090-945 B.C.
(Thebes again capital).
- Dynasty XXII (9 Kings) c. 945-745 B.C.
(A Libyan prince makes himself king and his family live as petty princes)

Dynasty XXV (3 Kings) c. 712-663 B.C.
 (Conquest by the Ethiopians c. 712 B.C.
 Conquest by the Assyrians c. 670 B.C.
 Brief period of revival 663-525 B.C.
 Persian Conquest 525 B.C.

Dynasty XXIX (4 Kings) c. 398-379 B.C.

Dynasty XXX (3 Kings) c. 378-340 B.C.

Ptolemaic Period c. 332-57 B.C.
 (Conquered by Alexander).

Roman Period 30 B.C. - A.D. 378.

Old Kingdom includes Dynasties 3 - 6 (2980 - 2476 B.C.)

Middle Kingdom " " 12 - 13 (2000 - 1788 B.C.)

New Kingdom " " 18 - 21 (1580 - 945 B.C.)

A.EDUCATION IN ANCIENT EGYPT.

Ancient Egyptian writers seem to have neglected the Drama, but History has no better show to offer than that which is presented on the banks of the Nile, with a pale backcloth of desert and temples. Even when our interest is diverted to Greece, Rome or France, it is only temporary, for soon we see Antony, Caesar, and Napoleon back in the country where Pharaohs, Persians, Ptolemies, Romans, Jews, Arabs, Turks and Mameluks, in their turn come on the stage and play their parts. It is as changeful as a revue, but it has an inner unity, and the pattern of the Egyptian Spirit can be discerned. No book has yet described it comprehensively, which is small wonder, for the writer of such a book would have to know Hieroglyphic, Hieratic, Demotic, and Coptic; Latin, Greek, Arabic, and Turkish; to have grasped the significance of a hundred schools of art, religion, philosophy, literature and law; to possess a deep acquaintance with the country, river-bank, desert, oases and their inhabitants; to have studied authorities and sources in the libraries and archives both in Egypt and Europe; and he should have a lively but reliable imagination to take the place of authorities that do not exist, insomuch at any rate as they have not yet been discovered.

After all, the known past of Egypt is the longest

recorded in history, and it affords a field of observation extending from the Palaeolithic age to the Christian era; over 4,000 years of civilisation being attested by written monuments.¹ Compared with this, Roman, Greek and Arab civilisations are mere mushroom growths of yesterday's morn.

The analyst of the Egyptian spirit must not only decipher inscriptions in the gloom of temples, and share the ecstasies of eremites in the desert glare; study mosaics in mosques, and read Arabic newspapers in cafes; he must approach the doors² of village schools, and learn for how many centuries pupils have swayed to the chanted lesson; he must turn from the painted scribe in the old tomb, seated with papyrus roll across his knee, to look at his modern counterpart in a government office; he must listen to the grave sheikhs who lecture under the arches of Al-Azhar, and notice the students talking politics on their way to secondary school or Europeanised university. He would remember that even a 'Strike' is an ancient Egyptian institution.³

1. See p.465, The Nile and Egyptian Civilization. Alexandre Moret. Lond. 1927.

2. The 'kuttab' (elementary school) as often as not has no door, but is conducted at the end of a passage, or in an alcove in the wall.

3. See No. 71. Hibeh Papyrus, Grenfell & Hunt. Lond. 1906.

Education is the frankest expression we have of the mind of a State, for there we have its judgement of the things that matter, its sense of its own first needs, and its hopes and fears for the future. Twice at least has Egypt expressed itself in full clear articulation, - once through the educational institutions at Thebes, and again in the mosques and 'madrassas' (schools) of medieval Cairo.

Today it is waiting for a new utterance to achieve itself, and the suspense is the very essence of the drama of modern Egypt.

II.

Egyptians say that Egypt is 'the gift of the Nile.'¹ This utter dependence on the river has had its effect.

The annual rainfall at Cairo is about one inch. South of Cairo there is no rainfall at all, but the Nile brings down thousands of millions of tons of water, and on this people live. But it became obvious that an uncontrolled Nile made life uncertain and so long before history basin-irrigation was invented. This was the beginning of organised education in the Nile valley, and the first 'educated' people were irrigation officials. Before this some training was probably given to the youths in the arts of hunting and fighting, with perhaps some sort of crude instruction preparatory to, or attendant on initiation into the tribal fraternity. Peace depended upon a fair distribution of water, and so an inter-tribal organisation was established to see that each part of the country got its fair share of water. In the royal house were kept lists which gave information on the superficies, boundaries, and water supply of each 'tashe' or district. This would naturally lead to a united state, and a national civil service. Officials had to learn to calculate and level dikes and canals, to

1. Herodotus 2.5. cf. Athenaeus V 36 'O god of Egypt mighty Nile.'

tell the areas of pieces of land, to reckon taxes, and to record observations. This work was a matter of life and death, just as it is for the dike officials today in Holland. If they made a mistake in the height of a dike, or failed to close the southern entrance of a basin in time, whole villages might be destroyed by the inundation; if they miscalculated the level of a canal, a large area might have to go without water. Gradually they became not only officials, but priests. The popular religion of ancient Egypt, - that of Osiris - was founded on the worship of the mysterious Nile-flood. Religion was certainly a department of state, many priests were government officials, and most high officials were also priests. This it is probable that religious training was an education whose chief object was to produce good irrigation officials, agricultural administrators and lawyers.

Bureaucracy, as well as a kind of benevolent despotism was early established, for according to the priest Manetho, it was "the peculiar business of the first Kings of Egypt to teach the arts, to draw out rules, to lay down the first foundations of knowledge for the use and piety of all then living, and who were to come after; to clothe justice in the form of laws, and in every way to encourage invention."¹

1. See p.57 Vol.1. Egypt Under The Pharaohs. Henry Brugsch. Lond.1879.

III

There was a certain naïve quality about the ancient Egyptians which made them rather lovable.¹ Children and slaves went about naked, while women including the Queen wore a single garment usually of diaphanous fabric fastened below the breasts and reaching to the ankles. The ladies used hairpins, combs and cosmetics. Both men and women used kohl to darken their eyelids, and the greatest attention was paid to personal hygiene.²

A father claimed unquestioning obedience from his son as well as continence from his wife.³ But a boy was considered to owe more to his mother than to his father, "Double the bread that thou givest to thy mother, and carry her as she carried thee -----". She put thee to school, when thou hadst been taught to write, and

1. See Herodotus 2.

Also, Dwellers On The Nile, Sir E.A. Wallis Budge; Lond. 1926

2. Of this ancient writers, especially Herodotus quote numerous instances.

3. The fate that overtook an unfaithful wife is graphically narrated in The Tale Of The Two Brothers.

daily she stood there (i.e. outside the school) ----- with bread and beer from her house."¹

Here we have a very human picture of a dotting mother escorting her child to and from school. Probably she was not of the richer class otherwise the boy would be accompanied by a 'man-nurse' who might be a slave² or even a tutor. Bread and beer seem to have been the regulation lunch of the schoolboys.³ Lessons in the morning - the results of which were to "endure for ever like the mountains,"⁴ but we are told, that when noon came the pupils left the school 'shouting for joy.'⁵ It is very possible, therefore, that the afternoons were devoted to games and athletics.⁶ Children indulged in games that combined amusement with stimulating exercise. Ball games, which necessitated running and jumping, were

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1. See The Wisdom of Anii, p.239. The Literature Of The Ancient Egyptians, Adolf Erman. Trans. A.M.Blackman. Lond. 1927.
 2. The practice still obtains in modern Egypt. A servant often escorts the children as far as the school gate. In Ptolemaic times too, there were male-nurses, and the title was an exceedingly honourable one. Princess Arsinoe made her escape from the Roman camp accompanied by her 'nutritius' Ganymedes.
 3. In Sallier Papyri 2,10,6 the allowance per day for each pupil was 3 rolls of bread and 2 jugs of beer. Falstaffian fare!
 4. Middle Empire, Sallier Papyri 2,9,4, pub.in the Select Papyri.
 5. p.330 Adolf Erman. Life in Ancient Egypt. Trans. by Helen Mary Tirard. Lond. 1894.
 6. See Chap. III Vol. I. The Ancient Egyptians. J.G. Wilkinson new ed. Lond 1878. for a detailed account of the games and amusements of the ancient Egyptians of both sexes.

popular. Ingenious toys have been discovered which are strikingly modern. The balls used were of leather or skin sewed in the same manner as a cricket ball. Another game was, for two boys to sit back to back, and the one who rose first without touching the ground with his hands, was the winner. Knife-throwing, the objective being a black of wood on which a circle had been drawn, is well illustrated in the Beni Hassan paintings. From the same source, we gather that wrestling was popular, and so it is in Egypt today. It is probable that like the Greeks, they annointed their bodies with oil preparatory to participation in these combats. Singlesticks is also depicted, a piece of wood being fastened to the left arm, to serve as a guard. There is one instance of quoits - in a tomb which is no earlier than the 19th Dynasty; it may, therefore, not have been an Egyptian game. Weight-lifting was performed with bags full of sand - and today it is still very popular in the Egyptian schools.¹

A child was in its mother's care for three or four years. Then he had to attend school. We are fortunately able to reconstruct the average career of a scholar from the inscriptions on the statue of Bekenkhonsu

1. The present Olympic champion weight-lifter is Ahmed El-Nozeir, who was a pupil of mine 1924-26. Government Secondary School, Tantah.

Dr Henry Brugsch¹ has tabulated them thus:-

		Years.
Bekenkhonsu was a little child	4yrs	1 - 4.
A boy, and at last official of the palace	12 "	5 - 16.
Priest of Ammon	4 "	17 - 20.
Holy Father of Ammon	12 "	21 - 32.
Third prophet of Ammon	16 "	33 - 48.
Second prophet of Ammon	12 "	49 - 60.
First prophet of Ammon	6 "	61 - 66.

It is well to remember that these boys matured early, and so a youthful scribe of about 16 or 17 years of age, after a period of specialised training in some department would be quite a useful and competent person. Then, as it is now, the great majority of the people were not educated at all, in the sense of beingtaught to read and write. The literate class were, as Diodoms says, "the better classes of artificers," especially those engaged in cutting or paining the monumental inscriptions, and the officials. People were expected to follow their callings,² but it was quite possible for the clever son of a poor man to receive the best education, and attain

Vol II
1. p. 114. Hist. Of Egypt Under the Pharaohs. 2 Vols.
H. Brugsch.

2. See p. 51 The History Of Diodorus Siculus. Lond. 1653.
Trans. by Henry Cogan.

to one of the highest ranks in the scribal profession. Restraints of caste did not exist, and in the schools the children of the poor mixed freely with those of the rich, and got the same treatment. Some monuments erected to the memory of some high functionary of the Court bear the inscription "His ancestors were not known in writing" or "His ancestors were unknown people."

The didactic literature is full of the interest fathers took in the education of their children, but there is no evidence that learning was sought for its own sake. To learn how to read and write meant escaping from manual labour. Their outlook was purely materialistic - they became educated because it led to a post in some department of State. The attitude of the modern Egyptian is identical.

A favourite school text-book of the 19th Dynasty was the "Teaching of Duauf" (or Tuauf)¹ which extols schools and school education.

Duauf is taking his son Pepi up the Nile to put him in 'The School of Books' among the children of

1. British Museum Papyri Nos. 10182 & 10222.

See Erman Literature Of The Ancient Egyptians.pp.67.ff.

the Magistrates, and Polonius-like gives him counsel. After drawing a vivid picture of the frightful hardships which manual workers underwent, he continues, "What I now do on the voyage up to the Residence, lo! I do it out of love for thee. A day at school is profitable to thee, and its work endureth even like the mountains ----- Be content with thy diet: If three loaves satisfy thee, and thou drinkest two pots of beer, and the belly is not yet contented, fight against it --- ----- Behold, no scribe lacketh sustenance, the things of the king's house. Mesekhent (the goddess of birth) hath vouchsafed success to the scribe; at the head of the officials is he set, and his father and his mother thank God for it ----- Behold, this it is that I set before thee and thy children's children." There is no indication here that the father was conscious of the elevating and ennobling influence of learning, feelings with which the wise men of antiquity credited him. The old man, not having had the benefit of the school himself, was worldly-wise enough to be aware of the superiority which, in matters of this life the learned possess over the unlearned. "Learning divided the ruling class from those who were ruled. He who followed learned studies and became a scribe, had put his feet on the first rung of the great ladder of official life, and all the offices of the state were open to him. He was exempted from all the bodily

work and trouble with which others were tormented."¹

The schoolboy had his distinctive kit or 'uniform' and it consisted of a girdle only!

It is difficult to make an 'ex cathedra' pronouncement upon the various schools, but sufficient evidence is available to justify the following classification.

- (a) Governesses or private tutors in the home.
- (b) Schools attached to the great temples.²
- (c) The School for scribes which was attached to the Court.³
- (d) The Royal Palace School,⁴ where the children

1. Erman. A. Life In Ancient Egypt.

It would be argued that to educate a son was a religious duty. There was a saying of Ptah-hetep (5th Dynasty: Old Kingdom) "If thou art a successful man, and thou makest a son by God's grace, if he is accurate, goeth again in thy way, and attendeth to thy business on the proper occasion, do unto him every good thing, for he is thy own son, to whom it belongeth that thy 'ka' (ancestral family spirit) begat; estrange not thy heart from him.

2. One such school concerning which we have definite information was the Ramesseum - a school attached to the temple of Ammon which Rameses II built at Thebes.

3. For what we should now call 'Higher education.'

4. According to Sir W.M. Flinders Petrie in Social Life In Ancient Egypt pp.123 ff. the Royal nursery had a large staff of nurses and tutors (father-nurses), - men of great ability though not always of high family for Senmut whose ancestors were not found in writing, was tutor to Nefru-ra.

of the upper classes were brought up with the King's sons and perhaps foreign princes.

- (e) The private schoolmaster,¹ who ran a school either at his own house, or near a rubbish heap, where writing material could be had for nothing.

Under the New Empire - departmental schools seem to have sprung up, e.g. the house of silver had its own school where youths (apprentices?) were trained for their profession. Perhaps they received their training in a department preparatory to passing some qualifying test for the higher branches or the Civil Service.

Then there was the Royal Military School.

Rameses II and Rameses III employed their own sons as chief charioteers.² A scribe of a royal stable could

1. He at any rate must have charged a fee.

2. We have the three sons of Kafrionkhu - grandchildren of the king, depicted exercising their functions as scribed in the presence of their father. There were several grades of scribed, and the 'insignificant register of oxen, a clerk of the Double White Storehouse, ragged, humble, and badly paid, was a scribe just as much as the noble, the priest, or the king's son.' See p.288 The Dawn of Civilization. Egypt And Chaldea, by G. Maspero. Trans. M.L.Mc.Clure. 2nd ed. Lond.1896.

command a company or even divisions, according to his rank. Erman¹ points out that, "this scholarly education of the officers does not seem to have been prejudicial to the performance of their practical duties; in times of peace both in the earlier and later periods they were employed in all manner of engineering works, such as the transport of stone, or the organisation of irrigation canals. These duties were not felt to be in any way derogatory for the high officers - - -. Thus according to Egyptian ideas, even in the profession of arms, a good education was the only thing that could bring man happiness and success."

We have no evidence of the existence of schools for girls. In a tale of the 5th Dynasty a woman of the highest rank is supposed to be able to read but not to write.² To be able to accomplish both meant being "A good writer, and a very learned one."

Concerning fees we are unfortunately without information, but it is clear that clever poor children seemed to have experienced no difficulty due to lack of

1. p.550 Life In Ancient Egypt.

2. See Petrie Egyptian Tales. Vol II.pp 131-2. Lond.1895. This distinction is rare, but the art of writing (i.e. drawing) all the many hundred forms of Egyptian, is far more complex than that of reading. Even now there are ten students who can read an inscription for one who could compose it correctly.

funds. One should like to think that education was free, although we know it was not general or compulsory. Personally, I think that the small 'educated' minority exploited the huge majority who were illiterate. The authority of the schoolmaster was absolute; and the rod was not spared. "The youth has a back, he attends when it is beaten."¹ Pupils were not allowed to over-sleep. The following words are put in the mouth of a scribe as he awakens a pupil - "The books are already in the hands of thy companions, take hold of thy clothes, (girdle?) and call for thy sandals."

Written work was done on papyrus; tablets or wooden boards covered with smooth white stucco; parchments or leather rolls; or on ostraca (potsherds or flakes of white limestone.) The tablet is covered with white plaster could be washed, and used indefinitely.²

1. Anastasi 5, 8, 6. Pub. in Select Papyri.

In the same Papyrus we also have a former pupil writing to his old tutor - "Thou has made me buckle to since the time I was one of thy pupils. I spent my time in the lock-up; he bound my limbs. He sentenced me to three months, and I was bound in the temple." -(prison). 5, 18, 1-3.

2. They must have been almost identically the same as one kind of 'loh' in use today in Egyptian 'kuttabs.'

Some of the papyri were of enormous length - one of which is known to have exceeded 144 feet, concerning which F.G. Kenyon¹ observes that they were, "editions de luxe which the owner proposed to take with him to the next world, where he might have strength to grapple with them, but which he certainly did not want to read on earth."

Nearly all the papyri found in Egypt including the Greek ones, exceed the limits Pliny assigns to them. The Papyrus containing the Revenue Laws of Ptolemy Philadelphus (now in Bodleian Library) is 42 feet.

The pen used was a reed² less than half an inch in diameter one end of which was shaped and split in the same way as a quill-pen is. Both red and black ink were used, the former being mainly for the writing of titles, catch-words and colophons. In the schoolboy texts that have come down to us, the date in red ink is at the termination of each day's work.

School furniture was of the simplest, in fact apart from a few jars to hold the papyri, and a chest or

1. p. 17. The Palaeography Of Greek Papyri. Oxford 1899.

2. They are still used in Egyptian schools for 'stylish' Arabic calligraphy.
See Guide to the First Second and Third Egyptian Rooms, in the British Museum 1924.
Also the Catalogue of Objects Of Daily Use From University College London. Flinders. Petrie. Lond 1927.

two, there was no need for any, for the pupils literally sat at the foot of their teacher.

The Egyptians had great veneration for writing,¹ which they considered to be of divine origin, and the foundation of all learning. The god Thoth was credited with the invention of 'divine words' and it was believed that he taught writing in the first place to the inhabitants of the Nile Valley.

The content of the elementary course of instruction does not seem to have amounted to much more than the three R's unless informal instruction in religion and moral precepts could be considered as a fourth R.

Egyptian writing is known to us in three forms - Hieroglyphic, Hieratic and Demotic. Hieratic is cursive hieroglyphic and could be written more quickly than the pictorial hieroglyphic.² Business letters and official

1. This has survived. I have observed that modern Egyptian students will accept the most fantastic statements, so long as they are typed, or otherwise printed.
2. This was a development that was inevitable. cf. Development of current writing in England. See Ch. Johnson and H. Jenkinson's English Court Hand. Oxford. 1915.

A. de Vlieger, p.13. The Origin And Early History Of The Coptic Church, Lausanne 1900; has this foot-note, - "As a matter of curiosity, I relate that a great egyptologist Dr Heinrich Brugsch Pacha copies hieroglyphics with the same ease as he did a page of his native German. The reader may admire his handwriting in the facsimile reproduction of some inscriptions in Die Biblischen Sieben Jahre der Hungersnoth. Leipzig. 1891!"

documents were written in this cursive hand and pupils were taught to read and write easily. We have Middle Kingdom examples with Chapters from the Pyramid Texts, and from the Book of the Dead written in hieratic. The famous Rhind Mathematical Papyrus, and the Ebers Medical Papyrus were also written in clear hieratic characters.

Demotic is an abbreviated form of hieratic, and was much used by business men especially lawyers, although several specimens of literary works in this script are known.

Hieratic gave way to the more cursive demotic about the 26th Dynasty (c 650 B.C.). When Christianity was introduced, demotic gave way to Coptic; the circle is now complete, for Coptic is the ancient hieroglyphic language written in Greek characters, with six letters borrowed from demotic to represent sounds not known in Greek.

The pupil began by learning the hieroglyphic signs alphabetic and syllabic, -- a formidable task. This is borne out by a papyrus of Roman date, which according to Prof. F. Ll. Griffith, although it is not a direct copy of an earlier list, yet "may be an adaptation and selection from a list of the Ramesside times."¹ This

1. See p.6. Two Hieroglyphic Papyri From Tanis.

1. The Sign Papyrus (A Syllabary).

11. The Geographical Papyrus (An Almanack). Lond. 1889.

document is divided into three columns, the first of which contains a row of hieroglyphic signs, the second hieratic transcriptions of those signs, while the third column seems to have been devoted to the names of the signs for oral reference. Schoolboys would have to learn and copy such lists in order that they might distinguish hieroglyphic signs viva-voce, for spelling exercises that have been found suggest that a method was used by which each consonant was combined with each vowel in turn, gradually advancing from bilateral to trilateral syllables. We have no evidence for the systematic teaching of grammar until Ptolemaic times. A good illustration of how vocabulary was acquired, is provided by "The teaching that maketh clever and instructeth the ignorant, the knowledge of all that existeth, what Ptah hath created and Thoth hath written, the heaven with its stars, the earth and what therein is, what the mountains disgorge, and what floweth forth from the ocean, concerning all things that the sun enlighteneth and all that groweth on the earth."¹ This grandiose title suggests a

1. Hood Papyrus British Museum: Also in a Moscow Papyrus.

comprehensive treatise on the Universe, but it is nothing more or less than a large collection of substantives and other uncommon words orderly arranged. By copying and memorising this a pupil would add to his vocabulary the names of 96 Egyptian cities, 42 architectural terms, and all that one might eat and drink, including 48 kinds of cooked meat, 24 drinks, and 33 sorts of flesh. The concluding portion is missing, but enough remains to show that the author was taking the animal kingdom in his stride.

Texts were emended,¹ not with a view to supplying a better reading, but simply to interpolate unfamiliar words and expressions. Glossaries were composed, but the most important have not yet been published.

The specimens of schoolboy exercises that survive, point to the conclusion that the work was carelessly done. "We often find," says Prof. Griffith, "the productions of schoolboys copying from dictation as an exercise in the writing school, and the blank edges of these papyri were often decorated with essays at executing the more difficult signs. The master of the school would seem not to have cared what nonsense was produced by the misunderstanding of his dictation, so long as the signs were well formed."

1. Strictly speaking a scribe never emends - only corrupts.

Prof. Erman is less gentle, - "And now for the products of the schoolboys of the New Kingdom -- those papyri and ostraca, on which, certainly not always willingly, they had to write out the daily task which their teacher assigned them. The mess they made of the texts which they copied absolutely beggars belief."

Plato has reported an ancient Egyptian method of teaching Arithmetic in the kindergarten stage, which has a genuine Montessori flavour; - "It is necessary then to say that the free born ought to learn of each of these subjects so much as the great mass of boys in Egypt learn together with their letters. For, in the first place, the rules relating to reckoning have been so artlessly devised for children that they learn it in sport, and with pleasure; for there are distributions of certain apples and chaplets the same numbers (totals?) being adapted to more and at the same time to fewer ----- Moreover, by way of play the teachers mix together bowls made of gold, copper, and silver, and other things of this kind, and others distribute them, as I said before, by groups of a single kind, adapting the rules of elementary arithmetic to play: and thus they are of service to the pupils for their future tasks of drilling, leading, and marching armies, or of household management, and cause in short the men to be more useful themselves to themselves, and more alert. The next step of the teachers

is to clear away, by lessons in weights and measures, a certain kind of ignorance, both absurd and disgraceful, which is naturally inherent in all men touching lines surfaces and solids."¹

A less interesting device, but probably more effective for the instruction of beginners was the counting-stick, an example of which was found by Sir Flinders Petrie at Kahun. This is a flat piece of wood marked in columns beginning from the left, first with dots for 1 to 9, then with the sign for 10, and dots added for 11 to 19, then 20, 25, and the tens up to the sign for 100. From addition the pupil passed to multiplication by two, where he apparently stuck, more advanced operations being performed by a laborious process of addition and experiment. Prof. Erman is of opinion that mathematics served merely a practical purpose for the ancient Egyptians, and only solved the problems of everyday life; and that they never formulated and worked out problems for their own sake.

This is not absolutely true, but one has always considered that mathematics should be practical. The Egyptians were very fond of mathematical puzzles, which

1. Plato. *Laws* VII. C.21. Trans. by George Burges. Lond. 1852. Trans. by R.G. Bury also used.

by the way did not solve any problem in everyday life. It is only just we should remember that the Egyptians had learnt how to divide time in accordance with the sun's course, into $365\frac{1}{4}$ days, and periods of $29\frac{1}{4}$ days, in accordance with the course of the moon. This is still the basis of our modern calendar. They divided the year into three seasons each of 120 days, and designated ^{them} the Inundation, the Growing of the Seed, and the Harvest. All this seems even now to have been very sane.

Diodorus¹ states that the Egyptians claimed to have invented Astrology, Geometry, and many other Sciences. He states that the motions of the stars were industriously observed by the Egyptians, and added that they kept a record of the motions for an incredible number of years. They also observed the motions of the planets, and their influence upon the nativities of animals, and often foretold what was to happen their 'repertoire' of forecasts embracing abundance or failure of crops, occurrence of epidemics, appearance of comets, and earthquakes. The kind of astrology referred to by

1. p. 47. History. Cogan's trans.

Diodorus was undoubtedly practical in its intention, and we may guess that the shrewd scribes before making their wonderful predictions of good or bad crops, or of floods, correlated the aspect of the stars with inside information from the irrigation department about the state of the river in Upper Egypt. He also stated¹ that the Priests instructed children in the letters which were called sacred, and in other sciences that concerned the public good, especially Geometry and Arithmetic. There was a persistent Greek tradition that they owed their Mathematics, especially Geometry to the Egyptians. Prof. T. Eric Peet² in pointing out that the Greeks looked up to the Egyptians as the originators of their mathematics and more particularly of Geometry, is inclined to consider as unconvincing Herodotus' story with regard to the carrying away of land by the river, but he states "we need have no doubts as to the soundness of the Greek Geometry from Egypt." In Book II, 109,

1. p. 55 Op. cit.

2. p. 31. The Rhind Mathematical Papyrus. Lond. 1923.

Herodotus¹ narrates that, "The priests said that this king (Sesostris) also divided the land among the whole of the Egyptians, giving square-shaped allotments of equal size to each and that it was from this source he obtained his revenues, and he ordered them to pay in full a yearly rent. If the river carried away any portion of a man's allotment, he came to the king and informed him of what had happened; whereupon the King would send men to inspect the plot and to measure exactly the amount by which the land fell short, so that the man should pay a rent in proportion to that which had been originally imposed. I am of opinion that it was owing to this custom that Geometry was first discovered and that it afterwards passed into Greece; - - -" Pythagoras after learning all that his tutor Thales could teach him went to study under the Egyptian temple priests, where he remained over 22 years studying Astronomy and Geometry.

Three problems are propounded by Hori, an official of the royal stable, to Amenemope, the scribe in command of the Army.²

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1. See, 'The Credibility of Herodotus' Account of Egypt in the Light of Egyptian Monuments,' by Prof. William Spiegelberg. Trans. A.M. Blackman 1927. The learned author believes that, "What Herodotus knows of Egypt's past is not history but stories about days of yore told by the populace."
 2. Anastasi 1. (14, 2-17, 2) See Egyptian Hieratic Texts. Alan H. Gardiner. Leipzig 1911.

The latter is unable to solve them, and no wonder for "the technicalities of these passages are such that *the* modern Egyptologist is placed in a far worse quandary than this ancient scribe, so far from being able to supply the answers, he is barely able to understand the questions."¹

The first problem was to reckon out the number of bricks needed to construct a ramp 730 cubits long, 55 cubits wide containing 120 compartments of 30 cubits and 7 cubits broad, and filled with reeds and beams; 60 cubits high at its summit, 30 cubits in the middle, with a ----- of 15 cubits (i.e. the base of the sloping side walls projects 15 cubits behind.) and its ----- 5 cubits.

The second problem was to estimate the probable number of men required to transport an obelisk,² whose dimensions are given, from the quarries of Gebel Akhamar (Near the present R.A.F. Aerodrome) Heliopolis, to the Capital. This must have been quite a task, for Pliny³

1. Op. cit. p. 31.

2. See, Egyptian Obelisks, Henry H. Gorringer. Lond. 1885.

3. Natural Hist. Bk. XXXVI. Ch.14.

records that, "Ptolemaeus Philadelphus had one erected at Alexandria, eighty cubits high, which had been prepared by order of King Necthebis: it was without any inscription, and cost far more trouble in its carriage and elevation, than had been originally expended in quarrying it." In 36. IX, he describes how King 'Rhamsesis,' in order to make the workmen more careful while erecting an obelisk, ~~caused~~ his son to be fastened to the top thereof concerning which Engelbach drily remarks,¹ - "the loss of a son would not have been vital, as he is known to have had over a hundred, to say nothing of several score daughters."

The third problem is of a practical nature too, and concerns the number of men required to empty the 'magazine' of sand on which a colossus rested. It savours of the 'proportion' problems we ourselves were faced with once upon a time, for Hori asks, "How many men will demolish it in six hours? Their hearts are apt, but their desire to demolish it is small, for the time does not come in which thou givest a rest to the soldiers, that they may take their meal." Obviously in

1. p.91. The Problem Of The Obelisk. Lond. 1923.

his attempt to answer this, Amenemope had assumed they would work for 6 hours without a break - whereas Hori, out of his wider experience knew they would not.

And now we come to the greatest of all mathematical papyri hitherto discovered, - the Rhind Mathematical Papyrus, now in the British Museum, the work of a scribe - Ahmose C. 1788 B.C. from an older papyrus of the period 1849 - 1801 B.C. It has been beautifully edited by Prof. T.E. Peet,¹ who deserves the highest praise for having succeeded so admirably in rendering the book intelligible,-

- (a) "to ^{the} mathematician who has no knowledge
whatsoever of the Egyptian language and...."
- (b) "to the Egyptologist with little knowledge of
mathematics."

Prof. Peet adds (rather blandly) that Egyptian Mathematics was a simple affair. This papyrus contains 84 sums more or less completely worked out, and a table of fractions. The problems deal with simple numbers; the volume of simple solids and the content of corn-bins; the Geometry of plane figures, and questions on the height and slope of pyramids. The Egyptians had a decimal system of

1. The Rhind Mathematical Papyrus, T.E. Peet. 1923.
See also his 'Mathematics in Ancient Egypt,' reprinted from, "The Bulletin of the John Rylands Library." Vol. 15. No.2. July 1931.

notation which ran into millions, but they had no sign for zero, and strangely enough neither ~~had~~ the Greeks. As the only multiplication table the Egyptian knew was 2-times, to multiply by a larger number he had recourse to a series of doublings. Division was accomplished by the same method of counting, e.g. to divide 88 by 8, the Egyptian would multiply as follows:-

$$\begin{array}{rcl}
 & \begin{array}{l} \diagup 1 \\ \diagup 2 \\ \diagup 4 \\ \diagup 8 \end{array} & \begin{array}{l} \text{X} \\ \text{X} \\ \text{X} \\ \text{X} \end{array} \begin{array}{l} 8 \\ 16 \\ 32 \\ 64 \end{array} \diagup \\
 11 & & = 88.
 \end{array}$$

He would see that $8 + 16 + 64 = 88$, so he simply added up the multipliers which gave him the correct quotient, 11. The same method was adopted for multiplication. The number to be multiplied was first written down with 1 in front of it, - then he proceeded to divide both columns until by a little juggling with the figures in the first column, he arrived at the answer. To facilitate the process of division the Egyptian made use of a table of fractions which represented the results of dividing 2 by all the odd numbers up to 101, for example,¹ -

1. See Section XX Ancient Egyptian Masonry. S. Clarke & R. Engelbach. Oxford 1930.

$$\begin{array}{ll}
2 \div 5 & \frac{1}{3} + \frac{1}{15} \\
2 \div 7 & \frac{1}{4} + \frac{1}{28} \\
2 \div 9 & \frac{1}{6} + \frac{1}{18} \\
2 \div 13 & \frac{1}{8} + \frac{1}{52} + \frac{1}{104} \\
2 \div 25 & \frac{1}{15} + \frac{1}{75} \\
2 \div 29 & \frac{1}{24} + \frac{1}{58} + \frac{1}{174} + \frac{1}{232} \\
2 \div 33 & \frac{1}{22} + \frac{1}{66} \\
2 \div 37 & \frac{1}{24} + \frac{1}{111} + \frac{1}{296} \\
2 \div 39 & \frac{1}{26} + \frac{1}{78} \\
2 \div 41 & \frac{1}{24} + \frac{1}{246} + \frac{1}{328} \\
2 \div 43 & \frac{1}{42} + \frac{1}{86} + \frac{1}{129} + \frac{1}{301} \\
2 \div 47 & \frac{1}{30} + \frac{1}{141} + \frac{1}{470}
\end{array}$$

It seems that these tables were the result of generations of experience, which preferred these to the alternative solutions possible in many cases.

Except for $\frac{2}{3}$ the Egyptian could deal only with aliquot parts. He was unable to regard $\frac{3}{7}$ for example, except as $\frac{1}{7} + \frac{1}{7} + \frac{1}{7}$. All fractions of $\frac{2}{n}$ where n was an odd number, were resolved into fractions with 1 as a numerator, e.g. $\frac{2}{5}$ they represented as

$$\frac{1}{3} + \frac{1}{15} \cdot \frac{2}{73} \text{ as } \frac{1}{60} + \frac{1}{219} + \frac{1}{292} + \frac{1}{365}.$$

No general formula was used, the results being collected and noted. The addition of fractions is well illustrated by example 32 in the Rhind Papyrus,¹ where

1. Explained by Prof. Peet. pp.9 ff. *Mathematics In Ancient Egypt*.
See also pp. 216 ff. *Ancient Egyptian Masonry*.
Clarke & Engelbach. Oxford. 1930.

it is required to show that

$$\left(1 + \frac{1}{6} + \frac{1}{12} + \frac{1}{14} + \frac{1}{252}\right) \left(1 + \frac{1}{3} + \frac{1}{4}\right) = 2.$$

The Egyptians worked it out in this way :-

$$\begin{array}{lcl} 1 & \frac{1}{6} & \left| \begin{array}{l} + \frac{1}{12} + \frac{1}{14} + \frac{1}{228} \\ \\ + \frac{1}{18} + \frac{1}{36} + \frac{1}{342} + \frac{1}{684} \\ + \frac{1}{24} + \frac{1}{48} + \frac{1}{456} + \frac{1}{912} \end{array} \right. \\ \frac{1}{3} & \frac{1}{3} & \\ \frac{1}{4} & \frac{1}{4} & \end{array}$$

Total $1\frac{1}{2} + \frac{1}{4}$.

Remainder $\frac{1}{4}$

$$\begin{array}{cccccccccccc} \frac{1}{12} & + & \frac{1}{114} & + & \frac{1}{228} & + & \frac{1}{18} & + & \frac{1}{36} & + & \frac{1}{342} & + & \frac{1}{684} & + & \frac{1}{24} & + & \frac{1}{48} & + & \frac{1}{456} & + & \frac{1}{912} \\ 76 & & 8 & & 4 & & 50\frac{1}{2} & & 25\frac{1}{2} & & 2\frac{1}{2} & & 1\frac{1}{2} & & 38 & & 19 & & 2 & & 1 \\ \text{Total} & 228. \end{array}$$

i.e. a quarter.

912.

$\frac{1}{2}$ 456

$\frac{1}{4}$ 228

In the first three lines the multipliers are on the left and the products on the right, and they have to be added together. "The simpler quantities, namely $1\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{4}$ to the left of the vertical line yield $1\frac{1}{2} + \frac{1}{4}$, and, if the whole sum is to be 2, the remaining eleven fractions must come to $\frac{1}{4}$. They are added by a process which looks very like that of the common denominator; for a number 912 is chosen - it happens

to be the greatest of the denominators, though this is not always so - and each denominator is divided into it, and the results placed in red ink under the respective fractions. These red numbers add up to 228, which is then shown by a simple division (bottom right) to be $\frac{1}{4}$ of 912. Hence the eleven fractions total $\frac{1}{4}$, and the whole product is 2."¹

This shows that the Egyptian was quite aware of the L.C.M. principle, only he did not necessarily choose the L.C.M. for his denominator. Had his knowledge of fractions extended beyond that of aliquot parts, he would have worked this problem just as we would, for there is no doubt that he understood the principle underlying it.

Squaring and taking the square root were known, but there is no evidence that a method for finding the square root was known. Probably they were known only from trial.

Problem 26 is an equation of the first degree with one unknown.

"A quantity whose fourth part is added to it becomes

1. Op. cit. p. 10.

15. (What is the quantity?)

(Step A) Reckon with 4.

Make their quarter, namely 1. Total 5.

(Step B) Reckon with 5 to find 15.

1 5

2 10 The result is 3.

(Step C) Multiply 3 by 4.

1 3

2 6

4 12 The result is 12.

(Proof) 1 12

$\frac{1}{4}$ 3 Total 15.

(Answer) The quantity is 12; its quarter is 3. Total 15."

It seems that the method adopted here is that of trial. We also have examples of an equation of the second degree, and again the method is that of trial. Examples 40 and 64 involve arithmetical progression; and one question dealing with geometrical progression. Several examples show how, in a country with no coinage, bartering could be equitably done: No. 78 illustrates this well:- "Example of exchanging bread for beer. If they say to you: A hundred loaves of pefsu 2. (Find the number of pints). You are to turn the 100 loaves of

pefsu 10 back into flour, i.e. 10 gallons. Multiply by 2; the result thereof is 20. Then shall you say, "This is their exchange." No 58¹ is very interesting and demonstrates a perfectly logical method:-

"A pyramid whose vertical height is $93\frac{1}{3}$. Let me know its batter, 140 being the length of its side."

You are to take half of 140, namely 70. You are now to reckon with $93\frac{1}{3}$ to find 70.

Reckon with $93\frac{1}{3}$: its half is $46\frac{2}{3}$,
its quarter is $23\frac{1}{3}$.

You are to make $\frac{1}{2} + \frac{1}{4}$ of a cubit. Reckon with 7, its half is $3\frac{1}{2}$; its quarter is $1\frac{1}{2} + \frac{1}{4}$; total 5 palms 1 finger. This is its batter.

Working out:

$$\begin{array}{r} 1 \quad 93\frac{1}{3} \\ / \frac{1}{2} \quad 46\frac{2}{3} \\ / \frac{1}{4} \quad 23\frac{1}{3} \end{array}$$

You are to make $\frac{1}{2} + \frac{1}{4}$ of a cubit.

Now a cubit is seven palms.

$$\begin{array}{r} 1 \quad 7 \\ \frac{1}{2} \quad 3\frac{1}{2} \\ \frac{1}{4} \quad 1\frac{1}{4} \text{ (read } 1\frac{1}{2} + \frac{1}{4} \text{)} \end{array}$$

Total 5 palms 1 finger.

This is the batter."

1. p. 99 Rhind Mathematical Papyrus.

Other problems demonstrate that the Egyptians knew how to calculate the areas of rectangles and triangles, and were not far wrong when they came to calculate the area of a circle. They were able to calculate accurately the volume of corn-bins, cylinders and truncated pyramids.

Thus we see that apart from a few abstract problems - Egyptian mathematic was intensely practical, and dealt with every-day problems. To the Egyptian a number was never abstract, but stood for something. It was always a case of 9 men, or how many loaves. He was interested in finding the area of the slopes of a pyramid because he wanted to know the number of masons to employ and the amount of plaster to supply. Civilisation as he knew, and perhaps desired it, presented no more complex problems than these practical ones; he felt he could cope with these satisfactorily, and so he did not enter the realm of abstract speculation in search of fresh ones. Such a departure from the convention of his day, would be disturbing to the smooth working of the system of which he was a part. Therefore, to inquire whether Egyptian Mathematics was scientific or not, is unfair, for as Neugebauer has so rightly pointed out, it is possible that their civilisation was

intellectually of a fundamentally different order.

We do know that their mathematics was adequate for the accomplishment of some astounding architectural feats.

Gunn and Peet¹ suggest that an elementary simplicity was given to the problems such as we have reviewed, so that the student could commit them to memory easily, thereafter being able to apply them to any similar ones as occasion demanded, by substituting for the simple figures of his memorised model the corresponding ones of the problem demanding solution. They, therefore, suggest, that "if this view be correct, the geometrical problems (and not only the geometrical ones) of the Middle Kingdom treatises are to be regarded not as problems containing formulae but as formulae to be applied to the solution of problems." This is exactly the attitude of the modern Egyptian student whose insatiable craving for 'models' is apt to prove embarrassing to any master unaccustomed to such 'labour-saving' pedagogic devices. He who follows not custom in Egypt is considered a fool.

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1. p.185 Vol XV. (1929) Journal Of Egyptian Archaeology. pp. 167.ff. Article on Four Geometrical Problems From The Moscow Mathematical Papyrus. See also same Journal. pp.100 ff. Vol XVII (1931). A Problem In Egyptian Geometry T. Eric Peet. pp.16.ff. Vol XIX (1933) Problem 14 of the Moscow Mathematical Papyrus, by Guido Vetter. pp. 232 ff. Vol XIII. (1927). The Mathematical Leather Roll In The British Museum, by S.R.K. Glanville.

In the next section an attempt will be made to show how the Greeks in Egypt improved upon Egyptian Mathematics.

It is strange considering the unrivalled opportunities the Egyptian had for dissecting, that no treatise on anatomy has come down to us. However, there are several dealing with medicine.¹ The Asclepios of the Greeks, and Aesculapius of the Romans can be traced back to an ancient Egyptian wise man and physician called Imhotep, court medical advisor to the Pharaoh in the 30th century B.C.

For his great skill in healing, he was raised

1. These are the chief:-

Papyrus Ebers, 2,289 lines with 877 Recipes. 16. cent.B.C.
Discovered by George Ebers at Thebes in 1872. Most complete record of Egyptian medicine known. Now at Leipzig.

Papyrus Hearst 273 lines with 260 Recipes. 16 Cent.B.C.
Discovered by George A. Reisner. Now at the University of California.

Berlin Papyrus No. 3038. 279 lines with 204 Recipes.
16 cent. B.C.

London Papyrus No. 10059. 253 " " 63 " 11th Cent. B.C.

The Edwin Smith Surgical Papyrus has been edited by James Henry Breasted. 2 vols. University Chicago Press. 1930.

to the position of a demi-god. He has been variously described as 'the beneficent god who listens to the prayers of the people, and by his protection gives life to all human beings in all places,' "the god who looks after the sick," and "the holy god who gives a son to him who has none."

In all these treatises,¹ disease was attributed to demoniacal intrusions, and so medicine played a subordinate part to incantations and spells.² The intervention of the gods was invoked through offerings and sacrifices, and as now, the good offices of the physician on payment of liberal fees. Yet in spite of the blighting influence of magic and their belief in demonology, these physicians stumbled on some effective recipes, for example we read in the Ebers Papyrus of a "Receipt for drawing the blood from a wound."

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1. Charles Singer p.205. The Legacy of Greece, Oxford, 1921, states "---- on the whole the general tendency of modern research is to give less weight to Mesopotamian and more to Egyptian sources than had previously been admitted, thus, as an instance, some prescriptions in the Ebers papyrus of the eighteenth dynasty (about the sixteenth Century B.C.) discovered at Thebes in 1872 resemble certain formulae in the Corpus Hippocraticum."
 2. Magical Texts From a Bilingual Papyrus In The British Museum. Lond. 1932. H.I. Bell, A.D. Nock, H. Thompson, contains some very interesting spells and charms of the 3rd Cent. A.D.

Fly-dung and vinegar placed thereon, Incantation.

The weak was carried off by the strong (repeat backwards).

The weak is saved; he smites the strong. This against that." Their materia medica included vinegar, ointment, olive oil, milk, beer, honey, castor oil and cummin.

The fact that they were, more often than not, mixed with loathsome and pernicious materials, such as the excreta of a fly, did not prevent some good being done.¹

Before we ridicule ancient Egyptian medical practice, it might be interesting to refer to Chaucer's "perfect practitioner." This worthy was guided by his knowledge of astrology, which, as Roger Bacon called it, was the "better part of medicine." In the "House of Fame" (III. 175-180) there is a further reference to this practice.

"And clerkes eek, which conne wel
Al this magik naturel,
That craftely don hir ententes,
To make, in certeyn ascendentis,
Images, lo, through swych magik,
To make a man ben hool or syk."

In Shakespear's time, Dr Fludd did great

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1. I have seen natives of present-day Egypt making use of similar 'Medicines.' An example of 'the hair of the dog that bit you' is found in the practice of the fellahs of bruising the body of the scorpion that has stung into ^{an} incision made in the place pierced. The blood that flows from the wound carries away the poison, and so good is done in spite of the superstitious remedy. The 'Zar' is another belief in 'magic.'

business in his "powder of sympathy" which was composed of the moss taken from the skull of a gibbeted murderer, warm human blood, human suet, linseed oil, turpentine etc. Valentine Greatrake, whom - St Evremond said, Catholics and Protestants from every part visited, asserted that every disease was due to demoniacal intrusions.¹

In Pericles,² there is a hit at doctors.

"Thou speak'st like a physician, Helicarnus;
Who minister'st a potion unto me,
That thou would'st tremble to receive thyself."

From a comparison with these feckless medical practitioners of comparatively modern times, the Egyptian 'doctour of physike' with periapt and charm, emerges with credit.

The Smith Papyrus proves that there was examination of the patient, diagnosis, and subsequent treatment, e.g. "If you are treating a man with a pain in the abdomen. If you find his abdomen swollen, and it comes and goes beneath the finger, then shall you say. This is a weariness of eating. Stop him eating forthwith. You are to make for him every kind of purge." Rather naive, but they knew that the heart was the centre of the cardiac

1. See The Doctor in History, Literature, Folk-Lore etc.
Edited by William Andrews. Hull & London, 1896.

2. Act I. Sc.ii.

system, and knew nothing of the three systems of nerves, muscles, and vessels. They were aware of the value of massage, and the use of wine as a tonic. Veterinary science was taught, and also dentistry, for some of the mummies have teeth neatly stopped with gold.

IV.

To return to the scribe. It was a term that included all kinds and grades of clerks and officials. The Temple had its own scribes to look after the administration of its vast estates: 'Royal' scribes were civil servants. But to be a scribe meant the possession of power, and so we find his office eulogised in the schoolboy 'model letters' and exercises that have come down to us. In these, exhortations to seek truth for truth's sake hardly ever occur, but the material advantages of education are put well in the foreground. A good example¹ is the letter of the royal scribe Nebma're'nakht, to the apprentice-scribe Wenemdyamun, and it was frequently set to be copied for the schoolboys of the 19th Dynasty. It is a very long letter, but is so remarkable from several points of view, and illustrates so well the ancient Egyptian mentality - and view of education, that a fairly lengthy extract in this place may be justified. The reader will be struck by the familiarity of its sarcastic pedagogic humour, for schoolmasters four thousand years ago had the same

1. See pp. 285 ff. Journal Of Egyptian Archaeology. Vol XI. Lond. 1925. Pub. Egypt Exploration Fund. Peet & Blackman, "The Papyrus Lansing."

capacity for making shrewd penetrating observations, as their brethren in the craft have today. The motives urged upon the pupil are freedom from physical toil, and the worldly advantages of the scribe's profession, which had long been established as the perquisites of a privileged and conservative caste. We strongly suspect the country to have been hag-ridden by officials. Save for one flash of what appears to be genuine enthusiasm over the pleasantness of writing, it is a frank and humourous appeal to self-interest and snobbery.

"----- love writing, hate dancing, that then mayest be a magistrate of note. Set not thine heart on the playing-field; put behind thee throwing (?) and hurling (?) Spend the whole¹ day writing with thy fingers, and read by night. Make to thyself friends of the roll² and the ink-palette, for it is pleasanter than

1. This refers to higher, not elementary or primary education.

2. **Have** friends in Court?

must. As for writing, to him that knoweth it, more profitable is it than any profession; it is pleasanter than bread and beer,¹ than clothing, than oil, yea it is more precious than an heritage in Egypt, than a sepulchre on the west.² Young fellow, thine heart is exceeding proud, and thou dost not hearken when I speak ----- '

'Even if I beat thee with every kind of stick, yet thou wouldst not hearken. If only I knew of another way of doing it, I would do it for thee and thou shouldst hearken, and thou should be a man by virtue of writing, although thou hast not yet known woman. Joyful is the heart that hath embraced the scribe's profession; it grows younger everyday.'

'----- Look for thyself with thine own eye; all the professions are set before thee.'

'The washerman spends the whole day going up and down, every limb of his is aweary, -----'

1. This may be a futile (we must believe that) reference to the indecent rush by scholars for the midday bread and beer.

2. i.e. On the left bank of the Nile.

'The potter is smeared with mud like a man one of whose folk has died. His hands and feet are full of clay. He is like one who is in the bog.'

'The cobbler mixes tan. His odour is marked. His hands are red with dye, like one who is smeared with his blood.'

'The florist (?) makes ^uboquets and makes gay the wine-jar stands. He spends a night of toil like one on whose body the sun is shining.'

'The merchants fare down stream and up stream and are busy as can be, carrying wares (from) one town to another, and supplying him that hath not. But the tax-gatherers exact gold, the most precious of all minerals (?).'

'The ships crews of every (i.e. commercial) house take up their freights. They depart (?) to ---- Syria ----. Not one of them dares say, "We shall see Egypt again."'

'The craftsman, he who is in the dockyard, carries timber and stacks it. If he renders to-day his ~~does~~ of yesterday woe to his limbs! The chief workman stands just behind him saying to him, "Bad." --- But the scribe he it is who **reckons** the labour of

all those. Prithee know that.'

'Yet again. Come that I may expound to thee how it goes with the husbandman, ----- that other hard profession. The water is in flood and he is soaked.-----
----- He spends time cultivating barley, but the worm is behind him. It finishes off the seed, when cast (to) the ground, and he never sees a green blade ---- '

'And now the scribe lands upon the bank registering the harvest. The porters are in attendance with rods and the negroes with staves. "Give corn," say they. There is none. He is stretched out and beaten; he is bound and thrown into the canal; he sinks (?) as one drowned (?). His wife is bound in his presence; his children are in fetters. His neighbours leave them and take to flight. All is over! The corn is not there:'

'If thou hast any sense, be a scribe. Thou hast informed thyself concerning the husbandman. Thou couldst not be one. Prithee, know that.'

'Again. The scribe of the army, the ganger of the cattle of the estate of Amun, to the scribe Wenemdyamun saying further:- Be a scribe, that thy body may be not smoke (??) like the lamp, as doth one whose body is weak, for there is no bone of a man in thee. Thou art tall and weedy. If thou wert to take up thy load to carry it, thou wouldst collapse (?), thy legs would continually give way, thou wouldst be lacking in strength, thou

wouldst be bereft of all thy members, and thy body would be in evil case.'

'Set thine heart on being a scribe, the godly profession of thy destiny. If thou callest to me, a thousand answer thee. ---- Thou shalt be at the head of others --- (Here follows a list of Weremdyanum's failings, - dancing, drinking, and association "with the Cassite woman").

'See, I instruct thee and make sound thy body, that thou mayest take up the scribe's palette without let or hindrance; that thou mayest become a favourite of the king; that thou mayest open the door of the treasuries and the granaries; that thou mayest receive the ship at the door of the granary; that thou mayest issue the divine offering on the festival days; arrayed in (fine) raiment, possessing horses, with thy boat upon the stream, furnished with attendants, and striking proudly forward on a tour of inspection. A mansion is built in thy city, thou holdest high office which the king hath given thee, and thou hast men - servants and maid-servants on thy estate-----'

'Put writing in thy heart, that thou mayest protect thyself from hard labour of any kind and be a magistrate of high repute --- ' (Now follows a vivid description of the hardships and trials of a soldier's life,) "Grievous for him are life and death alike."

In return for this sage advice, Wenemdyamun writes a hymn of praise to his tutor, 'playing up' to his sense of vanity by flattering him on his dignity, and his generosity as host and master:-

"Thou art beauteous of hands when hearing the censer in front of the lord of gods at every procession of his -----'

'Thou art an august Sem -priest in the House of Ptah, instructed in all the mysteries in the House of the Magistrate ----'

'Thou art one that is beauteous of hands¹ when making oblations, first in calling out the directions in the daily liturgy ----- '

'Thou art a good protector of the villeins; thy great repasts are plentiful like a high Nile ---- '

'Thou art a very magistrate in calmness, a son of praised ones, the darling of all men, possessing the favour of the King --- '

'Thou art beautiful in thy body, happy of demeanour; the love of thee is in all mankind like a great Nile.'

1. Judging from mummies and carvings, one is ready to believe that the Ancient Egyptians had small but finely shaped hands.

'Thou art one that is choice of utterances,
wise in sayings; all that thou sayest goeth straight
to the mark,¹ falsehood is thine abhorrence.'

'Thou art one that dwelleth magnificently in
thine abode; thy servants answer speedily,'

'(Thou art one) that poureth out lordly drinks (?)
hand over hand, everyone that beholdeth thee is festive
with good cheer.'

'Thou art one that is profitable to his city,
that maketh his villeins live; every utterance of thine,
the heart is content (therewith).'

'Thou art one that offereth the beer-vessel,
that filleth the bowl -----'

'Thou art one that yoketh the jubilees (for)
the Sovereign, that setteth the Nine Bows under his feet,
and preserveth his Army."

These letters provide a good introduction to
the general spirit of Egyptian culture. Its practical,

1. We can imagine Wenemdyamun's tongue in his cheek as he penned this great thought, but he knew what convention and good breeding demanded in the way of politeness to a superior.

materialis~~is~~^{is}tic motives are apparent enough; but so are its geniality, the bland charm of its frankly hedonistic outlook, its provision of an aesthetic sentiment and artistic style growing out of a sensuous enjoyment of life, and the natural pride and pleasure of professional efficiency, and the respect it freely pays to truthfulness and humanity, without, one suspects, allowing conscience to be painfully acute.

The aesthetic element in education showed itself chiefly in the cultivation of a florid literary and legal style. This was seldom abstract, but was adorned with formulas and pictorial imagery. The ideal was to acquire the gift of oratory 'in very sooth.' In the 'Instruction^{ion} Of Ptahhotep',¹ we find the following, "Take counsel with the ignorant as with the wise, for the limits of art cannot be reached and no artist fully possesseth his skill. A good discourse is more hidden than the precious green stone, and yet is it found with slave girls over the mill-stones. If thou findest an orator at his time, with sound sense and better than thou,

1. See Prof. F. Ll. Griffith. Library Of World's Best Literature. Edited by C.D. Warner.
Also pp. 54 ff. Erman, A. Literature Of The Ancient Egyptians.

bend thine arm and bow thy back."

The same attitude towards rhetoric is found in "The Complaints Of The Peasant."¹ Four copies of this work have been discovered, which shows that it was popular as a model of rhetoric, but as none of them dated from the New Kingdom, it seems that as a model in the schools of the latter its utility was impaired by the monotonous character of its complaints. But to us it is important for it represents what was considered in its time a model of elegant expression. A peasant from the salt lands of Wadi-Natrun² went down to Cairo with his asses laden with produce, intending to obtain corn in exchange. However, in the city he was swindled, and, to cut along story short, this peasant from the salt lands of Wadi-Natrun being highly gifted with eloquence, pleaded his cause so pleasingly before the King and Court, that justice was deliberately denied him until he had appeared nine times. The scribe's love of pompous

1. pp. 116.ff. Erman. A. Op. cit.

2. Popular nowadays as the 'rendezvous' on Sundays of motorists from Alexandria and Cairo. A thorough examination of the MSS. in the monasteries there might reveal some valuable Coptic documents. This is borne out by the experience of Tichendorf, the German savant who in 1844 found in a wastepaper basket, in the monastery on Mount Sinai, the 45 odd leaves (now in Leipzig) of the famous Codex Sinaiticus.

diction, is well illustrated for the peasant addresses Rensi the high steward thus, "O high steward, my lord! Greatest of the great, leader of that which is not and ~~that~~ which is ----- . Forasmuch as thou art the father of the orphan, the husband of the widow, the brother of her that is put away, the apron of him that is motherless."

The method of making schoolboys copy model-letters served more than one purpose. In this way were taught orthography, good manners, platitudes and morals, style or literary appreciation and vocabulary, while the 'bloods' were got at by having to write letters to themselves describing the disgrace they were bringing upon the learned and honourable profession. That popular literary 'motif' of comparing the life of a scribe with that of a manual worker has already been dealt with, but it may be worth while illustrating the scribe at work improving the shining hour. The following¹ are samples from letters that were popular as models:-

1. Collated from various papyri. See Erman. A. Literature Of The Ancient Egyptians. pp.188.ff.

'Write with thine hand and read with thine mouth. Ask counsel of them that are clever. Be not slack, and spend not a day in idleness, or woe betide thy limbs. Enter into the methods of thy teacher and hear his instructions. Set not thine heart on pleasures, or thou wilt be ruined. The Kaeri (an Ethiopian animal) is taught to dance, horses are broken in, a kite is put in a nest, a hawk's wings are bound. Persevere in asking counsel, neglect it not, and in writing sicken not of it. Set thine heart upon hearing ~~my~~ words and thou wilt find them profitable. Mine heart is sick of giving thee further teaching. I may give thee an hundred blows, and yet thou castest them all off. Thou art a beaten ass unto me, that is stubborn ---. Thou art as a jabbering negro unto me that is brought with the tribute. I will make thee play the man, thou bad boy. Prithee, know that. I am told, thou forsakest writing, thou givest thyself up to pleasures; thou goest from street to street, where it smelleth of beer, to destruction. Beer it scareth men from thee, it sendeth thy soul to perdition.¹

1. cf. Isaiah V. 11. "Woe unto them that rise up early in the morning, that they may follow strong drink; that continue until night, till wine inflame them!"

Thou art like a broken steering-oar in a ship, that is obedient on neither side. Thou art like a shrine without its god, and like a house without bread ----- Thou sittest in the house and the girls encircle thee; thou standest and makest -----,¹ -----Thou sittest in front of the wench and art besprinkled with oil; thy garland of ishet-penu (a plant) hangeth about thy neck, and thou drummest on thy paunch. ----- Howbeit, I have seen many like thee, that did sit in the writing academy and that said not "by God," without swearing: "Books are nothing at all." --- Do as I say, and thy body will be healthy, and thou wilt be found in the morning² to have no superior." I feel that to comment on the preceding extracts would only paint the lily!

We are able to distinguish three kinds of letters namely those from a superior to a subordinate, those from an equal to another of the same rank or social status, and those from a subordinate to a superior. In the first the writer usually dispenses with the introductory salutations, and generally ends with a curt, "Now look to it."

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1. One is tempted to supply the missing word by adding, "whopee!"
 2. The pupil wrote 'morning' incorrectly and the teacher carelessly and wrongly corrected it to 'month.'

In addressing an equal the writer usually retained, "Greetings and good wishes," concluding with a pious wish for the continuance of his correspondent's good health.

But in reading letters from a subordinate to a superior, one is ^{at} first apt to consider the introductory salutations servile. This would not be quite true, for etiquette demanded that certain formulae and rules should govern letter-writing. Elaborate greetings coupled with assurances of fidelity and industry were, in this case, little more than polite ceremonious formalities. Love of pompous diction is also apparent in the magniloquence and number of official titles as employed in the correspondence that has come down to us. Prof. Peet. says "some individuals possessed as many as thirty or forty." They flourish in present-day Egypt, and have lost little of their pristine importance. Thus letter-writing was in itself a very important subject in the curriculum.

There are four model-letters in the Papyrus Koller¹ (Pap. Berlin 3043) :-

1. See p. 35. Gardiner A.H. Egyptian Hieratic Texts.

- (a) The equipment of a Syrian expedition.
- (b) Warnings to an idle scribe.
- (c) A letter concerning Nubian tribute.
- (d) An order to make preparations for Pharaoh's arrival.

These texts are full of technical and foreign words included deliberately for the express intention of enlarging the schoolboy's vocabulary. The majority of the words are such as might reasonably claim the scholar's attention in his future career.

Morals and wordly wisdom were also inculcated through the transcription of well known texts.¹ In these the pupil was exhorted to respect a venerable wise man, never to repeat calumnies, nor look at a woman in a strange house, to keep a contented countenance and behave to superiors with proper respect, to be on guard against subordinates, to keep his eyes open under pain of becoming a beggar, to enter not uninvited into the house of another, but if invited to be silent about anything he saw while inside, to eat not bread whilst another stood by, for "one

1. "The Instruction of King Amenemhet" was a great favourite.
See pp. 165 ff. Erman, A. Life In Ancient Egypt.

is poor, another is rich, but bread remains to him that is generous (and) he that was rich in the year that is past, may even in this year become a vagrant," and never to sit down whilst an older person stood, or one who held a higher office.

No account of education in ancient Egypt would be complete without mention having been made of a remarkable instance of very fine writing. It is a satirical letter,¹ which, was a standard work in the schools, although it originated in an actual correspondence between Hori a Scribe of the Royal Stable, and Amenemope the scribe in command of the army. ~~Hori~~ is writing to ~~Amenemope~~, to refute certain accusations, and to make counter-charges. Introducing himself in the third person, Hori loses no time in waxing eloquent over his own fine qualities:- "The scribe of noble parts, patient in discussion, at whose utterances men rejoice when they are heard, skilled in the hieroglyphics; there's nothing he does not know. He is a champion in valour and in the art of Seshyat (goddess of writing) servant of the lord of Khmun in the hall of writing; assistant teacher in the office of writing. The most eminent of his

1. Pap. Anastasi. See Gardiner A.H. Egyptian Hieratic Texts.

companions, and the commencement of his family; the prince of his contemporaries, without his peer ----- Exquisite ----- wise of understanding --- men desire to be friends with him and tire not of him. He is swift to inscribe empty rolls. Youthful, eminent of charm, pleasant of grace. Unravelling the obscurities of the annals like him who made them. All that goes forth from his mouth is steeped in honey; the heart is refreshed with it as it were with medicine. Groom of his Majesty, follower of the Sovereign, trainer of the steeds of the king, ardent cultivator of the stable ---- ----- Hori, son of Onnofre of the region of Abydos, island of the just: born of Tewosre in the district of Belbeis, singer of Bast¹ in the Field of God."

The compliments he lavishes upon his rival scribe are only a degree less effusive, and they include expressions like, "Beloved of all men; beautiful to him who beholds her charm; like a flower of the marshes (i.e. a papyrus-plant) in the heart of others. ----- Keen of wit, patient of heart, loving mankind rejoicing at deeds of Justice, he turns his back upon iniquity. (The scribe of steeds (?)) --- Amenemope son of the steward Mose, the revered)!"

1. See Herodotus II. 60.

A good figure of Bast with her cats, monkeys, and basket is that of Berlin 12424.

Then having expressed further good wishes couched in the most extravagant phraseology, Hori proceeds to tell his correspondent that all his words are **perverted**, and that his prose was 'shedeh - wine mingled with pewer' (i.e. inferior wine). He gives a long description of his blunders in performing various tasks, and ends with gusto thus:- "How marred is every word that cometh over thy tongue; How feeble are thy sentences; Thou comest to me wrapped up in confusions, loaded with errors. Thou splittest words asunder,
 - - - - Thou are not wearied of groping
 - - - - Thy narratives are collected upon my tongue, established upon my lips. They are confusing to hear; none who converses with thee can unravel them. They are like the talk of a man of the Delta with a man of Elephantine.¹

In this letter abundant use is made of foreign words, and it displays considerable erudition regarding outlandish places in foreign countries.

1. Proof of the existence of dialects, - time of the New Kingdom.

As mentioned before - it also had certain mathematical problems. One must not regard this work as a vicious piece of invective satirical it is, and the quality of the wit is poor - but the dominant note is good natured raillery. And as Dr Alan Gardiner so justly points out, " - - that a Ramesside author should so well have understood to use a language in a way not immediately suggested by its plain face-value is an achievement to be respected."

V.

One writer after another has pointed out that ancient Egyptian education was practical and materialistic, employing the words in a depreciatory ^{and}disparaging manner. But surely education should of all things be practical. Under the ancient Egyptian system a boy received a general education in the three R's, and then proceeded to specialise in some department, being guided and instructed by a superior who knew exactly how to run that particular department. The people were progressive when they wished, as is shown by the evolution of a cursive hand. The fact that the teachers of the old Hieroglyphic literature were usually priests, gave Diodorus and other Greeks the erroneous impression that the hieroglyphic writing was essentially sacred - - hence the name - - whereas it was merely obsolete. Education gave a man an added capacity for enjoying and appreciating life. It fitted him to look everywhere at the happy side of life, and he succeeded so well in finding life entirely to his liking that he could desire nothing better in the other world than to live there much as he had lived

on the banks of the Nile. The Book of the Dead¹ was one of the earliest text-books, and apart from a system of counting - it was a magic guide-book to the Hereafter. Part of the song² placed in the tomb - temple of the departed King Antef illustrates this attitude, " --- On! live out a joyful day; rest not therein. Lo! it hath not been granted to man to take away with him his belongings. Lo! there is none who hath gone hence and returned hither."

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1. This book described all the localities through which the soul had to travel, the route to be followed and the ceremonies which had to be observed in order to ensure the successful completion of the journey. Wandering souls when in doubt had only to consult it, and they would find in it everything including the phrases in which testimony was to be given at the judgement-seat, the words which conjured up or exorcised evil spirits, the proper tribute of praise with which to hail the gods, the astronomical chart setting out the aspect of the night-sky, together with a tabulated list of the celestial latitude of the stars - everything, even to the acts of worship to be performed after all the perils had been overcome. See p.7 L'Art Copte. A. Gayet. Paris. 1902.
 2. p. 11. See Wiedemann A. Popular Literature in Ancient Egypt. Lond, 1902.

Fortunately we have proof of the high standard of morality that was taught by the most revered Egyptian teachers. It is, "The Teaching of Amenophis, The Son of Kanakht."¹ In this religion and morality are the chief motives. The "tranquil" benevolent and contented man is contrasted with the noisy, grasping, and unscrupulous one, much to the latter's detriment. In the Preface it is clear that morality was the art of civilised living, evidence of the existence of a social conscience:-

"Beginning of teaching how to live,
 guidance for welfare;
 every direction for intercourse with elders,
 rules for intercourse with courtiers;
 knowledge how to answer a statement to its pronouncer,
 and return a report to one that has sent him;
 to direct him to the path of life,
 and make him prosper upon earth;
 to let his heart enter its shrine,
 and steer it clear of evil;
 to save him from the mouth of others;
 praises in the mouth of men."

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1. See pp. 191 ff. The Journal of Egyptian Archaeology.
 Vol XII 1926. Papyrus B.M. 10474 by Prof. F.Ll.Griffith.

Chapter XXX Epilogue.

"See for thyself these thirty chapters;

they please, they educate:

they are the foremost of all books;

they instruct the ignorant.

If they be read before the ignorant,

he will be cured (?) by reason of them.

Fill thyself with them; put them in thy heart,

and be an interpreter of them - explaining

as a teacher,

As to a scribe who is experienced in his office,

he will find himself worthy (?) to be a courtier."

In ancient Egypt there was no clear separation between sacred and secular education, or sacred and secular offices. Hori is not only "Groom of his majesty, who accompanieth the sovereign and traineth the king's foals," but "Singer of Bast in the Field of God," and "A teacher of subordinates in the office of books," who prides himself on his ability to expound the classics as well as his facility in solving mathematical problems. The priestly teachers of ancient Egypt did not resemble

their brethren in the monastic institutions of Europe of a later date. The Egyptian priests were bureaucrats first. In Saxon England, for example, the administration of the Church was taken as a model for the State administration, whereas in Egypt the reverse was the case, for the fabric of the State left its impression upon religion, and its forms and institutions passed over into the world of the gods. Pharaoh was head of both Church and State alike, and tuition at the hands of an official who happened also to be a priest was as bureaucratic, practical and worldly as any other.

B.THE GRAECO-ROMAN PERIOD.I.

In 323 B.C. a microbe¹ had the honour of killing Alexander the Great at the early age of thirty-two, but not before he had founded Alexandria² and thereby prepared a place for Ptolemy, the son of Lagos, who with a native sagacity he continued to display throughout his later life, chose the rich province of Egypt, rather than compete for the position of regent for the whole empire; made the city of Alexander his headquarters, and even succeeded in securing the body of the illustrious conqueror, thus endowing the city with a shrine that appealed to the whole of the civilised world, and providing himself and his descendants with the attributes of legal executorship, which made the acceptance of the Ptolemaic dynasty appear to be no more than a continuance of the policy of the great Alexander himself.

1. With apologies to Dean Inge. See p.166 Outspoken Essays. Second Series. Lond. 1922.

2. See p. 228, and p.245 The Alexander Book In Ethiopia. Sir E.A. Wallis Budge. O.U.P. 1933.

The Theban brilliance and culture decayed, - outshone by the lustre of Greek learning of Ptolemaic Alexandria, and weakened by successive foreign invasions. Finally it died, like a fire on which bright sunlight had been playing. Cairo, the town of the tent, was not to become a rival until Arab times, and so Alexandria was to flourish for some considerable time as a great centre of civilisation and culture.

Hieratic^{writing} in Ptolemaic times was superseded by the more cursive demotic, which among the Egyptians, was used almost exclusively for all but religious purposes. Then, when Christianity was introduced, demotic gave way to Coptic, which, strangely enough, was a return to the old hieroglyphic language, only written in Greek characters, with some half a dozen letters borrowed from demotic to represent sounds not known in Greek.

The native Egyptian did not learn Greek, and we find no mention of Egyptians as members of the Museum. The Ptolemies¹ realised that they could never hold Upper-

1. It is significant that except ~~for~~ **for** Evergetes, none of the Ptolemies seem to have visited Thebes.

Egypt until the sullen defiance of the priests had been overcome. The old Egyptian Monarchy had been dependent on the priesthood, so the Ptolemies very ingeniously gave a national character to the cult of Osiris as practised at Abydos, and blended with it the Hellenistic elements of the Serapis cult. The compound that resulted pleased the priests who were eager for temporal power, and proved acceptable to the Jews,¹ Syrians, and Phoenicians, who were being encouraged at this time to settle in Egypt. To secure the support of

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1. W.M. Flinders Petrie in "Status of the Jews in Egypt."
Arthur Davis Memorial Lecture April 30. 1922:-

" The general conclusion appears that Egypt from its position and fertility has always attracted the Jew. It has had therefore a notable influence on the mental attitude, especially in the Alexandrian school of the Wisdom literature and Philo. The Status of the Jewish population has been fully equal to that of the other important races, Native and Greek especially in the great Jewish occupation under the Ptolemies, which was perhaps the age of the greatest political power in Jewish history."

the priests, or even their passive acquiescence, was a stroke of genius, for they were the national leaders, and it was they who had stirred up trouble against the Persians, and used the temple for revolutionary meetings. But the hellenisation of the native never took place. On the other hand the Ptolemies never went 'native'; their education and outlook remained Greek. And when the Romans came they simply employed the Greeks or Greek-speaking inhabitants to do their work for them. As Prof. Rostovtzeff¹ pointedly remarks, what the Ptolemies (and Romans, and other 'foreigners') did was to use Egypt and all that was in it as a foundation for "their edifice, in which all the upper storeys were for the dwelling of strangers, and the cellars reserved for the natives." A people that formerly had served their own kings, and worshipped their own gods, had now become the servants of

1. Vol. VII. Ch. IV. p.153. Cambridge Ancient Hist.

strangers and foreigners. The traditional apathy of the 'fellah' had made this possible, for then as now, only a very high or a very low Nile, could make any impression on him.¹

1. We might possibly include religion and taxation.

II.

It is almost certain that the first steps to found both the Museum and the Library - were taken by Soter, C.290 B.C., who was aided and guided by Demetrius of Phaleron. The motive that actuated Soter was probably a desire to have great thinkers and writers around him so that some of their glory would reflect on him.¹ Mahaffy² points out that he was not interested in the spread of any special doctrine, and that he cared nothing about the differences of the Athenian schools. Exact information concerning the history of the Museum is scanty and obscure. This is all that Strabo³ has to say about

1. Similar reasons prompted Louis XIV to cast covetous eyes upon the great Cotton Collection, and offer £60,000 for it. Likewise Euergetes son of Ptolemy II, who issued orders that all travellers disembarking at Alexandria should deposit their books at the Library, receiving in exchange an official copy later. Scholarship owes much to bibliomania!
2. p.94. The Empire Of The Ptolemies. Lond. 1895.
3. p.229 Bk. XVII C 158. Vol III. The Geography Of Strabo. Trans. H.C. Hamilton & W. Falconer. 3 Vols. Lond 1854.

it, "The Museum is a part of the palaces. It has a public walk and a place furnished with seats, and a large hall, in which the men of learning, who belong to the Museum, take their common meal. This community possesses also property in common; and a priest, formerly appointed by the kings, but at present by Caesar, presides over the Museum."

This suggests an institution similar to a college at one of the older universities of England.¹ The head of the college was in 'holy orders' for he was a priest, and nominated by the king. Like All Souls Oxford, the Museum seems to have consisted of Fellows rather than undergraduates. They dined in 'Hall' and at first they did not waste their time teaching, but quietly pursued their researches. This was as it should be, but gradually the crowd of young men that besieged the Museum craving for instruction, could no longer be ignored, so some of the fellows had to teach.

Nevertheless, Timon's gibe that they were so many 'scribblers on papyrus ceaselessly wrangling in the bird-

1. It is highly probable that the Museum was modelled on the Athenian Lyceum or Academy.

ceep of the Muses,' was not altogether justified¹ for they did some excellent work in textual criticism, and in bibliography. Their concern was the arrangement of the text, the settlement of accents, the theory of forms, syntax, annotations, authenticity and integrity of the text, and a criticism of the author and his work. This led to the rise of the sciences of grammar, prosody, lexicography. and archaeology. It was a great period of editing, and bears much resemblance to the editing of the English classics in the eighteenth century, when the texts of Chaucer, Shakespeare, and Milton had justice done to them at the hands of Tyrwhitt, Theobald, Steevens, Johnson, Malone, and Hume. The Alexandrians deserve credit for having undertaken this work at such an early date - work which is only now being completed and perfected. However, original work was done in mathematics medicine and natural history although the artificial atmosphere of textual and literary criticism chilled rather than fostered original

1. Antigonus said of Timon that he was too fond of eating and drinking to write his tragedies, and so it was not surprising Philadelphus did not make him a professor. Timon had his revenge in a poem that described them thus. (See Athenaeus lib.1.19).

genius. Scholarship was more highly valued than originality, literary craftsmanship was imitative rather than creative. And today, we are glad that it was so.

Strabo has no mention of the Library, but Diodorus states that he used the Court Journals at Alexandria. Probably it was a part of the Museum. There were six great librarians, Zenodotus of Ephesus, Apollonius, Eratosthenes, Aristophanes of Byzantium, Apollonius, and Aristarchus of Samothrace. Four of these were philologists.

The first Librarian was Zenodotus, an able scholar, and an expert textual critic. He was appointed chief Librarian by Philadelphus, and given two assistants, - Alexander the Aetolian, and Lycophron, to help him to classify the books. He established many texts, especially the text of Homer, which he edited, rejecting many interpolated verses. The Catalogue, called Pinakes, was published by his successor Cal^limachus. The books were arranged under 120 heads or classes. It was a stupendous work, and contained a biographical guide to the authors. It is to these men that we owe much of the reliable information we have concerning the old Greek poets and their works. Of their critical work, that of Theocritus is about the only one to survive.

Philadelphus¹ also founded a sister, or rather a daughter library² in the Sarapieion of Rhakotis.³ This may have been an annex to the bigger library, or possibly it housed the duplicates of the more

1. See Athenaeus. V.36. Of Philadelphus. "And concerning the number of his books, and the way in which he furnished his libraries, and the way he collected treasures for this Museum, why need I even speak, since they are in all men's memories?"

2. Athenaeus. 1.4. states that Philadelphus purchased the library of Neleus, who had acquired it from Theophrastus (Aristotle's favourite pupil) - who had received it from his illustrious master

3. Sharpe, S. Hist. of Egypt. 2 vols. Lond 1905, in Vol 1. p.318 quoting Josephus, states that the library at this time held 200,000 rolls which however, could hardly have been more than 10,000 printed volumes. However, it is probable that they were all Greek, for the Greeks did not study foreign languages, and considered the Egyptian writings barbarous.

valuable works. We see the beginnings of the science of bibliography in the lists of difficult words and glossaries that were compiled. Philetas of Kos¹ was not only a skilled grammarian, and one of the greatest masters of the modern elegy, - he was also the compiler of the first lexicon of strange terms. Didymus was happily nicknamed 'Brazen-Guts' because of his prodigious literary output. He is said to have composed 3,500 rolls.

Manetho was commissioned by Philadelphus to render the history of Ancient Egypt into Greek. He was an Egyptian priest of Heliopolis, and for his history copied hieroglyphic inscriptions. What remains of it now, is little more than a list of kings' names, and modern researches have shown that he was extraordinarily accurate. Josephus did not hesitate to quote him. Manetho also composed a long astrological poem. It is written in Greek. Into Manetho's chronological framework we have fitted our modern knowledge of the Ancient Egyptian

1. After being tutor to Philadelphus, he left the Court and went to Kos and Athens, driven, it is said, by the jealousies of these learned men.

dynasties. Another Egyptian who wrote in Greek on astronomical subjects was Petosiris, a friend of Manetho. Pliny quotes his works (lib.II.) Books were produced on a scale hitherto unknown. Educated slaves were employed as scribes. Learning had become a power insomuch as it might lead to royal recognition and favour; or at least command a hearing. There were two publics to cater for (or pander to?), the highly critical and educated class, and the masses who could read, and seemingly possessed the insatiable desire and capacity for being amused. It was politic either to flatter the royal patron, or give the crowd value for their money. We do not find much poetry, except poems on scientific subjects such as astronomy or geography, but tragedy was always in demand, and so was comedy, but without a chorus. Of the latter, those of Menander¹ (died C. 292 B.C.) were the best liked. Most of the plays of this witty and elegant 'rake' were good

1. For a very fair and reasonable estimate of Menander, see Art. by Prof. Gilbert Murray. pp.9 -34. New Chapters In The Hist. Of Greek Lit. 2nd Series. J.U. Powell & E.A. Barber. Oxford. 1929.

acting stuff, and some of his lines have become proverbial.¹ The Idyll was in favour, and in the hands of Callimachus (of Cyrene) and Theocritus (of Syracuse) it reached perfection. The craftsmanship of the former was flawless, but his Idylls lacked that warmth of life which the pastoral Idylls of Theocritus had. "In his hands even an official ode in praise of Ptolemy, or the talk of the vulgar women at the show in Alexandria, became poetry --- Alone of the Alexandrians he has become a classic, because alone of the Alexandrians, he could throw off all that Alexandria stood for and get back to Nature."²

On the whole the Alexandrians favoured style

1. e.g. "Whom the gods love dies young."

"Evil communications corrupt good manners." (St. Paul quoting a pagan author! 1 Cor. XV. 33.)

"Conscience makes cowards of the bravest."

"We live not as we will, but as we can." "But you are taking arms, with no good reason, Against a sea of troubles." (See Athenaeus XIII. c.8.)

Menander refused to leave Athens and come to Alexandria, in spite of the fact that Philadelphus sent a ship to Athens specially to fetch him.

2. p.222. Hellenistic Civilisation. W.W. Tarn. Lond.1927.

rather than substance. Even in history the tendency was to write for effect. Yet Ptolemy I in using official documents, and his own recollections for his Life of Alexander, was doing something that was not done in England until Walton¹ began his Lives.

Hecataeus of Abdera wrote on Egypt, but Ptolemaic Egypt had no historian of eminence.

It is only necessary to mention Euclid. He once told Ptolemy I that there was no 'royal road' to Geometry. How true a saying this was, generations of schoolboys can testify. Euclid set forth the results of his mathematical philosophy, or should we say philosophical mathematics, with such economy of language that later scholars have not been able to express what he did, and employ fewer words.

No one who has watched the 'fellaheen' at work can fail to be reminded of Archimedes. We know how he discovered specific gravity while in his bath, and how

1. Perhaps, in this connexion, we should not exclude Bale and Pits. See former's 3rd ed. Scriptorum Illustrum Maioris Brytanniae Catalogus. Basle. 1559 and the latter's Relationum Historicarum de Rebus Anglicis. Paris. 1619. Part 11. 'De Illustribus Angliae Scriptoribus.'

he ran home naked crying, "Eureka, I have found it!"

Such an episode endears the old thinker to us, but in Egypt we remember him as the inventor of the Archimidean screw, a contrivance for lifting water from a lower level to a higher one. Another great thinker, philosopher, and scholar, who worked at Alexandria, was Eratosthenes, who published works on mathematics, ^{geography} philosophy, and the history of comedy; wrote poetry; calculated the earth's circumference almost correctly,¹ and argued that it was possible to sail from Spain round the Cape to India. Strangely enough, he also chose to write a history of Egypt in order to correct Manetho. It has been valuable to modern Egyptologists, because it gives a list of the Theban kings without dividing them into dynasties as

1. His figure was 24662 miles. By means of his Theory of Shadows, he discovered that the earth was a sphere, and then by measuring the distance between two places he arrived at the length of a degree of latitude, which he found to be 700 stadia.

Manetho had done.

The book trade flourished; ship loads of rolls came and went. The Author¹ who cried forth, "of making many books there is no end; and much study is a weariness of the flesh," was himself probably an Alexandrian. The use of papyrus, which was cheap, the Greeks learnt from the Egyptians. A single roll or a 'book' cost from two to five denarii, (i.e. 4/- to 10/-). Each roll had its 'shelf mark' and title inscribed on a little ticket attached by a length of string to it. Before this, books had been written on linen, wax, bark, or leaves of trees. The knowledge of papyrus revolutionised the 'making of books,' and provided a stimulant which was more effective than the patronage of the sovereign. Another incentive to literary production in Alexandria was the belief prevalent there, that Athens was becoming decadent. From what has just been said, it must not be thought that every individual could afford to buy books. This was so far from being the case, that public readings were instituted to meet the popular demand for knowledge. Philadelphus employed Hermophantus

1. Ecclesiastes. X11. 12.

to read Homer, and Hegesias to read Herodotus. Painting was popular, and received royal encouragement. Helena, Timon's sister, was quite a capable painter.

In medicine and surgery, no advance on work done by Hippocrates, was made for over a century, when Erasistratus, and Herophilus began dissecting human bodies in Alexandria.¹ The usual outcry was raised that they were cutting human beings open before they were dead. The work of these two, and their contributions to medical knowledge, can hardly be overestimated. The duodenum was so-named by Herophilus, as a result of his anatomical observations. He was the first to note the difference between the two coats of the eye, and to describe the lens. He noted angina pectoris which he called "palsy of the heart." A great investigator of the brain, he distinguished between motor and sensory nerves. Erasistratus was a great experimenter. One of his experiments was to imprison a bird in a jar and weigh it. Then after an interval, during which no food was given to

1. Most of the anatomical parts of Galen's works, was borrowed from the writings of these two enterprising experts on anatomy.

the unfortunate bird, it was weighed again. He found that there was a great loss of weight. He knew of the function of the epiglottis, and described correctly its action in preventing food and drink into the windpipe. The anatomy of the brain was another of his favourite studies. Hegetor was another great student of anatomy; he described the dislocation of the hip much as our modern text-books do. These men were 'quacks' in the sense that they had no academic qualifications, but in their time there were no State diplomas, and it was due to their brilliant work that any standard at all was preserved.¹ We realise how much better the work of modern surgeons is, but we should remember that these men had been there before them, and had spoken of the same things in almost similar language.

The family of the Ptolemies are now remembered chiefly for the persistence and consistency of their

1. See p.237 The Legacy of Greece. R.W. Livingstone. Oxford 1921. Section on Medicine by Charles Singer. For a handlist of persons, periods and events in the history of medicine, see Chronologia Medica. D'Arcy Power & C.J.S. Thompson. Lond 1923.

patronage of arts and letters. Even Ptolemy Philopator, who during his reign of ~~seventeen~~ years, forfeited the loyalty of his subjects, as well as the respect of his mistresses, persisted in his patronage of learning. To his reign belong names like Aristarchus the Critic,¹ Timaeus² the 'armchair' historian, and Nicander the science poet, who used poetry as a vehicle for pharmaceutical discourses. Greater still, was Hipparchus, the father of mathematical astronomy, who was destined to have no rival of equal fame for fifteen centuries. By means of an instrument having a plane parallel to the equator, and gnomon parallel to the earth's pole, he succeeded in making observations which proved the year to be less than $365\frac{1}{4}$ days, and that the four quarters were unequal. He found that the sidereal year was not the same length as the ordinary year measured by the seasons.

Euergetes II, though given to low pleasures, had

1. Tutor of Euergetes.

2. See Athanaeus XII.

a love of learning, and was himself an author.¹ He was a great builder of temples, and his liking for Greek learning was probably fostered by acquaintance with Aristarchus and his critical methods.

Mahaffy² points out that the anecdote told by Galen concerning the conflict for pre-eminence in libraries between Alexandria and Pergamum, and the means taken to secure books from ships may refer to this Euergetes and not to the earlier one. Euergetes was jealous of Eumenes of Pergamum, and so forbade the export of papyrus. The result was that books at Pergamum were written on 'charta pergamena' or parchment. We read that during his reign the Brucheum library was composed of 490,000 rolls or volumes, and that in the Serapeum 42,800 volumes were housed. His persecution of the Alexandrians was not directed at the literary men, but a large number of men of letters had sided with Philometor against him in the war. The result was that learned men

1. Athenaeus II 84. "But Ptolemy Euergetes the king of Egypt being one of the pupils of Aristarchus, the grammarian, in the second book of his Commentaries writes this - - - -" C. D. Yonge, Trans. Lond. 1854.

2. p. 389 The Empire Of The Ptolemies. Lond. 1895.

left Alexandria; the study of mathematics declined, and "a rejuvenation of all culture was again brought about in the reign of the Seventh Ptolemy (it should be ninth) who ruled over Egypt, the king who received from the Alexandrians appropriately the name of Malefactor. (i.e. Kakergetes, Euergetes = Benefactor). For he murdered many of the Alexandrians; not a few he sent into exile, and filled the islands and towns with men who had grown up with his brother - philologists, philosophers, mathematicians, painters, athletic trainers, physicians, and many other men of skill in their profession. And so they, reduced by poverty to teaching what they knew, instructed many distinguished men."¹ The results were very similar to those produced by the capture of Constantinople in 1453 by Mahomet II.

When Diodorus visited Egypt (c. 60 B.C.) the city was more native than Hellenistic, for he reports² that ~~some~~ "a certain Romane happening to kill a Cat, all the people ran suddainly to his lodging, and could not be

1. Athenaeus IV, 184.

2. Diodorus Siculus Hist. II Ch. 111. p.57. Trans. Cogan Lond. 1653.

kept by the Princes of the blood, expressly sent thither for that effect, nor by the fear of the Romanes, from cutting him in pieces, although he had killed the Cat against his Will." Of course, we should bear in mind the possibility of the mob deliberately choosing to be 'native' for the nonce, so that their action might appear to have some justification.

The controversy concerning the burning of the Library, has by now almost died out, but there was a time when it raged fiercely. Then Caesar, defending himself against Achillas, was forced to set fire to all the galleys he could not guard, the naval arsenal caught fire, and also the famous Library which was situated near it. Sharpe¹ refers to it in sorrowful and disapproving terms, "Caesar the historian of his own greatest deeds, could have told us of the pain with which he saw the flame rise from the rolls of dry papyrus, and of the trouble which he took to quench the fire; but his guilty silence leads us to believe that he found the burning pile an useful flank to the line of walls that

1. p. 45. Vol II. The Hist Of Egypt. Lond. 1905.

his little body of troops had to guard, and we must fear that the feelings of the scholar were for the time lost in those of the soldier."

John Ogilby¹ refers to the burning as "a dire and irreparable mischance," at which Caesar, though it came not by his fault alone, was so much asham'd, that afterwards in his third Book of the Civil Wars he neither maketh mention of it himself, nor the Roman Consul Hirtius: But Plutarch,² Dio, Livy, and Seneca, have not omitted it, of which the last thus writes: Let another commend this burning Stratagem, like Livy, who said, that it was a work becoming the most Excellent, Wise and Provident Kings. And Ammianus pathetically: Among all the Buildings, the Serapeum had the pre-eminence, wherein was that invaluable Library, containing all antient Records of Memorable Transactions in seven hundred thousand Books, by the diligence of the Ptolemies, Kings

1. p. 58. Vol 1. English Atlas. Lond 1670.

2. "The second danger he had, was, seeing his enemies came to take his ships from him, he was driven to repulse that danger with fire, the which burnt the arsenal where the ships lay, and that notable library of Alexandria withal." Plutarch's Lives, 'Englished By Sir Thomas North.'

of Egypt, gathered together, but in the Wars of Alexandria, and Destruction of the City, burnt by that most Pernicious destroyer Julius Caesar."

Modern scholars are inclined to consider the whole story a fabrication.¹ A heap of books was probably burnt, for the quays must have been littered with books from the various ships. Strabo who visited Egypt about twenty-five years after the alleged destruction of the books, does not allude to it, and neither does Mommsen. When Antony gave Cleopatra the library of the City of Pergamum, she caused it to be transferred to the Serapeum at Alexandria, thereby enriching that library to the extent of about 200,000 volumes. Of

1. Weigall p.89. Life & Times Of Cleopatra. Lond. 1923, is of opinion that the silence of contemporary writers concerning the alleged literary catastrophe indicates "That the loss was not great, and, to my mind, puts out of account the statement of later authors that the burning of the entire library occurred on that occasion." Whatever be the truth concerning the fate of this library, we must not forget that the daughter library of the Serapeum remained, and so scholars could continue their work unchecked.

Cleopatra's mental accomplishments, there can be no doubt, - her outlook was definitely Greek, and in presenting this collection of books to the city of Alexandria, she was only being loyal to the literary instinct and tradition of the long line of royal patrons of learning, to which she belonged. The story that she forced Antony to give her this library has no more evidence to support it, than the evil report circulated by Propertius that she was "the harlot queen of incestuous Canopus." It is pleasant to know that the first libraries were in Egypt, and that they were called the "remedy for the diseases of the ^Isoul." The Serapeum library continued to be a great centre of study under the temple until it was wrecked in the reign of Theodosius. This disgraceful pillage was instituted in 389 A.D. by the Christian bishop Theophilus who was on the decree of Theodosius, concerning Pagan monuments.² Of course, there must have been several private libraries in Alexandria at this time. We know that Bishop George, for instance, between 361-363 A.D. had a very fine collection of books mostly historians, rhetoricians,

I.Lit. "Healing-place of the Soul" (Diod.I.49.3.)

2. See Articles 'Alexandria' and 'Libraries' Encyclopaedia Britannica. 11th ed. 1910.

and philosophers of all sects. After he had been murdered Julian tried to save those books. Judging from the knowledge of pagan authors that Clement shows, we should be ready to believe he too, possessed a good and representative library. It is possible that some considerable damage was done to the libraries in 273 A.D. when Aurelian destroyed the Brucheum quarter in his campaign against the merchant rebel Firmus who had rashly assumed the purple. The library at the Caesareum probably disappeared when the temple was converted into a Church of Constantine and sacked in some rioting in 366 A.D.

This brings us to a consideration of the last act of vandalism in connexion with books at Alexandria. In 640 A.D. the city was taken by the Arabs under Amr. He was able to report to his master the caliph Omar that he had captured a city containing 4,000 palaces, 4,000 baths, 12,000 dealers in fresh oil, 12,000 gardeners, 40,000 Jews who paid tribute and 400 theatres and places of amusement.¹

1. These figures must not be taken as being accurate, but at least they must have made Omar realise that Amr had captured a rich prize.

Abulfaragius account of the disposal of the books is as follows, - "John the Grammarian, a famous Peripatetic philosopher, being in Alexandria at the time of its capture, and in high favour with Amr, begged that he would give him the royal library. Amr told him that it was not in his power to grant such a request, but promised to write to the caliph for his consent. Omar, on hearing of the request of his general, is said to have replied that if those books contained the same doctrine with the Koran, they could be of no use, since the Koran contained all necessary truths; but if they contained anything contrary to that book, they ought to be destroyed; and therefore, whatever their contents were, he ordered them to be burnt. Pursuant to this order, they were distributed among the public baths, of which there was a large number in the city, where for six months, they served to supply the fires." A good story and well told. Omar's reply is quite in keeping with what we know of his character, and the question is whether the silence of native and contemporary writers is not more valuable as evidence, than the testimony of a stranger who wrote six hundred years later. In any case, we should hardly expect a sufficient quantity of rolls to have survived previous burnings, to have fed

the fires at the city baths for six months.

The Museum ceased to exist in the third century, for the grants from the royal coffers ceased, and the philosophers had to teach and conduct propaganda to keep their school alive. Doubtless, the foundation by Christian teachers of the second century, of the Catechetical School at Alexandria, with teachers like Clement and Origen, assisted its decline. Records of the activity of members of the Museum in various parts of Egypt, have been found. "On one occasion a fellow of the Museum is found acting as strategos in the Arsinoite nome, which would certainly be incompatible with the performance of regular teaching work at Alexandria during the three years of the strategia."¹

1. p.252. A Hist. Of Egypt Under Roman Rule. J. Grafton Milne. 3rd ed. Lond. 1924.

III.

"In almost no other field of Egyptian life have the papyri been so disappointing as in that of education."¹ The Oxyrhynchus and the Zenon Papyri,² are a rich quarry for wills, contracts, accounts, and matters concerning the organisation and administration of a big estate, but they are singularly deficient in letters that might shed light on school life. In fact, out of the one thousand or so Zenon papyri, there is not a single purely literary text, - the two epitaphs for a dog which had saved Zenon's life being the nearest approach to such.

1. Charles Henry Oldfather, p.62. The Greek Literary Texts From Greco-Roman Egypt. Madison 1923.

2. See The Oxyrhynchus Papyri. 17 Vols. B.P. Grenfell & A. S. Hunt, Oxford. 1898-1927. See also Chaps. I & II. Light From Ancient Letters. H.G. Meecham. Lond. 1923. Zenon Papyri In The University Of Michigan Collection. Campbell Cowan Edgar. U.M.P. 1931. Zenon Papyri (Catalogue Général Des Antiquités Egyptiennes Du Musée Du Caire Nos 59001-59800) 4 Vols. C.C. Edgar. Cairo 1925-1931. The Story of Zenon and Apollonius pp. 92 ff. The Past Of Greece & Rome Michael I. Rostovtzeff. Yale Univ. Press 1932. A Large Estate In Egypt In The Third Century B.C. M. Rostovtzeff Madison 1922. pp. 125 - 134. Commentary by C.C. Edgar, New Chapters In The Hist. Of Greek Lit. J.V. Powell & E.A. Barber, 2nd Series Oxford 1929.

Pliny¹ states that papyrus was not used for making paper until the time of Alexander the Great. As a matter of fact, it was used in Egypt from the earliest times. The Papyrus Prisse at Paris dates from 2500 B.C. or earlier. The dry climate of Egypt was ideal for the preservation of the papyri in the tombs. The method² of making papyri was to remove the pith and then slice the pith stalks in the direction of their length. These were placed on a flat surface, and similar slices arranged crosswise, the whole being moistened, probably with some kind of glue and then pressed before being exposed to the sun to dry. The different sheets were then joined together with paste, but usually not more than twenty to a roll. The width

1. Bk 13. Ch. XI. "ther was no use at all (saith he) of paper: but men used to write in Date leaves first, and afterwards in the rinds and barks of certaine trees. Then in process of time they began to register publicke records in rols and sheets of lead: and sonne after private persons set down their own affaires in linnen bookes, or els in tables covered with waxe." Philemon Holland's trans. Lond. 1601.

2. See Pliny 13. XII. He ascribes glutinous property to the "cleare water of Nilus," "for the fattie and muddie liquor thereof serveth instead of glew."

varied; the early Egyptian ones being about six inches, but later they were increased to nine, eleven, or even fourteen inches. The early Greek papyri were usually nine to ten inches in width. The Greeks called the papyrus "the reed of Egypt." It was rather expensive, - two sheets cost one drachma and two obols each, (about a shilling). About the middle of the tenth century, the manufacture of papyrus in Egypt ceased, thereby fulfilling the prophecy of Isaiah¹ that, "the paper reeds by the brooks, by the mouth of the brooks, and everything sown by the brooks, shall wither, be driven away, and be no more." Papyrus is found today in the Sudan, in Palestine by "the waters of Merom," (Lake Huleh) and Lake Tiberias, and in Italy on the shores of Lake Trasimeno.

Ibn Haukal in the tenth Century saw the papyrus plant growing very luxuriantly in Sicily, in the shallows of the Papireto² stream. This stream dried up c. 1591,

1. XIX, 7.

2. Hence its name and modern paper. Cf. also the hieratic byblus which has survived in 'Bible' or book. In modern Arabic the same thing obtains, - waraka meaning paper (for writing on) or a leaf, - leaves of trees being used at one time as writing material. Even postage stamps are known in Arabic as 'wara-bosta.'

but tourists in Sicily are still offered 'home-made' papyri as curios.¹

Papyrus was used in the schools, but it was rather expensive. Potsherds, - tiles, and tablets were in more general use, just as the slate was in our time. However, when a papyrus is found with writing on both sides, and if the orthography leaves much to be desired, then it is reasonable to regard it as the work of a schoolboy. Texts on ostraca and tablets almost certainly represent schoolboy efforts. Votes were recorded in Athens on fragments of broken vases,² while it was a general custom in Egypt to use potsherds for keeping accounts. They were popular as writing material in the Sixth Century B.C. Of course, the texts on ostraca are shorter than those on papyrus, because of the smaller size of the former. The great majority of the

1. See Ch. I generally, and particularly pp. 27-28 Light From The Ancient East. Trans. 1927 by L.R.M. Strachan of Licht Vom Osten. Adolph Deissmann Tübingen 1923.

2. Hence the word 'ostraca.' If a sufficient number of Votes were recorded against an undesirable citizen, he was exiled, or ostracised for a term of ten years, (Later reduced to five).

ostraca are tax receipts. The well-to-do considered it beneath their dignity to use potsherds, and it is related that Cleanthes, the Stoic, used ostraca and leather because he was too poor to buy papyrus.

Tiles were used by both Greeks and Romans for educational purposes. What commended the employment of ostraca was cheapness, and the same quality of cheapness combined with an even greater degree of utility and convenience, brought the tablet into general use. Wooden tablets had been used in remote times. Those of the ancient Egyptians have already been referred to in the preceeding section. One of the earliest specimens of a wooden tablet with Greek writing on it, in ink, is in the British Museum (5849 C). It records a money transaction in the reign of Ptolemy Philadelphus. Another British Museum tablet (Add. MS. 33,293) is a small wooden board painted white with lines 273-285 Iliad iii inscribed on it, was found in Egypt. This tablet¹ is

1. Cf. Bodleian MS. Gr. class. a.1. Sheet 9. (P). Iliad ii. v 843-77. on papyrus. Collation and description by Prof. Sayce pp. 24 ff. Hawara, Biahmu And Arsinoe. W.M.F. Petrie. Lond. 1889.

interesting because the words are marked off, and the syllables indicated by accents, presumably for the benefit of young scholars.

But as a general rule, tablets were coated with wax.¹ They "were used for literary composition, school exercises, accounts, or rough memoranda. They were sometimes fitted with slings for suspension. Two or more put together, and held together by rings acting as hinges, formed a candex or codex. Thus Seneca, De brev. vit. 13: Plurium tabularum contextus caudex apud antiquos vocabatur, unde publicae tabulae codices dicuntur."² These waxed tablets were used by schoolboys where slates would be nowadays.³

Metrotyme, the mother of Kottalos, a scapegrace schoolboy, complains bitterly to the schoolmaster saying,

1. See Plate XC Atlas Of Classical Antiquities. Th. Schreiber. Edited for English Use by W.C. Anderson. Lond. 1895.

Also. Handbook Of Greek And Latin Palaeography. Edward Maunde Thompson. Lond. 1893.

2. Op. cit. p. 20.

3. Also used for legal purposes, especially in the case of Wills. "The Will" Charicles, W.A. Becker, Trans. Frederick Metcalfe. Lond. 1845. Nothing could be easier than to change the letters on a wax tablet. In fact it was only for 'printing' that paper and parchment were used. For letter-writing, accounts, marriage settlements, etc. the tablet was in general use. For a fine photographic reproduction of one of the rare texts on linen See Egyptian Letters To The Dead. A.H. Gardiner & Kurt Sethe. Lond. 1928.

"His wretched writing-tablet, which I bother myself waxing every month, lies neglected before the inner post of his bed. He scowls at it as if it were Hades, and never writes anything rightly on it but scrapes all the wax off."¹ These tablets² were thin sheets of close-grained wood such as beech or box having a raised border or frame.³ Into the sunk panel, melted wax was run. The colour of the wax was black, but a red⁴ colour was sometimes used. A stylus was used for writing. This was a metal pin six to ten inches long with a sharp point and a blunt end or knob for erasing.⁵ When the wax was scratched

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1. The Mimes Of Herondas. No. III The School-Master.
 2. Hygienically they must have been superior to the slate. It is interesting to note that fish sales in the Market at Rouen were recorded until quite recently on waxed tablets. Even today, the only accounts kept by the landlords of certain inns in fishing villages in Great Britain are those jotted down on a slate, which hangs usually behind the door.
 3. The border was part of the tablet - not a separate strip fastened on. Bodleian Gr. Inscr. 4. S.C. 30826 has a border of 2 cms. on one side and a narrower one on the other which is fluted. Might this side not be for the 'fair-copy'?
 4. See Ancient Egypt. Sept. 1927. Waxed Tablets Of The Third Cent. B.C. H.I. Bell. followed by Petrie's ingenious explanation, which Bell is reluctant to accept. These are of special interest as being the earliest examples of such tablets yet found in Egypt, and also because in two cases the wax is coloured red, not the usual black.
 5. Hence 'vertere stilum' to correct.

the writing stood out clear against the black (or red) background. Schoolboys usually had a single tablet, but quintuplices or more were not uncommon, being carried, when not in use by means of a strap which had a handle. The stilus was either stuck in the straps or carried in a separate case. The most perfect Greek waxed tablets were found in Egypt, and are now in the British Museum (Add. MS. 33,270 3rd Cent. A.D.) They are a book of seven tablets measuring seven by nine inches, coated on both sides with black wax, the two covers being waxed on the inner side.¹ The contents are shorthand inscriptions repeated, as if they were exercises. British Museum Add. MS. 33,368 represents a 3rd Cent. A.D. schoolboy exercises in grammar. The boy has a caricature, - presumably of his teacher. A set of five tablets in New York have verses in the style

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1. Another good example is Bodleian. Lat. inser. 10-11. Black wax diptych; deed of appointment of guardian to a woman made by Q. Aemilius Saturninus - praefect of Egypt. Written 199 A.D. Presented by Prof. Sayce May 1919. Has three chamois leather 'hinges' with tags for fastening when shut.

of Menander inscribed by the master and copied by the pupil.¹

Herodotus² described how Demaratus ingeniously used a wax tablet to convey information to the Greeks of the impending invasion of their country by Xerxes. "Having taken a folding tablet, he scraped off the wax, and then wrote the king's intention on the wood of the tablet; and having done this, he melted the ~~wax~~ again over the writing, in order that the tablet, being carried with nothing written on it, might occasion him no trouble from the guards on the road."

The lack of adequate 'documentary' evidence of a kind that would shed light on the curriculum of the Graeco-Roman schools in Egypt, has already been noted. We

1. See pp. 176 ff. Melanges Nicole. Jules Nicole Geneva 1905. Where Edgar J. Goodspeed reviews Greek Documents in the Museum Of New York Historical Society. Nos, 534, 535 are described as tablets used by the Egyptian children in learning to write the Greek language when first introduced by the Ptolemies. G. Matha Queen's College, Oxford, informs me that he intends to publish amid others, a demotic ostrakon, which contains the months of the year set as a schoolboy exercise (Early Ptolemaic).
2. VII. 239.

We must, therefore, attempt to describe those schools according to the evidence available, avoiding, as far as possible, the ever-present temptation of employing phraseology applicable only to the schools of Greece and Rome.¹ The elementary schools were probably of the type of day school common in Greece - but it is almost certain that there were differences because in Egypt both the poor Greeks and the Egyptian masses were illiterate.

C.H. Oldfather² working on the very justifiable assumption that texts on ostraca and tablets, as well as papyri written on both recto and verso especially if the orthography leaves much to be desired, represent schoolboy efforts, has tabulated the texts in use in Graeco-Roman

1. For a useful account of Greek and Roman education, see Source Book Of The History Of Education For The Greek And Roman Period. Paul Monroe. Norwood. Mass U.S.A. 1901. By the same author: A Brief Course In The History Of Education. Norwood. Mass. U.S.A. 1907.
2. The Greek Literary Texts From Greco-Roman Egypt. University of Wisconsin Studies In The Social Sciences And History. No, 9. Madison. 1923.

schools in Egypt. It is probable that documents from Government archives with blank versos, would after a certain period be relegated to the schools. Besides, it is extremely unlikely that any city library would purchase any copy with the text written on the verso as well. A good example of this is a papyrus,¹ the recto of which contains a copy of several official letters dated 288 - 289 A.D. On the verso are several grammatical rules written in a rude schoolboy hand of late third or early fourth century. These rules are of an elementary character, and often agree verbatim with those found in ancient grammarians whose works are extant. Naturally there are several mistakes in spelling.

The curriculum was not a light one, and included long lists of surgical terms, as well as problems in Mathematics. There is little evidence of Herodotus, and Xenophon, probably because commentaries were preferred to the copying of passages from the historians. The selecting was done by the teachers, but a purely Greek tradition was maintained. An author's fate thus depended on the taste

1. XXI. The Amherst Papyri. Part II. B.P. Grenfell & A.S. Hunt. O.U.P. 1901.

of the teacher, who would transfer his preference to his pupils - who in their turn, set the public demand. Thus "plays for which there was no call would no longer be published, and so works without the imprimatur of the schools would soon be permanently lost."¹ Probably the schools had their own libraries.

Specimens of the following have come down to us from the schools in 'documentary' form. -

Anthology and Epigram represented by

Comedy	Hesiod
Sayings of Diogenes	Homer
Epic Poetry	Leonidas
Pseudo-Epicharmus	Theognis

Euripides (a great deal).

Aristotle	History.
Babrius	Homer
Biography	Hyperides
Calendar of the Saite Nome	Letter of Trajan
Callimachus	Lyric Poetry
Definitions of Surgical Terms	Mathematics
Demosthenes	Menander
Comedy	Mime
Epic Poetry	Oratory
Epigram	Philemon
Eudoxus	Posidippus
Euripides	Posidippus of Thebes
Fable	Romance
Grammatical Rules	Sophocles

TRYPHON.

1. p.75. Oldfather. Greek Literary Texts &c. 1923.

The order of frequency, excluding those that do not appear often, is as follows:-

Homer, Demosthenes, Epic Poetry, Drams, Medicine, Anthology, History, Oratory, Euripides,¹ Philosophy, Menander, Plato, Epigrams, Thucydides, Aristophanes, Isocrates, Hesiod, Lyric Poetry, Religion, Xenophon, Callimachus, Grammar.

Except by the content it is almost impossible to say whether a text was used in the elementary or the higher education. Examples have survived, of quasi-historical narratives on papyri, and it is feasible to suggest that they represent the composition of more advanced students in the schools of rhetoric.² On the same grounds, Aeschines, Alcaeus, Archilochus, Pindar, Plato, Hippocrates, and Hierocles Stoicus are ascribed as texts for the more advanced classes.

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1. In the Rainer collection at Vienna, is a board which has on one side 23 lines of Euripides' *Phoenissae*, and on the other 53 lines of the lost *Hecate* of Callimachus.
 2. See J.G. Milne. Relics Of Graeco-Egyptian Schools. Vol. 28. Journal Of Hellenistic Studies 1908.

The Greek element in the country was, of course, saturated with Homer. This is well brought out in a letter¹ (~~2nd~~ or ~~3rd~~ Cent. A.D.) from a mother to her son Ptolemaeus, --- "... It grieved me to learn from the daughter of our teacher Diogenes that he had sailed, for I had no anxiety about him, knowing that he intended to look after you to the best of his ability. I took care to send and ask about your health, and learn what you are reading; he said that it was the sixth book and testified at length concerning your attendant.² So my son, I urge both you and your attendant to take care that you go to a suitable teacher." A farm steward in the Fayoum in the third Century A.D. made use of a quotation from Homer to remind a debtor that payment was overdue and would be welcome. Even as late as the sixth century, Dioskoros of Aphrodite, - a scribe of the Thebiad, thought it fitting to introduce an iambic tag into a petition composed for some poor, hardworking villagers who had reason to complain of the oppression

1. Vl. 930. Pap. Oxy. XVll. Vols. (1-2156 pap.) B.P. Grenfell & A.S. Hunt. O.U.P. 1898 - 1927..

2. Generally a slave, who took the boy to and from school.

of certain soldiers.¹

The ostraca described by Dr Milne (J.H.S. 28. 1908.) were probably found in the very spot where a Theban schoolmaster in the second Century A.D. taught his school near a rubbish heap where ample writing material was available. They show how the characters of the alphabet was taught - first in their correct order, and then apart from it. The order of the letters was fixed in the minds of the pupils by associating them with a list of very familiar names. Older examples of the same thing are early first century acrostics,² which recall the modern alphabetical nursery rhyme. In column I, we have in alphabetical order, - "Baker, dyer, fuller, spear-maker, oilman, painter, cobbler, breastplate-maker, shipwright, scraper-maker, armourer, tablet-maker, - - - engraver, glassworker, - - - goldsmith, - - -"

In column II the loss of a garment is narrated, the lines again representing the letters of the alphabet in their order, - "My (garment ?) is lost; violent was he (who took it ?) well-born was he who took it. It was bought

1. See p.254. Hist. Of Egypt. J.G. Milne. 3rd ed. Lond. 1924.

2. No 278 Tebtunis Papyri. II. B.P. Grenfell; A. S. Hunt; E.J. Goodspeed. O.V.P. 1907.

for ten staters. If it had been a cloak I should not have minded. I seek but do not find it. It was taken without cause. He will meet with anger. Just so he took it, my lovely garment. A lion he was who took it, a fool who lost it. It was taken at night. He was a stranger who took it, it was nothing to one like him. I will choke myself, for I am cold. He is indicated to me, for he watches me (?) --- It is winter, there is great cold. How utterly unfortunate was I!"

Other ostraca show exercises in word-building, and the hand of the teacher is seen for the first letter in each line is well and clearly written while the others are clumsy and faint. Prof. Waddell writes,¹ "Greek schoolboys in Egypt had to copy such encouraging headlines as this: "Take pains with your writing," or this, with an added threat: "Take pains, boy, or you'll be flayed." The last word, "flayed" or "skinned alive," is used in a maxim, which may also have been a copybook headline, and is attributed to Menander: "The fellow who hasn't been flayed is not educated," or more exactly, "is not in the way of being educated." After this, it will

1. p.4. The Lighter Side Of The Greek Papyri. 1932.

not surprise you to learn that punishment tasks were also in vogue in ancient times: a recently published ostrakon - - - immortalises the punishment task of a boy who, having mistaken the gender of a noun, had to write out the word accompanied by the gender "masculine," repeated several times."

There are also examples of practice in writing and in formation of numerals. Mathematical ostraca and papyri are rare; Milne describes two of them, - the first a badly spelt list of ordinals from first to twelfth, in a very irregular hand, the second an exercise in weights and measures. A mathematical papyrus consisting of rules for the conversion of amounts stated in one kind of artaba into the corresponding amounts in other kinds, is described by F.G. Kenyon.¹ This papyrus is interesting because it proves that fractions could be expressed in Greek without having unity as a numerator. In a few places a fraction is expressed by writing the denominator above the numerator, e.g. $\frac{\rho\kappa\eta}{\rho}$ 40.

$$\frac{\rho\kappa\eta}{\rho} = \frac{100}{128} ; \text{ cf. } \frac{\iota\alpha}{\beta} = \frac{2}{11} . \kappa\epsilon$$

1. Vol. II. p. 259. (Pap. CCLXV. 1. Century.) Greek Papyri In The British Museum. Lond. 1898.

Kenyon¹ also describes some wax tablets which represent the efforts and methods of village schoolmasters and their pupils. A wooden book of eight tablets (Add. MS. 37533) 10 $\frac{1}{2}$ " x 3 $\frac{3}{4}$ ", with third Cent. A.D. writing, includes. -

- (a) About 207 verbs, but no scientific classification.
- (b) Phonetic classification of the alphabet.
- (c) Series of gnomic questions with their answers.
- (d) Notes on uses of conjunctions.
- (e) A classification of nouns.
- (f) Formulae for use of the various cases with verbs.

(This is exactly the same as that in B.M. Add. MS. 37516, thus showing that this was a general method of teaching.

In B.M. Add. MS. 34186, there is a list of words divided into their roots and suffixes, and also a multiplication table. The writing is that of second Century A.D.

The gnomic poets were used to inculcate sound moral sentiments. A favourite schoolboy exercise was to

1. pp. 29-40. ff. Journal Of Hellenic Studies. Vol. 29. 1909.

transcribe a short tale. One¹ of these that has come down to us describes the triumph of justice over vice. A patricide fleeing to the desert meets his just fate, through the joint instrumentality of a lion and a serpent.

A group of waxed tablets from Sakhkara, now at Paris, are good examples of the type of sentences set as copy containing moral sentiments. The writing is cursive third century A.D. with many errors. In the distichs in iambic trimeters the teacher seems to have distated moral sentiments which he placed in the mouths of mythical personages.

The second stage in the education of a Greek boy as an ephebe was limited to certain privileged classes. Admission to the ranks of ephebes was only granted on receipt of satisfactory evidence of free birth, and parentage on both sides of the ephebic class. Admission to the ranks of the ephebes carried with it the privileges of the gymnasium, which to the Greeks was what cricket and football are to the English schoolboys. The gymnasia were regarded as the public schools of the day, and to have been educated there was considered as the hall-mark of superiority. Music and rhetoric

1. No. LXXXIV. Greek Papyri Series II. Grenfell & Hunt. Oxford 1897.
Prof. Goodspeed identified this tale as a Fable of Aesop.

were taught, but the chief emphasis was placed on athletics. This Hellenistic cult of physical fitness and beauty lasted until a Christian monk discovered "that filthiness is next to godliness, and the morbid psychology of monasticism shattered that harmony of soul which was the highest glory of Hellenism."¹ Extraordinary honours and privileges were showered upon successful athletes,² even a pension being sometimes granted. In a letter³ from the Council of Oxyrhynchus to the Strategus, we read of a man claiming exemption from attendance at the praefect's Court at Alexandria, on the ground that he was a victor in the games, - "In this despatch he explained that he is a victor in the games and exempt from inquiries." We also have a woman asking⁴ that her son Artemon might be admitted to the list of privileged⁵ persons who were wholly or partially exempt

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1. p.97. The Byzantine Servile State In Egypt. H.I.Bell. pp. 86 ff. J.E.A. Vol. 4. 1917.
 2. Americans inform me that this attitude obtains in some of their Universities.
 3. LIX. A.D. 292. Vol. 1. Oxyrhynchus Pap. Grenfell & Hunt. Lond. 1898.
 4. L XXV. The Amherst Pap. Part II. Grenfell & Hunt 1901. See also Oxy. Pap. II. pp. 217 ff. and Nos. 257, 258.
 5. In the ancient Welsh laws of Moelmud & Hywel, it is set out that the learned class had an additional eight acres of tribal land, and could not be levied for war.

from payment of the poll-tax. Her claim is based on assertion that the ancestors of the boy, both on the father's and mother's side were descended from gymasiarchs.

The gymnasium was municipal. In A.D. 115¹ we find mention made of the "sum usually assigned to the public account of the city, by the gymnasium." If, however, the papyri tell us next to nothing of the humanistic education of the gymnasia, there is ample account of athletic activity. There is a proclamation² in A.D. 323 by Dioscorides with reference to an approaching gymnastic display by the youths of Oxyrhynchus, - "Dioscurides, logistes of the Oxyrhynchite nome. The assault at arms by the youths will take place to-morrow, the 24th. Tradition, no less than the distinguished character of the festival, requires that they should do their utmost in the gymnastic display. The spectators will be present at two performances." A letter³ (257. B.C.) which is very illuminating is that of Hierocles to Zenon. It runs as follows, - "If you are well, it would

1. LXX. Amherst Pap. Part II.

2. XLII. Oxyrhynchus Pap. Vol. 1. p. 87.

3. No. 88. Select Papyri. Hunt & Edgar. Lond. 1932.

be excellent. I too am in good health. You wrote to me about Pyrrhus, telling me to train him if I am quite certain of his success, but if not, to avoid incurring useless expense and distracting him from his studies. Now as for my being certain, the gods should know best, but it seems to Ptolemaeus, as far as a man can tell, that Pyrrhus is much better than those now being trained, though they started long before him, and that in a very short time he will be far ahead of them; moreover he is pursuing his other studies as well; and to speak with the god's leave, I hope to see you crowned - - -."

Who was this Pyrrhus? Rostovtzeff¹ suggests he was a slave, but E. Norman Gardiner² does not think so, for poor Greeks were recognised as having a claim on the generosity of great landowners like Apollonius. (Zenon was Apollonius' estate agent, and a landowner himself). Rostovtzeff is of opinion that in the Alexandrian palaestra boys were trained to take part in contests and games organised by the Ptolemies on Greek

1. A Large Estate In Egypt In The Third Century B.C.
 2. pp. 211 ff. Classical Review 1930.

lines. Zenon was bearing the expense of Pyrrhus's training, and even partly or wholly supporting the boy's family. There was also a palaestra in Philadelphia, which was supported by voluntary contributions of the inhabitants,¹ and Zenon was one of its honorary vice-presidents. Why should Zenon take such interest in the palaestrae at Alexandria and Philadelphia and invest in them large sums of money? Zenon was a level-headed business man who has left no evidence consistent with excessive philanthropy nor foolish speculation. Pyrrhus does not appear to have been his relative, so knowing the gambling² propensity inherent in the Greek character we may attribute Zenon's anxiety concerning Pyrrhus's 'form' to the probability that he was betting on the result!

Prof. W.G. Waddell³ states that, "Part of the charm of the Greek papyrus letters is that they are essentially ephemeral and for a single occasion, conveying to one person only information which was of interest to him at that particular time." True, but now that

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1. 364. Papiri della Societa Italiana. G.Vitelli & Others.
 2. See C XXXVlll Oxyrhynchus Pap. for evidence of the popularity of the racecourse.
 3. p.2. The Lighter Side Of The Greek Papyri.

these autograph documents have been edited, translated, and published they have been assured of permanent charm and the information they convey will have a permanent value and interest. This is well illustrated by the oft-quoted letter¹ of that interesting scapegrace school-boy Theon to his father. Just the barest of introductions, - "Theon to Theon his father, greeting," and he proceeds to tell Theon senior exactly what he thinks of him, - "That was a fine trick, not taking me to the city with you! If you don't take me to Alexandria with you, I won't write to you! I won't speak to you! I won't wish you good-morning! If you do go to Alexandria, I won't hold your hand or have anything more to say to you. That's what will happen if you don't take me! And mother said to Archelaus, "He upsets me. Take him off my hands!" And you did a fine thing! You sent me a fine present, those beans! They kept me in the dark at home on the 12th, when you sailed. So do please send for me. If you don't, I won't eat or drink. There now! Goodbye.

Moulton² writes, "--- the letter means more for the student of New Testament Greek than any other piece

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1. 119 Oxyrhynchus Pap. Original in show-case at the Bodleian. (MS. Gr. Class. f. 66 (P)).
 2. pp. 37-40 ff. From Egyptian Rubbish Heaps, 3rd ed. Lond. 1927.

of Greek of equal length anywhere, not only in grammar but also in vocabulary ---- 'Off with him!' Put that into literary English - 'Away with him!' Does not that suggest anything to you? Why, it is the very phrase that came from those hoarse, savage throats on Good Friday morning. Here we have it again in the rude schoolboy's letter. I think that will illustrate the close contact there is between the language of the New Testament and the language of daily life as we have picked it up from under the sands of Egypt."

A letter¹ from a boy Thonis to his father Arion, is rather pathetic. Living away from home with his teacher, as was the custom - a position of ~~stale~~mate has been reached. Whether the teacher was refusing to commence the boy's instruction before some part of the fees had been paid, or whether he wished to discuss the choice of subjects with the father, we are not told, but personally, I should attribute the tutor's reluctance to begin teaching to a keen business instinct. "--- Look you, this is my fifth letter to you, and you have not

1. 133 (Early third Century A.D.) Select Papyri. A.S. Hunt & C.C. Edgar. Lond. 1932.

written to me except only once,¹ not even a word about your welfare, nor come to see me; though you promised me saying, "I am coming," you have not come to find out whether the teacher is looking after me or not. He himself is inquiring about you almost every day, saying, "Is he not coming yet?" And I just say, "Yes." Endeavour then to come to me quickly in order that he may teach me as he is eager to do. If you had come up with me, I should have been taught long ago. And when you come, remember what I have often written to you about. Come to us quickly then before he goes up country - - -."

Then, as in Arab times later, it was customary to make gifts to teachers. The gifts described in the following letter² were given in the hope of future benefits. " ---- The pigeons and small fowl, which I am not used to eat, send to - - - the teacher of Heraclitus. Helena, the mother of Apollonius, asks (?) you to keep her son Hermaeus under your eye. Whatever things I did not eat when I - - - them from you send to

1. If the father was financially embarrassed, we must commend him for withholding that cheerless information from his son.
2. No. 116. Select Papyri. A.S. Hunt & C.C. Edgar. Lond. 1932.

the teacher of my daughter in order that he may be diligent with her. - - -"

This sentence from a letter¹ of a student to his father (third Cent. A.D.), - "Now do not be uneasy, father, about my studies; I am working hard, and taking relaxation; I shall do finely," might well have been written by any present-day schoolboy. It has the true schoolboy or student flavour.

It is gratifying to see a reference to an attempt on the part of a Greek to learn the Egyptian language. A mother writes to her son thus,² - "I hear that you are learning the Egyptian language, and I congratulate you and myself because now you will come to the city and teach the boys in the house of Dr. Phalou--es, and so make provision for old age."

An interesting example of private tuition is illustrated by a contract³ whereby an ex-cosmetes of Oxyrhynchus apprentices his slave to a shorthand-teacher for two years. He was⁴ to be taught to read and write shorthand the teacher to receive in fees 120 drachmae in

1. 1296 Oxyrhynchus Pap. 137. Hunt & Edgar Select Pap.
2. p.5. Lighter Side Of The Greek Papyri. W.G. Waddell.
3. 724. Oxyrhynchus Pap. V. 14

three instalments of forty drachmae each, the third payment to be made, "When the boy writes fluently in every respect, and reads faultlessly." In Herondas (Mime III The School-Master) Metrotime, the mother of Kottalos that enfant terrible complains, - "He couldn't tell me on the instant where the teacher's house is, and when the thirtieth day of the month - plague on it - demands your fee, ---" This rather suggests payment of fees on a monthly basis, but there is no reason to assume that the rule as to monthly or yearly payments was absolutely fixed. Payment by the course was also popular - especially among professors of the higher branches of study. Presumably the more advanced the course of study, the longer was the period of credit. The splendid portraits¹ (100 - 250 A.D.) found by Petrie at Hawara go to prove that there once existed a very fine school of art, for these represent the efforts of obscure commercial artists. In this collection is the portrait of Hermionē Grammatikē, the grammarian or teacher of the classics, who is the only learned woman of whom we

1. See Hawara Portfolio. Lond. 1917. for excellent reproduction of these in colours.

have any remains or portrait. Petrie writes,¹ "She herself now stands in the Library of Girton College, once again surrounded by books and girl students, whom she doubtless loved well, long before the Goth and the Arab had broken up her old culture."

1. Introd. to above.

IV.

Meanwhile what was happening to the Egyptians? After mentioning the priests, Diodorus¹ continues, - "The rest of the people of Egypt learn in boyhood from their fathers or kinsmen the pursuits pertaining to a particular way of life, as I have already said. Boys are taught letters for a short time, not by all fathers, however, but above all by those who are practising crafts. It is not customary among them to learn wrestling~~and music~~. For they hold that from daily exercises in the wrestling school, young men will not gain health, but only a temporary and altogether precarious strength; and they regard music as being not only unprofitable, but actually harmful. on the ground that it effeminates the listener's soul.

What a sad decline of a music loving nation, which had formerly loved its lyres, harps, guitars, flutes, pipes, tambourines, cymbals, trumpets and sistra. The truth of the matter was that successive conquests had accelerated the decline which had already set in. From this point of view the Greek culture of the Ptolemies in no wise benefited Egypt, in fact it had a

1. Bk. 1. Chap. 81. 7.

strangely baneful effect. As early as the second century B.C. the Greeks were exploiting the natives. A letter¹ from Epidorus to the Priests of Socnopaeus, refers to a grant of land, about 46 arourae in all, which the temple had received. Arius who had the duty of apportioning it, leased 21 arourae of the best land to the Greeks, leaving only 25 arourae of the worst land for the temple. The Ptolemaic feudal system of land tenure had a crippling effect upon the country. The sole landowner was the king, - even the sacred land of the temples being managed through royal officials. But if there was no private ownership, - there was private possession. There was a great deal of military land, held by Greek soldiers who thus formed a kind of military reserve which could be easily mobilised. Land was leased periodically at auctions to the highest bidder. This was not an incentive to good farming. The great defect² of

1. XL. Amherst Pap. Part II.

2. See H.I. Bell's excellent account. - "The Byzantine Servile State In Egypt." pp. 86 ff. J.E.A. 4/1917.

the Ptolemaic government was its subordination of everything and everybody to the fiscal interest. After 30. B.C. much of the military land became private property, for the Romans had no use for a territorial army, believing as they did in using Roman soldiers for fighting other people's battles. They frankly regarded and treated the Egyptians as a conquered nation, and looked upon Egypt as the chief supplier of Rome's wheat supply. The culture of the Egyptians interested them not at all. So acute did the land question become, owing to the increasingly heavy taxes, that it became difficulty to get anyone willing to lease the farms. To combat this, compulsory leasing was resorted to, and a large class of landowners was thus created who were legally obliged to cultivate unremunerative land. The result was that cultivators of land ran away from their holdings, and attached themselves to patrons. This led to the establishment of a large servile population, and to the formation of a number of extensive estates or domains. Churches and monasteries were not behind hand in exercising their acquisitive instinct, assisted occasionally by testatory gifts from deceased Christian gentlemen whose departure from this earth had doubtless been soothed in proportion to the value of their gifts. The monastery of Metanoia, near Alexandria, even had its own fleet of

corn ships. The highest clergy and the feudal lords ruled and shared Egypt - both for their own profit. Thus did the policy of exploiting the native, inaugurated by Alexander when he sent seven thousand Samaritans into the Thebaid, - run its course - the Egyptians becoming 'hewers of wood and carriers of water' in the process.

The amazing statement by Rostovtzeff¹ that the great Greek writers "were equally read by the fellaheen of Egypt, by Hellenized Syrians, by citizens of the world capital - Rome - and by Romanized Gauls, Britons and Berbers," cannot be accepted literally. There must have been Egyptian scholars who knew their Greek and Latin authors, - Plotinus springs readily to the mind, - but the mass of Egyptian people - ~~the~~ fellaheen - maintained an invincible indifference to the glory of Greece or the grandeur of Rome. It is much more likely that with the succession of weak rulers the process of de-Hellenization set in. Marriage of brother and sister was repulsive to the Greeks, but it was quite fashionable in the Roman period. In 98 and 95 B.C. ephebes in Fayoum were found dedicating shrines to Suchus the crocodile god. Of course, the Alexandrian Greeks probably persisted in

1. The Foundations Of Social And Economic Life In Egypt In Hellenistic Times. J.E.A. Vol VI. Part III 1920.

referring to the Egyptians as "those confounded niggers."

Dr Milne¹ sums up the situation admirably when he states that the traditional wisdom of the Egyptians which had been generally accepted by the Roman writers and the Church Fathers were really nothing more than a body of rites and doctrines which were regarded as profound mysteries because they were unintelligible to those who did not understand Egyptian." There is no evidence that the priests and others who used the old language and the old script possessed any higher learning derived from their ancestors. The language was revived in Coptic, --- but the poverty of the Coptic writings show that those who used this language had learnt nothing of Greek culture." The attitude of the native Egyptians to the new doctrine of Christianity was at first definitely sullen and cold. As Gibbon² says it was rare even in the time of Origen, to meet with an Egyptian "who had surmounted his early prejudices in favour of the sacred animals of his country. As soon, indeed, as Christianity

1. pp. 254 ff. A Hist. Of Egypt Under Roman Rule. 3rd. ed. Lond. 1924.

2. p. 509. Vol.1. The Hist Of The Decline And Fall Of The Roman Empire. Ed. Gibbon. Lond. 1776.

ascended the throne, the zeal of these barbarians obeyed the prevailing impulsion; the cities of Egypt were filled with bishops, and the deserts of Thebais swarmed with hermits." Egypt was the parent of monachism, and the practice of going into retreat dated from pre-Christian times. But most of the monks dwelling in caves along the banks of the Nile, or in desert places were Copts to whom the Greek language was unknown. Maqrizi¹ states that the Copts before they became Christians were famous for their knowledge of magic, of talismans, of geometry, of astronomy, of medicine and of alkimia. Then their sciences dwindled away by degrees until they became Christians when they gave up the customs of the idolaters, and followed what they were told to do of the Christian religion.

There is no doubt that the Coptic schoolmaster tended to replace Homer by the Bible. The Coptic literature was wholly religious. No doubt lonely monasteries in the deserts once contained good libraries. Certainly the monasteries of St. Antony and St Paul at one time housed magnificent literary treasures,² but four hundred

1. pp.10-14. ff. Hist Of The Copts And Of Their Church. S.C. Malan's trans. Lond. 1873 of Imam Taqi-ed-Din El-Maqrizi.

2. p.240. The Ancient Coptic Churches Of Egypt. Alfred J. Butler. 2. Vols. Oxford 1884.

and fifty years ago the slaves employed by degenerate monks rose up against their masters, and burnt the books. So now "the Copts"¹ can boast of no great poets, historians philosophers, or men of science. Their only literature is religious, and the fact that they have neither witchery of speech nor treasures of knowledge to offer has caused their language to be treated with a strangely undeserved indifference." Before the Arab conquest, the lessons were read in Greek, but explained in Coptic. By the twelfth Century, Gabriel II (C. 1140 A.D.) ordered the bishops to explain the Creed and the Lord's prayer in Arabic.²

In cosmopolitan Alexandria, Eastern and Western thought were fused and mixed with elements of Hellenistic and Jewish philosophy. The Jews had always been favoured by the Ptolemies, and at the beginning of the Christian era they occupied two fifths of the city. Their concession was known as the Delta,³ and in the time of

1. op. cit. p. 247.

2. When Addison confesses (Spectator 69. May 19/1711) that he is 'not versed in the Modern Coptick', he simply meant that he was ignorant of Arabic.

3. The city was divided into four quarters named after letters of the Greek alphabet.

Philo they had two quarters. Different schools of thought succeeded in reconciling their views with admirable elasticity. The Hellenistic doctrine of personal revelation could be combined with the Jewish tradition of a complete theology revealed to a special people. The result was Jewish matter arranged in Greek form. Plato was reconciled with Aristotle, and the worship of Serapis with adoration of Christ. Out of all this arose Gnosticism, the Patristic theology, the philosophical schools of Neo Pythagoreanism, Neo Platonism and eclectic Platonism. The place was very favourable to eclecticism, the beginnings of which are seen in the Septuagint (280 B.C.). The Septuagint version of the Bible was produced gradually by Jews who knew Greek better than their own mother tongue, but the older explanation as set forth in 'The Letter of Aristeas'¹

1. See The Oldest Version Of The Bible. Henry G. Meecham. Lond. 1932.

is far more interesting. The temptation to include a sentence like this, was, of course, irresistible.-"Thus it happened that the task of translation was completed in seventy-two days, just as though such a thing had come about in accordance with set purpose."

Philo was a very great man and he took Greek metaphysical theories and interpreted them in accordance with the Jewish Revelation. Neo Pythagoreanism, Neo Platonism, Platonism, Stoicism and Aristotelianism were tinged with oriental mysticism. The nature of the soul reaches its height in Plotinus who was an Egyptian. The Egyptian influence was also very great in the Trinitarian controversy. Petrie¹ goes as far as to say that it was a purely Egyptian dispute, between two presbyters brought up in the atmosphere of intricacies about the ka, the khu, the khat, the ba, the sahu, the khaybat, and other various entities which constitute man. "To carry forward similar refinements concerning the Divine Nature was as congenial to such minds as it was incomprehensible to the Western.

1. p. 92. The Religion Of Ancient Egypt. (Religious Ancient & Modern Series). Lond. 1906.

And the dispute finally rested on the question of whether 'before time' was the same as 'from eternity.' Such was the struggle which Arius and Athanasius thrust upon the Church; a dispute which would never have been heard of in such a shape but for their Egyptian origin." The consultation of oracles, and the old magic were not abandoned, but transferred bodily into a Christian setting. Here is the prayer of an early Christian, - "God the Holy, Gabriel, Michael, grant me satisfaction. O Lord God, smite Philadelphie and her children. Lord, Lord, Lord, God, God, God, smite with her - - - O Jesus Christ, have mercy on me and hear me, O Lord." Obviously a fairly comprehensive invocation to the Deities and the hierarchy of blessed angels.

Early Christianity had to give a Christian significance to many an irrepressible pagan rite.¹ Origen knew more about angels and demons than he did about the people amongst whom he lived. Clement used to say that all streams flow into one river of truth, and

1. See The Paganism In Our Christianity. A.E.P.B. Weigall Lond. (Undated) 1928 (?).

that the bee gets honey from every kind of flower. He knew the pagan authors, and was no biblicist. His scholarship was never in question. He tried to unite the mysticism of Neo-Platonism with the practical spirit of Christianity, and this, no doubt, modified the fanaticism of the early Christians. The Logos was more to Clement than the historic Son of Man. "Plotinus¹ regarded time as just an image of eternity. Philo was impatient when circumstances led him to interrupt his mystical interpretation of Scripture, and travel on a political embassy to Rome. It is no exaggeration to say of these men that they spent half their time in the spiritual world." Thus by the fourth century Christian theology had replaced the older causes of controversy. The opposition to Christianity came from the ranks of the votaries of Serapis, of Astarte, of the Great Mother, of the rider god of Thrace, and the devotees of Celtic, African, and Asiatic deities. In 305 A.D. came the great

1. See. p.83 Alexandrine Teaching On The Universe. R.B. Tollington. Lond. 1932.
 Also Clement Of Alexandria by the same Author. 2 Vols. Lond. 1914.

persecution, and the beginning of the Meletian schism. From now on there was but little toleration, and the events reflect but little credit on the leaders of the Christian cause. Athanasius was deposed and his successor George¹ appointed amid the scenes of wildest horror. The church was sacked, virgins were ravished, and most of the congregation slaughtered. As Bell² ironically remarks, "In such forcible ways did men debate in ancient Alexandria the nice philosophical question whether the Son is, or is not of one substance with the Father." In the fifth century, the Jews were expelled and their property confiscated by the mob, who were led by the Patriarch Cyril. At the hands of the same mob, the scholarly pagan philosopher Hypatia perished, - flesh being scraped off her quivering limbs by oyster shells.³ One change manifests itself; whereas before the Diocletian persecution the dominant note

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1. The infamous George of Cappadocia has by now been transformed into St George of England, - the patron of arms and chivalry.
 2. See his article Alexandria pp. 171-184 ff. J.E.A. Oct 1927.
 3. Literally so, according to Gibbon.

of Christianity had been Greek - thereafter it became Coptic. Romances were replaced by legends of saints and martyrs, while Christian hymns supplanted the poems of the past. A poor exchange we should consider this to have been, but Prof. Sayce¹ tells us that 'countless manuscripts of priceless value have already perished through the ignorance of the fellahin and the neglect of the tourist and savan, to whom the term 'Coptic' has been synonymous with worthless.'

In 619, the country occupied by the Persians, but Heraclius swept them out. Cyrus was appointed Patriarch at Alexandria, - a disastrous choice for he persecuted the Monophysites, who thereupon welcomed Amr and the Arabs when they came. Meanwhile a small town on the Syrian border was pillaged by the Saracens who cut to pieces troops sent to its relief, - "an ordinary and trifling occurrence, had it not been the prelude of a mighty revolution. These robbers were the apostles of Mahomet; their fanatic valour had emerged from the desert, and in the last eight years of his reign, Heraclius lost to the

1. p. 172. The Egypt Of The Hebrews And Herodotus. A. H. Sayce. Lond. 1902.

Arabs, the same provinces which he had rescued from the Persians."¹ Muhammad died in 632, Damascus fell in 635, followed by the fall of Jerusalem two years later. It was now clear that a star of the first magnitude was in the ascendant. The conquest of Egypt was referred to as an expression of Divine displeasure at Christian aberration, not as the collapse of a structure rotten to the core. Amr's army was reinforced by 12,000 men just before the battle of Heliopolis. His path was further made smooth by the apathy of the provincial governors towards any concerted action. The Duke of the Thebaid took independent action by collecting all the taxes he could and decamping at speed with the proceeds.

Greek lasted barely a century more, Arabic and Coptic finally extinguishing it. Hellenism gave way to Islam, but in the next Section we shall see how Islam preserved many Greek treasures returning them to Europe after they had been circulating ⁱⁿ translation, the original text ~~having been~~ irretrievably lost.

1. p. 531. Vol IV. The Hist. Of The Decline And Fall Of The Roman Empire. Ed. Gibbon. Lond. 1788.

Rulers of Egypt.

A.H.		A.D.
18-21	Conquest by Amr.	639-641
21-38	Governors for the Orthodox Caliphs.	641-658
38-132	Governors for the Umaiyyads	658-750
132-254	Governors for the Abbasids	750-868
254-292	Dynasty of the Tūlūnids	868-905
292-323	Governors for the Abbasids	905-935
323-358	Ikshidid dynasty	935-969
358-567	Fatimia Caliphs	969-1171
567-648	Aiyubid dynasty	1171-1250
648-792	Bahri Mamelūks	1250-1390
792-932	Burdji Mameluks	1390-1517
923-1212	Ottoman Pashas and Mamelūks	1517-1798
1212	Napoleon's Expedition.	1798.

C.THE ARAB PERIOD.

I.

In this section we have to deal with a young language and a young religion, and we shall see how great their interaction has been. We have South Arabic or Sabaean inscriptions which date from 800 B.C. but Arabic as it is now understood - dates only from 500 A.D. By 600 A.D. South Arabic had become a dead language, and the language of Arabia became Arabic par excellence. It became the language of the Koran, and inimitable in style and matter. The Muhammadan conquests, and the consequent converts to Islam made it necessary to preserve the purity of the language of the Koran, and so we find philologists waging relentless war against vulgar depravation. However, after the Mongol invasion of the thirteenth century, classical Arabic ceased to be the common dialect of the Arabic world, and was supplanted by vulgar colloquial dialects. Although every child in Islam on going to school learns

the Koran by heart, the mother tongue is usually colloquial Arabic. This has been the case for some considerable time. Here, in the compulsory study of the inelastic classical Arabic, we have one of the causes which make against progress in Islam. Four hundred years ago England freed herself from the shackles of academic Latin, and trusted herself entirely to the language of Shakespeare. Italy led by Dante, again took pleasure in the renaissance of original thought. It is not eighty years since the Serbians rose up against the use of a literary language and demanded a living one. For centuries Egyptians have been enjoying the soporific effect of listening to sonorous words which they do not understand. The result has been the destruction of all originality of thought. Yet all the time colloquial Arabic has been full of sharp crisp words, and short effective expressions of the kind which classical Arabic avoids. In the following expressions chosen at random, the colloquial scores every time.

English equivalent.	Colloquial.	Classical.
<u>This</u> and <u>These</u>	da, di; dōl	haza, hazini hawlai.
What is this?	eh da?	ma haza?
Not so.	mush kida	laisa kazalik.

The colloquial speech is rich in one-syllabled verbs of every day use, and they are as prompt and alert in action as they are in English. But in the literary Arabic 2-syllabled words are used and the 'snap' is no longer there. Prof. Duncan Black Macdonald believes that there will be no renaissance in Islam until a Dante or a Chaucer comes who will write books of weight and genius in the colloquial dialect. "Having mentioned this colloquial Arabic permit me to diverge a moment and say that, for me the great hope of the Arabic speaking races lies in the rise of an Arabic literature written in the language really spoken by these peoples. At present their older literature is as remote for them as Latin to an Italian or Spaniard."¹

Of course classical Arabic will never be without its defenders. The voice of the muezzin calling the faithful to prayer is heard in the Phillipine

1. p. 356. Aspects Of Islam. Duncan Black Macdonald, New York, 1911.

islands, China and Burma; in the valleys of the Himalayas, the hills of Persia and the plains of Anatolia; in Palestine, Egypt, and the deserts of North Africa; even in Paris and London the 'faithful' are summoned by the Arabic formula, - 'Allahu akbar.'

As early as 1315 Arabic was taught at the universities of Europe, and today it is more critically studied in England, France and Germany than it is in Egypt, Morocco or Iraq. A missionary in Syria who was an expert in Arabic thus described it,¹ "A pure and original speech of the greatest flexibility, with an enormous vocabulary, with great grammatical possibility, fitted to convey theological and philosophical and scientific thought in a manner not to be excelled by any language except the English, and the little group of languages which have been cultivated so happily by Christianity in Central Europe." We have more sympathy with the testimony of another missionary who while in

1. See p. 239 Arabia. The Cradle Of Islam. S.M. Zwemer Edin & Lond. 1900.

Egypt in 1864 confessed, "I would rather traverse Africa from Alexandria to the Cape of Good Hope, than undertake a second time to master the Arabic language." Keith Falconer¹ used to say that Arabic grammars should be very strongly bound because learners so often used to dash them frantically on the ground.

It is a well known fact that the vocabulary of some Arabic authors is so large that copious explanatory notes have been appended to their works. And it is not infrequent to find notes on the notes, to explain the difficult words used to explain others more difficult.

Dr Zwemer very aptly writes² that, 'the regular verb in Arabic has fifteen conjugations, two voices, two tenses, and several moods; the irregular verbs are many and mysterious to the beginner although the grammarians try to make them appear easier by demonstrating that all their irregularities are strictly logical, not the result

1. p. 238. Op.cit.

2. p. 250. Ib.

of linguistic perversity but foreseen calculation and providential wisdom. Is it not "the language of the angels?" - even the broken plurals?"

Renan¹ gives his opinion thus:- "Cette langue, auparavant inconnue se montre à nous soudainement dans toute sa perfection, avec sa flexibilité, sa richesse infinie, tellement complète, en un mot, que depuis ce temps jusqu' à nos jours, elle n'a subi aucune modification importante. Il n'y a ni enfance, ni vieillesse pour la langue arabe; une fois qu'on a signalé son apparition et ses prodigieuses conquêtes, tout est dit sur son compte. Je ne sais si l'on trouverait un autre exemple d'un idiome entrant dans le monde, comme celui-ci, sans état archaïque, sans degrés intermédiaires ni tâtonnements."

As soon as Islam had its Koran, education immediately centred around it. People went to school to learn how to read the sacred book; scholars wandered from one place of learning to another - increasing their

1. p. 321. Histoire Générale Et Système Comparé Des Langues Sémitiques. Ernest Renan. Paris. 1855. See Livre IV. Chapitre 11. pp. 320-388. ff.

knowledge of hadith (Traditions) and of philology and jurisprudence. The mosques were used as schools. Of the various secular uses of mosques we have ample information. The chief University of Islam, the al-Azhar in Cairo is still a mosque. The Arabs in Spain had no schools as such, but carried on their work in mosques. In the time of the Abbasides, mosques were lit up. Al Mamun commanded that lamps be put in all the mosques for the convenience of those who wanted to read, and to lessen crime. The Prophet is reported to have settled legal problems in his mosque. In the mosque at Basra poems that were far from religious were delivered.

In the year 17, Omar sent teachers in all directions and commanded the people to appear at the mosque on Friday. There was a regular system of education, and a guild of teachers. In the old Christian countries the same thing had happened, - learning had centred around the churches and monasteries. The Church of the Apostles in Constantinople had a university attached to it.

One of the first to teach in Egypt is said to have been Yazid b. Ali Habib (d.128). At first education

was arranged for by the Government allowing suitable persons to give instruction in addition to the performance of their regular duties. Therefore it is not surprising to find that some of the first teachers were kussas of the mosques, men who dealt with the procedure of divine service, and the interpretation of the Koran. From the earliest times study-groups established themselves in mosques especially groups to deal with Arabic philological problems. At quite an early date, we read of special apartments¹ for the use of authorities on the Koran. No sooner was the Mosque of Ibn Tulum founded² than a pupil of al-Shafi began to lecture in it on Hadith, (sayings attributed to Muhammad) and this continued throughout the Fatimid period.

In 361, al Azhar mosque was complete and lectures on hadith commenced. The number of lecturers was increased considerably in 378 by al Aziz and his vizier Yacoub b.

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1. According to al-Wakidi, Abd Allah b. Umm Mastum lived in Medina in the Dār al-Kurra.
 2. 254. Almost the oldest in Cairo. The earliest example of the use of the true pointed arch throughout a building. 200 years earlier than any in England.

Killīs. In addition to a salary, they were given free quarters in a house near-by.

In the Fatimid Mosque of al-Akmar¹ teaching was carried on from the very first. The same is true of the Mosque of al-Hakim founded earlier (380-403). The people of Islam have very wisely demanded unrestrained access to the mosque at all times. In 400 al-Hakim founded a Sunni dar al - ilm in connexion with the famous Mosque of Amr (founded 21.) In it, two Maliki scholars taught hadith and fikh, (Muhammadan law or Jurisprudence) but after about three years the institution was abolished, and the scholars executed.

Nizam al-Mulk is commonly given the credit of founding the madrassah² (school) but we find ~~that~~ the madaris³ of Iranshahr praised as early as the fourth Century, and therefore before he was born. Al-Azhar, Dar al-Ilm, and Dar al-Hikmah in Cairo also existed before the time of this enlightened Caliph. He was fond of

1. Founded 519.

2. From darasa = to ready; to study.

3. Plur. of madrassah (school).

Jurisconsults and Sufis and honoured and preferred them. He built the Nizamiyyah Madrassah in Bagdad, beginning it in the year 457. It was completed in the year 459, and the people assembled in it according to their degrees, to listen to the lecture of Shaikh Abu Ishak, who for twenty days did not present himself. At the hour of prayer¹ Abu Ishak used to quit the College and perform his devotions in a mosque because he had been informed that the greater part of the materials employed in the construction of the College had been procured illegally. Nizam al-Mulk learnt and taught Hadith, and used to say,² "I am conscious of not deserving that honour, but I wish to establish myself in the series of persons who have transmitted the sayings of the Prophet." He is credited with the following verses, - "After four-score, strength exists not; and the alacrity of youth is departed. With staff in hand I resemble Moses, but have not the gift of prophecy." Nizam al-Mulk also built a college in

1. See p. 414 Vol 1. Ibn Khallikun.

2. Ibid.

Nisabur named the Nizamiyyah, and the Imam al-Haramam lectured in it. Al-Hafiz al Dhabī in his History of Islam has contradicted those who assert that Nizam al-Mulk was the first to build colleges. He says, "Before Nizam al-Mulk was born¹ there was the Baikakiyyah College in Nisabur; also the Saidiyyah College in Nisabur, built by the Amir Nasr b. Sabakten the brother of Sultan Mahmud, when he was Governor of Nisabur; and a third college in Nisabur built by Abu Saad Ismail b. Ali. b. Al-Muthanna Al-Astrabadhi, the Sufi Preacher and Shaikh; and a fourth college also in Nisabur built for the Professor Abu Ishak."

Nizam al-Mulk's death was lamented by his son-in-law Shibl ad-Dawlat Mukatil al Bakri in an elegaic poem which contained this passage, - "Nizam al-Mulk was a precious pearl, formed of pure nobleness by the merciful God; it was so fine that the age knew not its worth, and the Maker jealous for its honour, restored it to its shell."

Ibn Khallikan says that when the Sultan Salah ed - Din ruled over Egypt there were no colleges therein because the Fatimid Dynasty being of the Shia persuasion

1. See pp. XXViii ff. Vol.1. Ibn Khallikan.

did not believe in these things. So Salah ed-Din built colleges near the tomb of the Imam Shafii and that of Husain in Cairo. He also set aside the dwelling of Said al-Suada, - the servant of the Egyptian Caliphs as a Monastery, and converted the house of Abbas the Fatimid Wazir as a college for the Hanafis. This was later known as the College of the Sword-Makers (Suyufiya 572). He also built in Cairo the College known as "the Ornament of the Merchants" for the Shafiis, - known later as the Noble College (Sherifiya). He also built in Cairo a College for the Malikis, known as the Kamhiya.

A early school in Cairo which differed from any other was the Dar al-Hikma (House of Wisdom or Philosophy) founded by the Fatimid Caliph al-Hakim in the year 395. It contained an immense number of books, and all classes of the public were admitted, pens, paper, and ink being supplied, while lessons were given by jurisconsults, koran-readers, astronomenys, grammarians, philologists and physicians, all of whom received salaries. The revenue of this institution was estimated at 2,570 dinars per annum which was employed in this manner, for mats, 10 dinars; salary of the khatib (copyist or clerk) 90 dinars; Salary of the librarian 48 dinars; for water

12 dinars; for the farasheen (servants) 15 dinars; for paper, ink, and pens 12 dinars; for the mending of the curtains 1 dinar; repairing books and replacing lost leaves 12 dinars; a carpet for winter 5 dinars; for palm-leaves to cover the floor in winter 8 dinars.

It is highly probable that al-Mulk was among the first to inaugurate scholarships, and his patronage and energy made it possible for the madrassah to flourish as never before. Men of affluence and influence followed the example set by their ruler. The madrassah as such was a new institution in Islam, and Nizam al-Mulk saw how effective it could be in indoctrinating the coming generation with Sunnite orthodox beliefs, thereby dealing a blow at the Shiites. Certainly a professor at the Nizamiych who held Shiite beliefs, was dismissed. The great Salahed-Din (Saladin) closed Dar al-Ilm in Cairo because it was a Shiite institution.

During the period of the Aiyubids and Mameluks the number of madaris increased greatly. Two long rows of schools made their appearance on the site of the old Fatimid palace in Cairo. Ibn Battuta who travelled in Egypt at the beginning of the eighth Century found madaris in small towns like Dimyat, Kena, Kus, and Esna.

The difference between a madrassah and an ordinary mosque, cannot have been very great, for sermons were also preached in the school. In Egypt from 569-665, there was only one school with a Friday khutba,¹ but after 665, there was a minbar in most of the larger madaris. Thus the distinction between masdjid (mosque) and madrassah was largely artificial. It was a madrassah + djami (mosque) only if a Friday service was held. In 772, the emir Bubakri built a madrassah and opposite a djami. In 815 the madrassah was given a minbar² and thereafter used as a mosque as well. The great mosque of Sultan Hasan³ was also one of the largest schools in Cairo, while the Khatiri Mosque (737) Bulak and the Djami Aslam (746) were primarily schools. In the ninth Century the Mosque of al-Muaiyadi⁴ was one of the most important schools in Cairo. We must

1. The sermon or oration.

2. A pulpit from which the khutba is delivered.

3. Founded 757.

4. Makrizi. IV. 139.

never lose sight of the fact that learning and a manifestation of piety ^{were} inseparable in Islam. The student was never to forget that the great aim of all knowledge was God. Pious students would often leave their monasteries and attend lectures at a mosque. Sometimes lectures were delivered at the monasteries. The care of the body was not lost sight of, for around 259 Ibn Tulun had a physician to be present behind the mosque every Friday, and he could be consulted free of charge. Attached to the mosque was a hospital and dispensary for the poor. Ibn Khallikan states that in the upper storey of a mosque a poor poet had its room.

Before proceeding to a more detailed description of Moslem education it might be helpful to give a list of the more important educational foundations of Cairo before the Osmanly Conquest of Egypt, (922):-

Name of Institution.	Founded.	Time Of.
Mosque al-Azhar	359-361.	Caliph Al-Moezz-Lidin-Ellah.
Mosque of Al-Hakim	380-403.	el-Aziz.
Mosque al-Akmar	519.	el-Amir
College Nasiriya	566.	en-Nasir Salah-ed-Din.
" Kamhiya	566	"
" Kutbiya.	570	"
" Ibn-el-Arsufy.	570	"
" Suyufiya	572	"
" el-Fadiliya	580	"
" Ushkushiya	592	el Aziz (son of above).
" Ghaznawiya	595(?)	el-Mansur b. el-Aziz
" Adiliya	596(?)	el Adil Seyf-ed-din
" Sherifiya	612	"
" Kamiliya	622	el-Kamil b. el-Adil
" Fakhriya	622	"
" Sayramiya	c636.	el-Adil b. el-Kamil
" Faiziya	636	"
" Salihiya	639	es-Salih Ayyub b. el-Kamil
" Kutbiya	650	el Moizz Aybek.
" Sahibiya	654	"
" Zahiriya	660	ez-Zahir Beybars.
" Megdiya	663	"
" Muhedhdhibiya	676(?)	"
" Farikaniya	676	"

"	Mansuriya	684	el-Mansur Kaṭaūn
"	Tafagiya	c 698	el-Mansur Lagin.
"	Mangutimuriya	698	"
"	Nasiriya	699-704	en-Nasir (2nd reign)
"	Karasunkuriya	700	"
"	Gemaliya	703	"
"	Taybarsiya	709	" (3rd reign)
"	Saidiya	715	"
"	Almelikiyya	719	"
"	Gawaliya	723	"
"	Mihmandariya	725	"
"	Buktumuriaya	726	"
"	Akbughawiya	734	"
"	el-Kharruba	750	en-Nasir Hassan (son of above)
"	Kaysaraniya	751	"
"	Saghira	751	"
"	Farisiya	756	Hassan (2nd reign).
	Sarghitmishiya	756	"
"	Sultan Hassan	757	"
"	Bediriya	758	"
	Higaziya	761	"
	Beshiriya	761	"
	Sabikiya	763	el-Mansur Muhammad (grandson of en-Nasir).

" Bubekriya	722	el-Ashraf Shabān (another grandson)
of Gay el-Yusufy	775	"
" Bakriya	775	"
" Ibn-Iram	782	el Mansur Ali b. Shaban
" Aytmiş	785	ez-Zahir Barkuk
" of Barkuk	788	"
" of Inal Ustaddar	795	"
" Mahmudiya	797	"
" Mikbil Zemamiya	797	"
" Ibn-Ghurab	798	"
" of Sudun	804	en-Nasir Farag b. Barkuk.
Mahally	c 806	"
" of Farag	803-13	el-Mansur Abd-el-Aziz b. Barkuk.
" of Gemal-ed-din	811	Faraq (2nd reign.)
" of Abd-el-Ghany	821	el-Muayyad Skeykh
" of Kady Abd-el-Basit	823	"
of Bars-Bey	827	el-Ashraf Bars-Bey
of Feyruz	830	"
of Taghry-Berdy	844	ez-Zahir Gakmak.
of Ināl	855-60	el-Ashraf Inal
of Kamim	c 870	ez-Zahir Khushkadam

of al-Ashraf Kait-Bey	880	el-Ashraf Kait-Bey
Another at er-Roda	896	"
of Abu-Bekr b. Muzhir	885	"
of Ezbek el-Yusufy	900	"
Kany-Bek emir akhor	908	el Ashraf Kansuh el Ghury
of el-Glmry	909	"
of Kany-Bek Kara	911	"

The chief colleges¹ mentioned by Suyuti were, - The Azhar Mosque; the Mosque of Hakim; the Salahiyah College; the Monastery of said Suada; the Kamiliyyah College; the Salihyyah College; the Baiharsiyya Monastery; the College of Sarghitmish; the College of Sultan Hasan; the Zahiriyah College and the Muayyidiyya College.

According to Suyuti the Azhar Mosque was the first college mosque founded in Cairo, and originated by Gowhar al-

1. Wustenfeld pp.97-113 Die Akademien der Araber und ihre Lehrer describes the following Schools and colleges of Cairo:- Hakkariyyah, Nasiriyyah, Fakhriyyah, Fadiliyyah, Kutbiyyah, Salihyyah, Mansuriyyah, Husaini Chapel, Zahiriyah, Shafii (Chapel), Saifiyyah, Muizziyyah.

Katib at Sikilli the Maula of Muizz lidin-Allah when he planned Cairo. He began the building thereof on Saturday when six days and nights remained of the month of Jamad-Awal in the year 359, and completed its building when seven nights had passed of the month of Ramadan in the year 361. The first Friday prayer meeting was held on the ninth of Ramadan 361. There was a talisman in connexion with it; no sparrow, nor turtle-dove nor pigeon, nor any such bird would nest on it. Successive Caliphs, princes and kings added to the original building. Al-Hakim (VIth Fatimid Caliph) endowed it, and set in it two silver ovens, and twentyseven silver candlesticks, and placed in its mishrab a girdle of silver similar to the one that was in the Mosque of Amr. But it was taken up in the time of Salah-ed-Din, as were also the girdles from the other mosques. Al-Hafiz (XIth Fatimid Caliph) was responsible for a beautiful Maksurah near the Western doorway which is the forefront of the mosque. It was renovated in the days of al-Zahir Baibars the Mameluke Sultan.

The Caliph used to deliver the khutbah in the Mosque of Amr on one Friday, in the mosque of Ibn Tulun on the next Friday and in the Azhar Mosque on the next Friday. The following Friday he had a rest. But when the Mosque of Hakim was built (380-403) the khutbah was transferred thither from el-Azhar.

At first there was no specific law regulating study at el-Azhar. The student allowed his personal inclination and aptitude to be his guides in the selection of subjects and teachers. He remained at el-Azhar until he ~~deemed~~ himself competent to lecture to others. Food was supplied to the poor students, and it is feared that many of them did not make reasonable progress, so that they might enjoy the 'loaves and fishes' a while longer. The first law of el-Azhar was not promulgated until 23rd of Zilkadi 1288 (i.e. 3rd Feb. 1872 A.D.) in the reign of the Khedive Ismail. This law¹ instituted the Alimieh Certificate, successful candidates being granted first, second, or third class according to their merit. The subjects prescribed were, - Muhammadan Law (Fikh), Principles of Muhammadan Law (Ossoul), Monotheistic Divinity (Tawhid), Traditions of the Prophet (Hadith), Exegesis (Tafsir), Grammar (Nahw), Morphology (Sarf),

1. The most important change was brought about by Law 49 of 1930, which classified education at el-Azhar into four stages, - primary (4 years); secondary (5 years); higher (4 years) and specialisation section.

Rhetoric (Maani, Bayan and Badie) and Logic. Those who wished could also study Arithmetic, Algebra, Geometry, and Astronomy.

Stanley Lane-Poole¹ sets out the virtue of el-Azhar in a racy comparison with the older Universities of England. He writes this, "Instead of college dues, university dues, battels, servants' fees, lecturers' fees, professors' fees, examination fees, degree fees, the undergraduates of the Azhar are partly supplied with food, are taught for nothing, and received a license on the strength of their proficiency as teachers and students. Instead of wine-parties and "bump suppers," they meet together over a crust of bread and a water bottle to debate questions of grammar and Koranic criticism, and their headaches come from thought and not from punch. Instead of pinching their parents to meet their tailor's bills and the subscriptions to the boat club, cricket club and all other clubs, the Azhar undergraduates earn their frugal living themselves. Any comparison between the two is wholly in favour of the Cairo University as far as the

1. p. 84. Social Life In Egypt. Lond, 1884. (?)

principle is concerned; and the unhappy fact that the subjects taught in the Azhar are perhaps even less profitable in after life than the art of turning hexameters and sapphics does not detract from the beauty of the system." The experience of Dr Taha Hussein¹ as told by himself gives a rather different kind of picture. Although blind, the monotonous sameness seems to have jarred upon him, - "It was Friday and the lad found himself at Al Azhar for prayers. He listened to the preacher, a skeikh with a deep, loud voice, who rolled out his "qafs" and "rays" sonorously. Otherwise there was no difference between him and the preacher in his town. The sermon was the same one as he had been accustomed to hear at home. The tradition was the same. The second sermon was the same. The prayers were neither longer nor shorter than those he was accustomed to. The lad returned to his house, or rather to his brother's room, somewhat disappointed."

The Mosque of Hakim was at first known as the

1. p. 155. An Egyptian Childhood (The Autobiography of Taha Hussein). Trans. E.H. Paxton. Lond. 1932.

Mosque of the Khutbah and it was completed in 393.

Hakim endowed¹ it with property, including some at the Bab al-Futuh (i.e. the Gate of Conquest). It was destroyed in the earthquake of 702, and Baibars the Mameluke Sultan renewed it, and arranged in it lessons according to the four orthodox schools of Tradition.² In addition instruction was given in Tradition, Grammar, and Koran readings. Hakim also established and endowed a Mosque in Maks on the bank of the Nile, and so called from the Maks or custom house once there. It was renewed by the Wezir Shams at Din al-Meksi in the year 770.

The Salahdiyyah College in the vicinity of the tomb of the Imam at Shafii, was called the Crown of

1. Salah ed-Din endowed al-Madrassah al-Suyufiyyah in Cairo with thirty two shops, and the al-Salahiyyah in Jerusalem with a whole street. Ibn Jubair relates that when he visited Damascus over five hundred students drew a daily allowance of bread from the funds of the Mosque of that City. The numerous schools of Baghdad were well endowed with property, the income from which went for the support of the teachers and students. (See Ibn Jubair p.207).

2. See pp. 172 ff. of this Thesis.

Colleges, and its founder was considered the greatest of rulers - none of the rulers of Islam either before or after him being quite as great.

Salah ed-Din b. Aiyub built it in the year 572, and paid the Shaikh Najm al-Din forty dinars a month for lecturing in it, and arranged that he should get sixty rotls of bread and two skins of Nile water daily. Makrizi says that a number of outstanding persons had charge of the instruction in it, and then it was without an instructor for thirty years, only assistants, ten in number being present. Then dating from 678 it had the benefit of a long succession of illustrious teachers among whom was Sadr al-Din b. Hamawaiah who took charge of the Shafiite instruction.

With regard to the distribution of schools within the Arab Empire, Cairo, Damascus, Jerusalem and Baghdad led the way with the greatest numbers, although there must have been quite a number in Alexandria, for if we are to believe Ibn Jubair¹ "Of God's wide country this town (Alexandria) has the most mosques, the numbers of which are exaggerated and underestimated - the greatest number given being twelve thousand and the smallest eight thousand." Some of these must have been madrassah mosques.

1. p. 12.

II.

We have noted how Salah ed-Din closed the Dar al-Ilm in Cairo because it was a Shiite institution. The Shiite school was considered unorthodox by the people of the Sunna (orthodox believers, sunna = usage or custom). The Koran was the raison d'être, for the whole system of education in Islam. Nothing was taught that did not tend to a greater understanding of the Koran. Muslim theology stated in unmistakable terms what a man should believe. Muslim law prescribed all man's duties to God, to his neighbour and to himself.¹ The intense seriousness of early Moslems will be appreciated, when it is remembered that one of the greatest legists of Islam would not eat a water-melon (agoor, buteech or shamam) simply because he could not find that the usage of the Prophet had laid down

1. See pp. 66 ff. The Development Of Muslim Theology Jurisprudence And Constitutional Theory. Duncan Black Macdonald. Lond. 1903.

and sanctified a canonical method of doing so.¹

After the death of the Prophet the question of law had to be decided. Islam was essentially a legal religion. It learnt much from the Courts (especially in Syria) where the juris prudentia of the Romans was practised. Thus it is no accident that in Arabic today, the duty of proof lies upon the plaintiff.

Fikh (Jurisprudence) covered the whole field of possible legal contingency, - it aimed at providing solutions for all the legal questions that could arise in social life. It embraced criminal law, constitutional law, as well as canon law, and what we should now call civil law. The way Muslim jurists grappled with the problem of building up a complete corpus of laws, is to be admired. The Prophet had died, but the Koran remained, as "the strange and complex record of Mohammed's impassioned rhapsodies, studied harangues, legal decisions, ordinances of ritual and other heterogeneous matters."²

1. See p.66. Op. cit.

2. See Chap III "School & Mosque" Social Life In Egypt. Stanley Lane-Poole. Lond. (Undated) 1884 (?)

In a way it taught no new precepts, but it gave a code to the people, and a constitution to the State, both of which had the sanction of religion. The spirit of Islam has always been essentially democratic. The great ideal was to place all Muslims in a position to read the Holy Book.¹ Even today in Egypt education is known as public instruction, and the early Muslim schools had this definite end in view, - that of teaching the public to read the Koran. The result was that interest in the written text of the Koran became universal, and frequent and bitter were the quarrels over isolated texts. The textual difficulty was appreciated by the Caliph Othman, who ordered Zaid Ibn Thabit the former Secretary of the Prophet, to prepare an official text. The edition that Zaid prepared was very trustworthy and several copies were made of it, and sent to the provinces to replace the earlier ones, which were then collected and burnt.

1. This is well explained p. 47. The Arab Civilization. Joseph Hell. Trans. S. Rhuda Bukhsh. Cambridge 1926.

Thus whenever possible a solution to a legal problem was first sought in the Koran. If found, - then divine law was considered to have settled the matter. In the event of the Koran not providing a solution research was made among the decisions of the Prophet. If the memories of the Companions (Sahibs) of the Prophet failed, - then the judges had to look further. However, it was not often that the constructive memories of the Companions failed, but when they did, recourse was had to the common law of al-Madina. Thus gradually, Muslim canon lawyers (fakihs) came to divide fikh into five classes, according to the nature of the duty involved.

- (a) A duty, the omission or disregard of which was punished, the doing of which was rewarded.
- (b) The recommended duty - the doing of which was rewarded, but the omission was not punished.
- (c) That which was permitted.
- (d) That which was disapproved of by the law, but which was not punished.
- (e) That which was definitely forbidden, and punishable by law.

Thus it is easy to see how the record of the manners and customs (sunna) of the Prophet, and the details of his life and sayings (Hadith) assumed an unprecedented

importance. Even before the birth of Islam, sunna or custom had had a tremendous grip upon the Arab¹ mind. On becoming Moslem the Arab exhibited admirable elasticity of mind and soul for he converted the pre-Islam duty of following the sunna of fore-fathers into the greater merit of following the sunna of the Prophet Muhammad.

Ilm al-Hadith² (the science of Traditions) became very important. Hadith at first was a communication or narrative in general, - either religious or profane. Then it came to mean a record of the actions or sayings of the Prophet and his Companions.

Traditions were of three kinds, -

- (a) Those emanating direct from the Sahabis (Companions)
- (b) Those that went back no further then the Tabiun (i.e. successors of the Sahabis).

1. Bedouin tribes still have their tribal sunna something which is akin to a law of precedent. See Bedouin Justice, Austin Kennett. C.U.P., 1925.

2. The Kamiliyya College Cairo was a great School of Tradition, and it was considered the oldest Tradition school in Egypt and the second oldest in existence, the oldest being one built by Al-Malik al-Adil Nur al-Din Mahmud b. Zanki in Damascus (569). Al-Malik al Kamil built the Kamiliyya and it was completed in the year 621, and Abu'l - Khattab Omar b. Dahya was appointed as its Shaikh.

(c). Those sayings that had no authority earlier than that of the Successors of the successors of the Companions of the Prophet.

A perfect hadith was composed of (a) isnad, (b) Matn.

Isnad was the chain of authority upon which a tradition was based, that is - the names of the persons who had handed it on. Every person named had to be above reproach.

The matn was the substance or text of the tradition. It was a vital matter to establish the authenticity of a tradition. Ibn Abi Awja (executed 155) confessed to having circulated over four thousand false traditions. Al Bukhari (d. 257) could only accept seven thousand traditions out of over seven hundred thousand that he examined. In the great collection of Ahmad ibn Hanbal (d. 241) over seven hundred Companions are cited as the authors of the thirty thousand traditions contained in his Musnad. The truthfulness of ~~Abu~~ Huraira was disputed by many Muslims. A tradition was classified as sahih (sound), hasan (beautiful), or daif (weak). There was another three-fold classification.

- (a) Marfu, - tradition which contained a statement about the Prophet.
- (b) Mawkuf one which referred only to doings or sayings of the Companions.
- (c) Maktu one which dealt only with the successors of the successors (Tabiun).

Traditions had to be heard, and long journeys were performed in order to hear them from the famous teachers of hadith. This, and the duty of pilgrimage fostered the growth of a large class of wandering scholars,¹ the disappearance of which in these modern times being a circumstance we can only view with profound regret. But as the number of traditions increased they ceased being transmitted orally, and were simply written down. There

1. A studium generale was open to students from every country. Thus there was easy communication between distant seats of learning. "Moreover the Universities were the earliest centres of the book trade as we understand it, and the provisions for the multiplication, sale and rent of standard works helped these at least to travel by their own momentum." (See p.99. Studies In Mediaeval Culture. Charles Homer Haskins. O.U.P. 1929.

were six books of hadith accepted by the orthodox, the collections par excellence being those of Bukhari and Muslim. The other four were the collections of Abu Daud, Tirmidhi Masai and Ibn Maja. The strictly Shia hadith were excluded. The Shiis or Shiahs only considered such traditions reliable as were based on the authority of Ali or his adherents. They held the following works in high esteem, -

- (a) al-Kafi of Muh. b. Yacoub al-Kulini (d.328.)
- (b) Man la yastahdiruhu l'fakih of Muhammad b. Ali b. Babuya al-Kummi (d. 381.)
- (c) Tahdhib al-Akham &
- (d) al-Istibsar fima khtalafa fihi l-Akhbar of Muhammad al-Tusi. (d. 459).
- (e) Nahdj al-Balagha of Ali b. Tahir al-Sharif al-Murtada (d. 436.)

The Shia doctrine was based on recognition of Ali as the legitimate Caliph after the death of Muhammad. They claimed that the imamate in Islam should be reserved for the Alids, that is to say with the Prophet's daughter Fatima's husband Ali and their offspring. Here they disagreed with the Sunnis (the orthodox party) who maintained that

the election of the first three caliphs Abu-Bekr, Omar, and Othman, was constitutional in Islam. The Shia doctors claimed to be interpreters of the Alid Imam and to share in his infallibility. Their chief festival was held (and still is) to commemorate the death of Husain, Muhammad's grandson, who fell in the year 61. This Husain who was a very ordinary person eclipses Ali, who in his turn is accorded more veneration than the Prophet himself. Thus in essence Shiism was not Muhammadanism at all, in fact it was as much political as religious. To conduct their propaganda, a secret society was initiated. The doctrine was taught that God has always been incarnate in some Imam such as Adam, Abraham and so on down to Ali, but he need not always be visible. Hence it was but a short step to announce the coming some day of the Mahdy or Messiah. The Shiahs did not hesitate to bear false witness or take false oaths when it suited them. They cursed all the enemies of Ali, interpreting literally the verses (Koran IX. 28. 29).

"The Infidels are unclean &c."¹ One point of difference between the Shiah and the Sunnis is interesting. The former admit the new moon² of Ramadan by astronomical calculation, but the latter must have it established empirically and attested by witnesses.

The Prophet had cast heresy into the outer darkness when he said, "He who tires of my sunna does not belong to me." From the seventh century the orthodox party (sunnis) was composed of four schools, the earlier schools of the exegetist Tabari and of Daud Ibn Ali having disappeared. The four schools³ were (a) The

1. Cf. also Sura V. 40, 41. "As to the infidels - if that they had twice the riches of the earth to be their ransom from torment on the day of resurrection, it should not be accepted from them: And a dolorous torment shall be their's." "Fain would they come forth from the Fire; but forth from it they shall not come; and a lasting torment shall be their's."

2. Cf. Rubáiyát Of Omar Khayyám. LIX.
'Listen again One evening at the Close
Of Ramazán, ere the better Moon arose.'

3. There is an interesting article on Muslim Jurisprudence by Maulana Mahmud Hassan Khan in Islamic Culture. Jan. 1927
Pub. at Hyderabad. Ed. by Marmaduke Pickthall.

Hanafi; (b) the Shafii; (c) the Maliki (d) the Hanbali. Today half Islam follows the Hanafite fikh so called after the founder the Imam Abu Hanafi (150). Abu Hanafi understood the importance of liberty of opinion, and was quite willing to have foreigners taught the Koran. It made most headway in Turkey, Asia, and India.

In point of numbers the Shafite school comes next, so named after the Imam Abu Abd Allah Muhammad b. Idris al Shafii (204).¹ The school flourished under the Abbasids, and spread to Iraq, Persian Gulf, Southern Arabia, Palestine and Lower Egypt. As we have mentioned before, the tomb of the founder is in Cairo, and this was an asset hardly less valuable to Cairo than the possession of the body of Alexander was to Alexandria. The Shafiis professed the golden mean between the Hanafis and their adversaries. Shafi set forth the pros and cons of the problem of whether the Koran should be translated, (translation would be essential if foreigners be taught the Koran) and then he hesitated. Both the Hanafis and

1. His teaching is still studied at al-Azhar.

the Hanbalites approved of an interlinear version.

The Imam Malik Ibn Anas (179) founded at Madina the dar as-Sunna (home of primitive tradition). The Malikis claimed to be purely orthodox, and considered it a duty to vindicate the imprescriptible rights of the prophetic Sunna. Malik was definitely hostile to all translation of the Koran. The Malikis predominated in Andalusia, Western Africa, Sudan and parts of the Persian Gulf.

The school of Imam Ahmad Ibn Hanbal (241) did not acquire recognition as a juridical school until after the sixth century, and then only after sanguinary struggles. It represented extreme orthodoxy, and had most adherents in Syria and Mesopotamia. Liberty of opinion was only allowed in desperate cases.

Concerning persons taken in the Holy War, Ahu Hanifa advocated death or slavery; Shafii considered they should be liberated, with or without ransom. Hanifa would allow marriage with a Scriptuary woman, but Shafii would not, on the ground that the Scriptuaries having altered the text of the Bible had thereby forfeited their right to be treated as Scriptuaries. Concerning the

giving of alms at the end of Ramadan, the Shafiis considered it a duty, the Hanafis were not so strict, while the Malikis regarded it as sunna (custom). Abu Hanifa alone permitted the execution of a Muslim who had murdered a tributary. Shafii alone maintained that the borrower of an article might not lend again without the owner's permission having been obtained.

In the Mansuriyya a College founded in Cairo by the Mameluke Sultan Al-Malik al-Mansur Kalaun in 684, lessons in Jurisprudence were given according to the Four (orthodox) Schools. Instruction was also given in Commentary (Tafsir) Traditions (Hadith) and Medicine. "Mens sane in corpore sano," has from time immemorial been endemic, as it were, in the very soil of Egypt. Al-Sharaf al-Busiri extolled the opening of this College in an ode beginning :-

"Thou hast founded a College and Hospital
To rectify religions and bodies."¹

1. This pleased the Emir Alam al-Din who was in charge of the erection, and so he bestowed a present on al-Busiri.

Al-Nasir Mohammed b. Kalaun who completed the Nasiriyya College in Cairo in 703, arranged in it lectures according to the Four Schools.

The professors belonging to these different schools were fond of argument at the best of times, but one can easily imagine what a bear garden the mosque of Amr was, when the Malikis and the Shafis were allotted fifteen porticoes each, but the Hanafis only three.

Salah ed-Din built colleges for the Shafiis, the Hanafis and the Malikis. This method of fighting heretical tendencies by building and endowing orthodox colleges was not peculiar to Salah ed-Din. His former Sovereign Nur -ed- Din had founded colleges for Hanafis at Damascus. Nur -ed- Din again was only following the example set by that splendid pattern of the age in Asia - the great Seljuk Sultan Malik Shah, friend of Omar Kháyyám and founder of the magnificent Nizamiyya college at Baghdad.

The instruction at these college mosques was narrow and bigoted, but it was the system of education throughout Islam and by the establishment of such buildings in Cairo ^{that city} ~~it~~ became a centre of such thought and learning

as was good currency in Islam.

Of the Four Schools the Hanbalites were the least tolerant towards non-Muslims. They also manifested extreme hostility towards Sufism.¹ The word sufi is derived from suf (wool.), woollen garments being frequently worn by ascetics, but attempts have been made to trace its connexion with safa (purity) and suffa (bench) the allusion being to the homeless and destitute people sitting on the bench outside the mosque at Medina. Ibn Khaldun (809) has a chapter on Sufism in his Prolegomena.² According to him, Sufism "is one of the religious sciences which were born in Islam. The way of the Sufis was regarded by the ancient Moslems and their

1. See pp. 227-235. ff. A Literary Hist Of The Arabs. Reynold A. Nicholson. C.U.P. 1930.

Also by the same author -

Studies In Islamic Mysticism C.U.P. 1921.

The Idea Of Personality In Sufism. C.U.P. 1923.

2. p. 467 Ibn Khaldun's Muqaddima (Beyront, 1900) = vol iii pp, 85. ff. of the French Trans. by De Slane. Quoted p.229. Nicholson's Literary Hist. Of The Arabs. C.U.P. 1930.

illustrious men — the Companions of the Prophet (al-Sahaba), the Successors (al-Tabiun), and the generation which came after them — as the way of Truth and Salvation. To be assiduous in piety, to give up all else for God's sake, to turn away from worldly gands and vanities, to renounce pleasure, wealth, and power, which are the general objects of human ambition, to abandon society and to lead in seclusion a life devoted solely to the service of God — these were the fundamental principles of Sufism which prevailed among the Companions and the Moslems of old time. When, however, in the second generation and afterwards, wordly tastes became widely spread, and men no longer shrank from such contamination, those who made piety their aim were distinguished by the title of Sufis or Mutasawwifa (aspirants to Sufism). The Prophet is reported to have said, "There is no monkery in Islam," and for over a century after his death there was not. The Sufis, however, invented spurious Traditions to support their contention that Sufism was the esoteric teaching of the Prophet. The early Sufis were fanatically pious men who had an overwhelming consciousness of sin and a great dread of Judgement Day (so graphically described

in the Koran) and the torments of Hell fire. This naturally led them to renounce the world and concentrate upon saving their own souls. They loved God much, but they feared him a great deal more. Such fear of God seized upon Hasan of Basra that "it seemed as though Hell-fire had been created for him alone." But the early Sufis were within the pale of orthodoxy; in fact they attached the greatest importance to some of Muhammad's teaching. That fine thinker al-Ghazzali,¹ became a Sufi. At one time Ghazzali tasted all the bitterness of complete scepticism. In search of a Belief again, he sought in vain among the Scholastic Theologians, the Materialists, the Naturalists, the Theists, the Doct^rinists and the Esoterics. None could comfort nor instruct him. As a last hope he turned to Sufism, and in the Sufi prayer, praise, and meditation, his weary spirit found peace.²

1. Al-Ghazzali's connexion with Sufism will help us to understand some of his ideas on education which are discussed on pp 246 ff. of his Thesis.

2. See The Life Of Al-Ghazzali. Duncan Black Macdonald. Journal Of The American Oriental Society. Vol. XX. (1899). pp. 122. ff. This is still the best account of al-Ghazzali.

Al-Ghazzali's great work for Islam was to redirect men's minds to the study and exegesis of the Word and the Traditions; to bring philosophical theology within the range of the ordinary mind; to re-awaken fear in the minds of the congregation, and to establish Sufism in Islam.

Salah-ed-Din in 569 endowed the monastery (Khanakah) of Said al-Suada in Cairo upon the Sufis,¹ and arranged that supplies of food, flesh, and bread be sent to them daily.

The mosques were the colleges or academies of Islam. One could always find learned doctors of canonical law, poets, and commentators in a mosque. When they were not lecturing, they were either disputing or sitting in judgement upon the poetical, legal, or theological effort on the part of some aspiring scholar. Omar Khayyám² has

1. See Suyuti's Account Of Egyptian Ascetics and Sufis. (Husn al-Muhadara Vol. I. pp. 218 ff. Cairo, 1327 A.H.)

2. The Rubáiyát. XXVII. & XLV.

described it with considerable felicity. -

"Myself when young did eagerly frequent
Doctor and Saint, and heard great Argument
About it and about: but evermore
Came out by the same Door as in I went."

And in a later stanza gives this advice :-

"But leave the Wise to wrangle, and with me
The Quarrel of the Universe let be;
And in some corner of the Hubbub coucht,
Make Game of that which makes as much of Thee."

III.^{1.}

The following were handed down as sayings of the Prophet himself :-

"The ink of the learned and the blood of the martyrs are of equal value in the sight of heaven."

"Who so pursueth the road of knowledge, God will direct him to the road of Paradise; and verily the angels spread out their arms to welcome the searcher after wisdom, and all things in Heaven and Earth ask grace for him: for the pre-eminence of a learned man over a mere worshipper is as the full moon² above the stars."

"A father can confer upon his child no more valuable gift than a good education."

"It is better that a man should secure an education for his child than that he bestow a sa in charity."

1. Johnson in the Preface to his Dictionary (p.3.) wrote, -
 "--- I am commonly indebted to Junius and Skinner, the only names which I have forborn to quote when I copied their books; not that I might appropriate their labours or usurp their honours, but that I might spare a general repetition by one general acknowledgment." I desire to do likewise by stating that for this^{sub} section in particular, the article on Muslim Education by Prof. Ignaz Goldziher. Vol.V. Encyclopaedia Of Religion And Ethus, 1912, has been of the utmost assistance.

2. The moon has always been a symbol of beauty among the Arabs.

"He who leaves his home in search of knowledge walks in the path of God until his return home."

"God makes easy the path of Paradise to him who makes a journey for the sake of knowledge."

"The learned are the heirs of the Prophet."

"Honouring a learned man is worth honouring seventy prophets."

"The learned hold the third rank, preceded only by God himself and His angels."

"Seek ye learning from the cradle to the grave."

According to the Koran, the four great virtues were

- (a) the science of the learned.
- (b) the justice of princes.
- (c) the prayers of the faithful.
- (d) the valour of the brave.

Among the sayings attributed to Ali are:-

"Eminence in Science is the highest of honours."

"He dies not who gives his life to learning."

"The greatest ornament of man is erudition."

To educate a female slave, and then to set her free and give her a husband was a means of acquiring

merit and honourable advancement in Islam. The Prophet himself (who, if he himself learnt to write at all, only did so towards the end of his days) was in favour of the acquisition of knowledge. Certain prisoners taken at the battle of Badr (2. 624 A.D.) were allowed to go free,¹ after they had taught twelve boys to read and write. Those who could read or write in Medina had learnt the art from the Jews who were resident there.

The kuttabs (elementary schools) and their muallims (teachers) occur early. The mother of Anas b. Malik, - one of the attendants of the Prophet, requests a muallim-kuttab to send her some schoolboys, preferably of the slave class to assist her in wool carding.

By the early Umayyad period elementary education

1. Ukbah son of Abu Muait who was taken prisoner at Badr was slaughtered. His offence was that he bought the books of the Greeks, Persians, and the Arabs of Hira, and recited their contents. He also argued that if story-telling was any qualification for the title of Prophet, then he had as good a right as Muhammad. See pp. 268. ff. Mohammed D.S. Margolionth. Lon. 1905.

was firmly established in Islam. Famous men were schoolmasters or had been before they became famous. The poets Kumait and Tirimmah are examples, while the famous Commander and vicegerent Hajjaj b. Youssef was never allowed by his enemies to forget that he had been once a schoolmaster at Taif. This was because the status of an elementary teacher was particularly low, no higher than that of weavers or cobblers. Khalil Totah recalls¹ the following doggerel which he often heard in his boyhood.

"Among six is lowliness distributed:
The weaver, the tailor, the cobbler,
As to the teacher of children, oh, how stupid he is!
And with him go the stitcher and quilter."

The teacher's profession forced him to spend most of his time among little children, and as a result he was dubbed 'cold-bearded,' (effeminate or lacking in virility.) It was considered a sufficient indignity² "for a man to be a teacher of boys, however virtuous he may be; for a teacher

1. p. 37. The Contributions Of The Arabs To Education. Columbia Univ. Press. N.Y. 1926.

It is unfortunate that this work (pp.105) can only be used with extreme scepticism. Chap.V. in particular, which deals with Arabic Pedagogical Literature, calls for complete revision.

2. p. 37. Ib.

is a teacher wherever he may be even though he builded him a heaven above the heavens." "More of a sot than a teacher of kuttah," was an expression in common use, as was the adage, - "Seek no advice from teachers, shepherds, or those who sit among women,¹ for God has deprived them of reason and withheld His blessing from their trade."

The same contempt for the elementary school-teacher is seen in the Arabian Nights. In the tale of the Foolish Dominie² it is related that "once upon a time, a schoolmaster was visited by a man of letters who entered a school and, sitting down by the host's side, entered into discourse with him and found him an accomplished theologian, poet, grammarian, philologist and poet; whereat he wondered, saying to himself, 'It cannot be that a man who teacheth children in a school, should have a perfect wit.' "

Then there was the illiterate who set up for a schoolmaster.³ He was one of the menials of a mosque,

1. Cf. Eccles. IX. 2-9.

2. pp. 118 ff. Vol.V. Alf Laylah Wa Laylah. Rich. F. Burton. 10 vols. Benares. 1885-1886.

3. p. 119. Ib.

"who knew not how to write or even to read and who gained his bread by gulling folk. One day it occurred to him to open a school and teach children; so he got together writing-tablets and written papers and hung them in a high place. Then he greathened his turband¹ and sat down at the door of the school; and when the people, who passed by, saw his huge head-gear and tablets and scrolls, they thought he must be a very learned pedagogue, so they brought him their children; and he would say to this, "Write," and to that "Read;" and thus the little ones taught one another."

When Abd Allah ibn al-Muqaffa was asked by Ismail ibn Ali to tutor his child, the reply he gave was, "Do you wish me to be classed among fools?" Even among Hadith attributed to the Prophet this contempt² of the teacher is found, - "The teachers of our children are the vilest among you; the most deficient in pity for the

1. Gone out of fashion in Egypt now.

2. The teacher in Andalusia, and in Sicily was held in much more reverence than in the rest of Islam.

orphan, the most churlish towards the poor."

Yahya b. Aktham (243) judge under the Khalif Mamun refused to accept teachers¹ as satisfactory witnesses in a court of law. Yet it was considered that possession of knowledge effaced differences of rank and birth, and a high value was attached to seeking knowledge which though sought without an intention was an intention in itself. Concealing knowledge, and speaking without knowledge, were equally culpable. But some held that fear of God was sufficient knowledge. The Prophet had said, "Verily the green rod² is one of the trees of Paradise." So one is inclined to think that on the whole the teachers of children were a dull ignorant lot, who resorted to excessive use of the 'green rod' to instil that adequate

1. Cf. the implied contempt in Epigrams of Martial. IX. LX VIII. To the master of a noisy school. "Dismiss your scholars, brawler, and take as much for keeping quiet, as you receive for making a noise."

2. Cf. universal use of. Ibid Bk. X. L XII. "---- and the terrible cane, the schoolmaster's sceptre, be laid aside, and sleep until the Ides of October. In summer, if boys preserve their health they do enough."

knowledge - 'fear of God,' the sole text-book being the Koran which had to be learnt by rote. This contempt for the pedagogue had its counterpart in Greece and Rome, and one would hesitate before saying that it does not linger still in our country.

Yet teachers in general were held in respect by the public. Among the supposed utterances of the Prophet we find, "The best of men, and the best of all who walk the earth, are the teachers. When religion falls into decay, it is the teachers¹ who restore it. Give unto them, therefore, their just recompense; yet use them not as hirelings, lest you wound their spirit. For, as often as the teacher bids the boy say, "In the name of Allah, the Merciful, the Compassionate," and the boy repeats the words after him, God writes for the teacher, and for the boy and his parents a record which shall surely save them from the Fire."²

1. It is obvious that this does not allude to the mualim kuttab.

2. Quoted by Abdari, Madkhal ii.158.

Astonishment at meeting an accomplished teacher is the theme of this tale.¹ "(Quoth one of the learned) I passed by a school, wherein a schoolmaster was teaching children; so I entered, finding him a good-looking man and a well-dressed; when he rose to me and made me sit with him. Then I examined him in the Koran and in syntax and prosody and lexicography; and behold, he was perfect in all required of him, so I said to him, "Allah strengthen thy purpose! Thou art indeed versed in all that is requisite." Thereafter I frequented him a while, discovering daily some new excellence in him, and quoth I to myself, "This is indeed a wonder in any dominie, for the wise are agreed upon a lack of wit in children's teachers."

Al-Faqih Abu Ibrahim's reply to the message from the Caliph al-Hakam summoning him to his presence was, "All obedience is due to the Commander of the Faithful, but kindly return to him (may God bless him &c) and inform him

1. pp. 117-118 ff. Vol. V. Alf Laylah Wa Laylah. Burton's ed

that you found me in one of God's Houses instructing some students and, therefore, I shall be unable to leave until the conclusion of the lesson." Students would mourn famous teachers for a year or more.¹ I have often witnessed instances of exhibitions of deepest respect on the part of students towards their teachers. Prof. Duncan Black Macdonald² described a scene in a mosque which is a charming picture of the patriarchal relationship between teacher and students, - "Once, in the mosque of al-Muayyad, I came upon a scene which carried me back to the earliest days of Islam. An old man was seated in the great colonnade with his back to a pillar. Round him was a little circle of half a dozen

1. When the Imam al-Haramain died in 478 at Nisapur, poets sang his praises, merchants closed their shops, the pulpit in the mosque was broken down, pupils smashed their pens and inkpots, and had a year's holiday in honour of the dead. The corpse was washed by favourite pupils, and the entire city turned out for the funeral.

On the death of al-Shirazi his pupils sat in silence for three days, and the madrassah was closed for a year. His desk was destroyed and the pupils broke their ink-wells and pens.

cf. Elegy on the death of a celebrated scribe (Katib) called Ibn al-Bawwab. (Quoted Ibn Khallikan II. 283.)
 "The ink-bottles are black with sorrow, and the pens are rent with affliction."

2. p. 290. Aspects of Islam. N.Y. 1911.

students, each with book in hand, to whom he was reading and explaining a text. The lesson closed and they rose, one by one, picked up their shoes and went sway. But first they each kissed the hand of their old teacher and he was left sitting at his pillar and reading. So had the founders of Muslim science sat, before colleges or universities were dreamt of, when each scholar taught for himself, and his disciples went forth with his personal certificate and boasted of the learning of their master," Verily it was not in vain that the Prophet had said, "Respect him who teaches you and him you teach." There is a very well-known Arabic proverb which states, "I am the slave of him who teaches me a (one) letter." What a contrast to another expression still in common use today, - "ahmaq min muallim kuttab!" (Duller than a dominie!) Nevertheless it was common to find that the teacher had more influence over the children than their own father, and this in spite of the fact that obedience to a father's commands was regarded as a virtue. One often sees in Egyptian households adult sons refusing to sit down or eat until their father has been satisfied.

The teacher who had, say half-a-dozen pupils, would employ them to fetch and carry and cook for him. Al-Ghazzali exhorted students to be humble before their master, and to seek the honour of serving him.

Even more so than in Ancient Egypt, was it possible for a poor youth of Islam to obtain an education. The great al-Ghazzali came from a very poor family, his father being a wool-spinner. The famous poet Abu Tammam was a water-carrier attached to a mosque; Abu al-Atahiah, another poet was a potter, Omar Kháyyám may have been a tent-maker; the poet Bashir ibn Burd's father was a humble maker of bricks; the great Abu Hanifa was once a draper. Poor students were assisted, especially in Cairo, Alexandria, Damascus, and Baghdad, by grants of food and clothes.

Yet apart from certain schools with endowments specially set aside for this purpose, up to the eleventh century (A.D.) it was left to the teacher to earn his living as best he could. Therefore he had to carry on a trade, or better still be a judge or a mufti. Al-Shafii practised law along with a theoretical study of jurisprudence for fifteen years. A Quadi was very well

paid. C. Snouck Hurgronje¹ refers to the same practice in Mecca, only on a less elevated plane, -
 "- - - a highly esteemed dootor whom I knew in Mekka, is also acquainted with watchmaking and gun-mending, the distillation of fragrant oils, the gold or silver plating of trinkets, and (this is a speciality of his) the smelting of gold and silver ores. With all this he surpasses as a doctor most of his competitors."

However, the more conscientious of the teachers of Islam refused these posts. Abu Hanifa refused to accept the chief judgeship of Baghdad. According to al-Bukhari² a teacher could not ask for money in return for lessons. The point was that for the spreading of knowledge concerning Divine things, a teacher should expect

1. p. 93. Mekka. trans. J.H. Monahan. Lond. 1931.

Ibn Djubair in the sixth century found many schools for orphans and poor children in Cairo. Nearly all of them had a drinking fountain. A children's school was called 'maktab' but a school for poor children was known as 'kuttab sabil.' The poor children received in addition to free instruction, free maintenance, with the usual object of teaching, "the orphans of the Muslims to recite the Book of God, the Exalted, and also for other works pleasing to God, and the various kinds of piety." Even today children are being taught at al-Azhar Mosque, or University, the open apartment above the entrance being a schoolroom, where the poor children of the neighbourhood are taught to read and write.

2. Idjara Bab. 16.

no monetary recompense, but should find it a sufficient reward to be engaged upon a work well pleasing to God, and thereby attaining a nearness to Him. Thus as a means of living, poetry offered the best prospect. Up to the tenth century (A.D.) the Caliphs were surrounded by poetical philologists. A philologist could not hope to have a Government post, but a well-turned couplet might at any moment bring in an estate or a bag of gold. These poets travelled from one Court to another to celebrate in rhyme all the great ones they could get hold of. Many of them were fine stylists. The Katib Abd al-Hamid¹ was a perfect master of the belle-lettres. He began his career as a boy's teacher, and then became katib or secretary to the last of the Omayyad sovereigns. He said, "The best style is that whereof the words are stallions and the thoughts virgins."

The Wazirs generally had a fund for assisting learned men, for few were content to teach on earth in

1. See pp. 173 ff. Vol. II. Ibn Khallikan's Biographical Dictionary. (De Slane's ed.) Paris 1843.

the hope of a reward in heaven. Even Bukhari had to admit that instruction in the Koran should have a pecuniary reward, and in support of this ruling, he cites the case of a man who, being too poor to give his bride a wedding present, was allowed by the Prophet to teach her several suras of the Koran in lieu thereof.¹ Accordingly payment of the teacher became the rule, but he had to be satisfied that all money and gifts presented to him was above suspicion. We have already recounted how Shaikh Abu Ishak al-Shirazi refused to lecture in a mosque built of stones dishonestly come by. An equally high principle made Abd al-Rahman al-Sallami return the present of a number of cattle which the grateful of a student had sent him. As in ancient Greece, there was no uniformity of pay.² Libanius who was very lenient in the matter of fees, left it to the conscience of each

1. Comment is unnecessary!

2. See p. 29. p.32. pp. 179-184 ~~see~~. pp.187-189 ~~see~~ The Universities Of Ancient Greece. John W.H. Walden. Lond 1912. Isocrates (b. 436 B.C.) charged for his course of rhetoric (2 - 3 years) as much as 1,000 drachmae.

individual student to pay him. He lost, and thereafter he sorrowfully reflects that it was neither to the advantage of the teacher nor to the student that instruction should be given free, "For," said he,¹ "What one can get free one makes no exertion to obtain, and what has cost nothing, one does not value." The sophists of Antioch charged fees while in the enjoyment of a salary. Themistius at Constantinople, prided himself on not accepting any fee or remuneration. The famous Tirmidhi received only four dirhams a month, the lecturer in the Suyufiya college eleven dinars, while in the Salahiya and the Nasiriya the lecturers received as much as forty dinars and sixty roṭl of bread per month. Al Tabari was given a sum of money when he taught in the Mosque of Amr. Should a teacher's fees, allowance or salary cease, he was not to discontinue his lessons or lectures, for that was considered a shameful thing to do.

1. iii. 441, 12.

The madrassahs established after the eleventh century A.D. seem to have adopted the small subsistence allowance of the earlier days as the standard of the teacher's salary. The result was that many teachers gave up their jobs. But they could also continue as private teachers.¹ In Egypt it became the practice for teachers to take in boarders, whose parents supplied the food. The teacher often gave his daughter² in marriage to the best of them. Ibn Rashik³ says that the youth of Kairawan gathered at the house of Abn Ishak al-Husri, a poet, and took his lessons; "they looked on him as their chief, and felt for him deep respect; his works got into circulation and gifts⁴ poured in upon him from all sides."

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1. These too are what we may describe as endemic, for the land of Egypt today is full of them.
 2. A convenient way of disposing of daughters!
 3. p. 34. Vol. I Ibn Khallikan.
 4. The practice of 'bringing gifts' to learned men seems to have been universal. Ministers of the Gospel in Wales, especially those in rural districts, still receive gifts of butter, eggs &c. from members of their flock.

Like Socrates, he is reported to have said, "The utmost of my knowledge is that I feel my inability to acquire a just knowledge of it." A certain teacher is reported to have nursed a sick pupil, and to meet the expense of the illness - even sold his donkey. As time went on the pay of teachers became more regular. The sultan Beybars who founded the College Zahiriyah in Cairo (660) made a condition that none should teach in it without pay. Al-Maggari¹ states that Malik Ahmad, and al-Shaffi all admit the principle of remuneration to teachers for lessons or tuition given. Abu al-Abbas received money for teaching Arithmetic and syntax. Some teachers charged excessive fees. The grammarian Muhammad b. Ali al-Mubraman (345) would not give instruction in the kitab (book) of Sibuyah for less than a fee of 100 dinars.² Al-Suyuti (808) charged a dirham for every line of Alfiyya a grammatical poem of 1000 lines. According

1. p. 68. Vol. III.

2. The value of the dinar varied according to period and country, but for general purposes it can be valued at 8/- to 10/-.

to the Egyptian historians¹ public lectures on different branches of knowledge were instituted at al-Azhar in Old Cairo, in the reign of Al Aziz Nizar, and that the professors were paid by the Government. The rise of the madrassah was not due to lack of room in the mosques, - but the spread of knowledge had created a body of men who found it difficult to make a decent living through their stock of abstract learning.

There were three types of teachers, - the much despised muallim kuttab,² who tried to teach the Koran to children in the elementary school; the muaddib or tutor, who instructed the sons of the princes, nobles, and the rich, for then as now "the poor man is honoured for his skill, and the rich man is honoured for his riches,"³ and thirdly the mudarris or professor of higher learning. In the case of a chief justice the title "al-imam al-mudarris" was sometimes used. Attached

1. See p. XXX. Vol. 1 Ibn Kallikan.

2. In Egypt the term fiki was used for a schoolmaster.

3. Eccles. X. 30.

to the mudarris was a muid (the Repeater), the best pupil or student being sometimes chosen for this post. His work was to go over the lectures with the students after the mudarris had delivered them.¹ Then there was the title of Shaikh, a title of honour given to eminent divines. In a way it represented our Rev. plus D.D. The imam was he who led the congregation in prayers, but it gradually attracted to itself the extra connotation of academic doctor. Teachers had a characteristic dress consisting of a gown² with wide sleeves, long tails and pleats. One wonders whether there was not some form of hood as well, for in 1774 A.D. Mohammed Bey founded his beautiful Madrassah opposite el-Azhar. It has porticoes for the Hanafis, the Malikis and the Shafiis, and its professors were paid a salary. On opening day, Mohammed Bey clothed the learned doctors of law with cloaks of white sable, or white fur.

Men of learning had some kind of guild, with a

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1. Cf. a surgeon who operates, leaving assistants to sew up the incisions.
 2. Probably the forerunner of the modern 'academic dress.'

rais (superintendent) for each district, who was able to exercise considerable influence upon the appointment of teachers. The Caliph would not admit a teacher to the Mosque of al-Mansour without permission from the rais. Around 1066.A.D. these 'unions' had funds at their disposal for the support of needy students. Both al-Ghazzali and his brother when destitute became students at a madrassah, and thus got food.

The law of Islam, and the Talmud demanded that all teachers should be married, and, in the case of the elementary schoolmaster laid down the condition that he should carry on his work, not in his own house, but in a specially appointed public place in full view of the people. Ethically this is interesting, for such a rule was obviously propounded to obviate even the breath of suspicion or scandal.

Muslin literature abounds with precepts and exhortations to treat all pupils alike. Force was given to these precepts by the affirmation that on Judgement Day the poor Dominie would be subjected to a brisk cross-examination in order to elicit whether he had maintained strict impartiality between pupil and pupil.

Abdari held it unworthy and 'unprofessional' of a teacher to advertise, or compose invitations¹ to prize-giving days, or school festivals, in verse which, of course, would abound in compliments. Neither was a teacher to place placards outside the entrance to his establishment. School was to be shut on Thursday, Friday, and a few days before and after the 'eid' (festival or holiday, e.g. Bairam). This gave rise to the now common saying, - "As happy as a Teacher on Thursdays. (Kama fariha al muaddib bil Khames.) In addition, scholars were granted whole or half-day holidays with or without the slightest provocation. There was method in doing this. Every time a scholar had mastered a section of the Koran, a holiday was granted and thereby an opportunity was given to his parents (who naturally would be adequately warned in advance) to visit the school - bringing gifts to the Teacher. The rod was always in evidence, and Muslim jurisprudence sanctioned, three to

1. As this, too, was only a surreptitious method of advertising.

ten strokes according to the nature of the offence, religious aberration being considered especially serious. The boy had to be over ten years of age. A favourite description of the teacher was, - "the one who brandishes the whip and takes reward for teaching the Book of God." There is ample evidence that the tutors of the sons of the Caliphs did not spare the rod, and the fathers do not seem to have disapproved.

The educational maxims with which Arabic pedagogical literature abounds refer to boys for the most part, but Ibn Bassan records polite instructions to the effect that teachers of girls were to be more strictly supervised with regard to the poetical selections put before their pupils. There was no general desire to educate girls, apart from instructing them in religious and moral things. Instead of training in letters, they were to have practice with the spindle. Had not the Prophet said out of his infinite wisdom, and a fairly

extensive experience of women¹ (he had in his harem ten wives and two slave girls). "Do not let them frequent the roofs; do not teach them the art of

1. See pp. 77.ff. Studies In A Mosque, where Stanley Lane-Poole makes a spirited defence of the Prophet's morals:- "Two things he loved, perfume and women; the first was harmless enough, and the special case of his wives has its special answer. A great deal too much has been said about these wives. It is a melancholy spectacle to see professedly Christian biographers gloating over the stories and fables of Mohammad's domestic relations like the writers and readers of "Society" journals. It is, of course, a fact that whilst the Prophet allowed his followers only four wives he took more than a dozen himself; but be it remembered that, with his unlimited power, he need not have restricted himself to a number insignificant compared with the harims of some of his successors, that he never divorced one of his wives, that all of them save one were widows, and that one of these widows was endowed with so terrific a temper that Abu-Bekr and Othman had already politely declined the honour of her alliance before the Prophet married her."

writing; teach them spinning and the surat al-nur"¹ (XXIV Light). The above hadith did not prevent Muhammad from requesting al-Shaffa, the daughter of Abd Allah to teach Hafsa his wife the art of

1. This Sura hardly seems suitable for young girls e.g. "The whoremonger shall not marry other than a whore, or an idolatress, and the whore shall not marry other than a whoremonger or an idolater."
 "Verily, they who throw out charges against virtuous but careless women, who yet are believers, shall be cursed in this world and in the world to come; and a terrible punishment doth await them."
 "And speak to the believing women that they refrain their eyes, and observe continence; and that they display not their ornaments, except those which are external; and that they throw their veils over their bosoms, and display not their ornaments, except to their husbands or their fathers, or their husbands' fathers, or their sons, or their husbands' sons, or their brothers, or their brothers' sons or their sisters' sons, or their women, or their slaves, or male domestics who have no natural force, or to children who note not women's nakedness.
 ---"

writing charms. Ayshah, daughter of Abu Bekr and wife of the Prophet was literate, and she is credited with over a thousand traditions. Nevertheless emphatic warnings were uttered against teaching women to write. There was a current saying, "A woman who is taught to write is like a serpent which is given poison to drink." Especially were girls to be kept from poetry. But the rule against teaching women to write, was not rigidly applied. A learned lady of Damascus went by the name Sitt al-kataba (mistress of writers). Al-Shafii, when he went to Cairo, listened to Nafisah, daughter of Abu Muhammad, reciting traditions. Cases are recorded of one or two girls attending school with boys. In the Banu Abs quarter at Kufah there was an elementary school for boys one member of which was a girl. Khalil al-Muallim taught boys and girls in the same place. The Umayyad Caliph, al-Walid ibn Abd al-Malik once passed the place where a schoolmaster was teaching boys, among whom was one solitary girl learning the Koran.

Haroun al-Rashid, before buying a slave-girl submitted her to an examination. "Therefore the most notable professors of theology, law, exegesis, medicine, astronomy, philosophy, rhetoric and chess examined her

in succession, and in each case she not only gives satisfactory replies to all their questions, but ends by putting to each of them a question which he is unable to answer."¹

Khalid ibn Abdallah al-Qasri bought thirty maids and having paid a high price for them, he set them

1. p. 32. Arabian Medicine. Edward G. Browne. C.U.P. 1921. Cf. Dr Pococks's opinion at a much later date. "The best education is among the slaves, who understand Arabic and Turkish, and often write both, and go through their exercises constantly; to ride, shoot, and throw the dart well, being esteemed great accomplishment."
- p. 315. Vol. XV. A General Collection Of The Best And Most Interesting Voyages And Travels In All Parts Of The World. John Pinkerton. Lond 1814.
- Ibid. p. 316. "The Arabs that live in tents are seldom seen to pray."

a test. It transpired that they knew the Koran well, could sing, and also recite a great deal of poetry, much of which was from the works of al-Kumayt.¹

The lot of the slave-girls seems to have been a happy one for we read² that once upon a time, "A free boy and a slave girl once learnt together in school and the boy fell passionately in love with the girl, --- so one day, when the other boys were heedless, he took her tablet and wrote on it ---" two couplets declaring his love. She answered him in two couplets. The teacher saw the tablet, and being^{of} a sentimental nature told them in two couplets not to fear the teacher. Then the girl's owner came, and discovered the verses, so he added two couplets of his own in which the teacher came in for some abuse, and then he got the two lovers wed, and they lived in joy and happiness, "till there came to them the Destroyer of delights and the Severer of Societies."

1. A second-rate poet.

2. pp. 73-74. Vol.V. Burton's Alf Laylah Wa Laylah.

In the tale of "The Man's Dispute with the Learned Woman - - -" we are told,¹ "And when we had eaten we fell to disputing upon points of divinity, and I propounded to her a theological question bearing upon a difference between the Imam, the Founders of the Four Schools."

But there is no doubt that in Islam education of women has always been the exception rather than the rule. Only when the women-folk of Islam become generally educated, will the regeneration so sadly needed, commence.

1. Ibid. pp. 154-157. ff.

IV.

The basis of all education in Islam was the Koran. The first primer placed in the hands of a boy was the Koran, and his first task was to memorise it. Before a boy ever entered a kuttab his father would have made him know his Credo or articles of faith, - "I testify that there's no deity but God, and I testify that Muhammad is his Apostle." (La ilaha ill Allah). That and the inculcating of obedience to himself was usually the sole concern of the father. The boy was early made familiar with the formula of the adan (call to prayer) "God is most great; God is most great; God is most great; God is most great. I testify that there is no god but God. I testify there is no god but God. I testify that Muhammad is God's apostle; I testify that Muhammad is God's apostle. Come to prayer; Come to prayer; Come to safety; Come to Safety. God is most great; God is most great. There is no god but God." After this he memorised the Koran XXIII 117b. "Wherefore let God be exalted, the King, the Truth! There

is no God but He! Lord of the stately throne? And who so, together with God, shall call on another god, for whom he hath no proof, shall surely have to give account to his Lord. Aye, it shall fare ill with the infidels." After this he was taught the famous throne verse (ayat al Kursi ii. 256) "God! There is no God but He; the Living, the Eternal; Nor slumber seizeth Him, nor sleep. His, whatsoever is in the Heavens and whatsoever is in the Earth! Who is he that can intercede with Him but by His own permission? He knoweth what hath been before them and what shall be after them; yet nought of His knowledge shall they grasp, save what he willeth. His Throne reacheth over the Heavens and the Earth, and the upholding of both burdeneth Him not; and He is the High, the Great!"

Lastly, he learnt the last two verses of Sura LIX (surat al-hashr), "He is God, there is no Deity but him: He is the King, the Holy, the Peaceful, the Faithful, the Guardian, the Mighty, the Strong, the Most High! Far be the Glory of God from that which they unite with Him!"

"He is God, the Producer, the Maker, the Fashioner! To Him are ascribed excellent titles.

Whatever is in the Heavens and in the Earth praiseth Him. He is the Mighty, the Wise!"

When he was about six or seven years of age the boy entered a kuttab.¹ By the time he was ten,² he was expected to be able to know the Koran by heart. Absolute accuracy of pronunciation was demanded, for to mis-pronounce even one vowel was a sin. The effect of this training in the exact nuance of pronunciation of Arabic was to make the exercise purely mechanical. Prof. Duncan Black Macdonald³ has noted this tendency for,

1. At six years of age a boy's education began; when he was nine, he used a separate sleeping place; when he was thirteen (this varied) he received corporal punishment if he omitted to say his prayers; at sixteen his father gave him in marriage.
2. The following finished the Koran:- Ibn Sina (better known as Avicenna) at ten years of age Ibn al-Arabi and Omar Ibn Ahmad at nine; and the prodigy al-Tabari when he was only seven years of age.
3. p. 291. Aspects Of Islam. N. York. 1911.

"at al-Bira, in Palestine, about ten miles north from Jerusalem at a village school held in an old oven¹ out of which the scholars swarmed like rabbits, I learned how it was possible in Semitic for the same verbal root to mean "to cry out" and "to read." The dux of the school was put up to read to me from the Qu'ran. At once his lips became the bell of a trumpet; his face was as bronze and his mouth and throat were as brass, and with the hoarse, metallic falsetto of a phonograph he rendered his piece. He had his book before him; but it was evident that he was reciting from memory with the precise tones and inflections into which he had been mechanically drilled. It would be hard to over-estimate the proportion of time and labor given to this accomplishment."

Penmanship was also included in the elementary course, and interest in fine writing was often shown by adults. The Katib Abd al-Hamid² used to say, "Let the

-
1. I have frequently seen schools in Egypt in passages, tunnels, or even holes in walls, (i.e. old archways &c.)
 2. See pp. 173 ff. Vol. II. Ibn Khallikan.

stem of your reed pen be long and thick, let its point be fine, and cut it sloping towards the right hand."

Ibrahim Ibn Jabala remarks, "I followed his advice, and my writing became good.", To draw the human form was forbidden in Islam, so the artistic sense found some expression in the execution of exquisitely elaborate penmanship. Concerning the art of writing it was said that Ismail the patriarch was the first to have written in Arabic, but the learned believed that it was Murâmir Ibn Marwa, a native of al-Anbar, who was the first to do so. It was said that he belonged to the tribe of Murra, and that from al-Anbar the art of writing spread through the people. "Al-Asmai states that it was related of the tribe of Koraish that, on being asked whence they had received the art of writing, they answered: from Hira, The same question was then addressed to the inhabitants of Hira, and they replied: from al-Anbar ---"¹

1. Ibid. II 284. See also p. 285 for systems of writing.

After memorising the Koran a boy spent three years more on arithmetic,¹ the Arabic language² and some commentary on the Holy Book. The pupil was made familiar with joint-prayer, one of the older boys acting as imam. Other branches of knowledge taught were, legends of the prophets, hagiographic anecdotes and poetry, - erotic poetry being rigidly excluded.

The Caliph Omar I counselled parents thus:-
 "Teach your children to swim, and to throw darts, charge them that they must be able to mount a horse securely, and make them recite appropriate verses." The Caliph Abd al-Malik was positively Spartan in his views, "Teach them to swim, and accustom them to sleep, little." Here is the advice of an ex-schoolmaster, the great

-
1. Essential for calculating times of prayers, fasts &c, for Muslims worked according to the lunar calendar.
 2. The science of Grammar arose out of a need of protecting the sacred language of the Koran from corruption.

Hajjaj, "Instruct them in swimming¹ before you teach them writing, for they can at any time easily find one who will write for them, but not one who will swim for them." Ibn al-Tauam advised every wise father to have his sons taught writing arithmetic and swimming. Strangely enough arithmetic was considered of greater value than writing. It seems strange that swimming was mentioned so often, for there are but few opportunities to practise it in Arabia the birthplace of Islam. Goldziher² is of opinion that the pedagogic maxims such as those mentioned above were but the echoes of foreign, especially Greek and Persian views. He traces the importance ascribed to swimming to Greek ideas, to be able "neither to swim nor to read,"³ being the Greek equivalent for an absolute lack of culture.

Naturally a nobleman could prescribe what his son should be taught. Hisham Ibn Abd al-Malik commanded

1. The fate of a kingdom depended on this art once, for the last of the Umayyads swam the Euphrates, fled to Spain and there founded a kingdom.
Ancient History has many other examples.
2. Art. Muslim Education. Vol V. Encyc. of Religion & Ethics. 1912.
3. Plato Leg. iii 689. D.

his son's tutor to give the boy instruction in the Koran, then poetry, the great orations, history with special reference to famous battles, knowledge of good and evil, and finally the art of conversation. Haroun al-Rashid ordered the tutor to instruct his son in the Koran, history, poetry, the religious code and usages, and the art of conversation. It will be seen that sons of the rich received a far better education than those who went to school in the ordinary way.

This first stage in the education of a young Muslim, has been admirably summed up by Ibn Khaldun¹ in his Prolegomena, "To teach children the Qur'an² is a sign of religion shown by the Muslims in all their cities, and a duty which they universally fulfil; for by this means the faith is firmly planted in the youthful heart,

1. See p. 297. Vol. II. Ibn Khallikan.

2. He believed that the Koran must be the foundation of education for only this would produce the strongest faith in God, "an undergarment of religion." Even in Tripoli and Tunis where the Koran, the Traditions, and the principles of the various branches of learning were taught, the Koran retained its importance as the chief subject.

as also a knowledge of the dogmas which are enounced in the verses of that book. The Qur'an is therefore the basis on which are reared the future faculties of the mind; for that which is learned at an early age remains deeply impressed on the memory, and serves as a foundation for what follows, and we know that the form of the edifice is determined by the disposition of the foundations."

From this first step the young Muslim proceeded to the higher departments of study. We gather much information concerning higher education from the biographical notices of learned men. Avicenna studied medicine, literature, dogmatic theology, logic, Aristotle, arithmetic, algebra, Euclid, and the Almagest.

Lisan al-Din Ibn al-Katib pursued courses in the Koran, the Arabic language,¹ fikh (jurisprudence), exegesis of the Koran, literature, and mathematics.

1. Arabs still praise God, "who created the Arabic language the lust of all languages."

Other courses mentioned were, dialectics (ilm al-jadal) scholastics (ilm al-kaḥān), logic, philosophy, and astronomy.

Arabic studies were of two kinds (a) humanistic and (b) rational. To the former belonged grammar exegesis, tradition and jurisprudence; to the latter, - logic, natural science, metaphysics, music, arithmetic, geometry, and astronomy. It must be remembered however, that all these subjects had a strong theological bias. After all the first scholars of Islam were definitely theologians. While the theological system was being built up, the defence of the youthful faith was never lost sight of. Theological motives dominated everything - Allah was the fount of all knowledge.

Scientific subjects such as mathematics, astronomy, medicine, and metaphysics were outside the usual course of instruction in a madrassah. Therefore instruction in these could only be obtained from a private teacher. After the first flush of the early Abbasid period of culture had passed, the study of mathematics astronomy and science in general was considered as individual eccentricity, unless, of course, the intention

was to become a qualified physician. The effect of this kind of education was to train the memory and develop the power of reasoning, but only in formal methods. Neither was given adequate material upon which to work. So long as the problem concerned some intricate passage in the Koran they fared well enough, but minds so burdened with verbatim knowledge of the Koran, theology and jurisprudence, and reason developed only in one particular direction, were ill-fitted to cope with science, literature, foreign languages, philosophy and history. Stanley Lane-Poole¹ gives an instance of the remarkably retentive memories of the Arabs. It happened that fire destroyed the work of an Arab lexicographer, and the labour of years seemed to have vanished. But the learned man simply sat down and began to dictate the whole dictionary from alif to ye, and those who were familiar with the original MS. certified the second copy to be the same as the draft that was destroyed.

1. p.9. Islam . A Prelection Delivered Before The University Of Dublin. March 10. 1903.

Learning the Koran at an early age, and having to transmit traditions orally with absolute accuracy, naturally tended to produce such memories. In Islam the teacher rather than the madrassah was the centre around which students gathered. Traditions had to be heard orally, and so scholars wandered from one great teacher to another. The journeys undertaken and the hardships endured by some of these wandering scholars seem incredible. And when text-books came into use the teacher taught a book and the student transcribed it. There was a rule that no teacher could use the book of another without his permission, or that of his heirs.¹ Not even his sons could use his book. It was thus an acknowledgement of the rights of copyright, and also the rule that nobody could teach without the permission of the teacher. This permission or diploma (the idjaza) was written² in the book transcribed. Thus a particularly

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1. Very often the heirs had no say in the matter, for authors before they died frequently had their books destroyed.
 2. Usually on the fly-leaf of the books mastered under his tuition.

ambitious scholar would collect numerous diplomas from various teachers.¹ Abd El Latif had certificates from teachers in Baghdad, Khurasan, Egypt, and Syria. The value of each idjaza depended entirely upon the degree of fame and learning of the professor who gave it.² The kadi'l Abu'l-Husain Ali Ibn al-Hasan Ibn al-Husain Ibn Muhammad, a supporter of the School of as-Shafii, and an inhabitant of Egypt was the sole transmitter of certain Traditions founded on the highest authority. An idjaza from him would therefore be equivalent to first class in the Honours school of Hadith.

It was said of Ibn Tabar zad, a Baghdad shaikh who travelled teaching traditions that, "he filled the earth with the certificates which he gave to those who

1. Taj al-Islam Abu Sad is reported to have had four thousand teachers!

2. This is an abbreviated idjaza granted to al-Maggari by his teacher Abu Hayyan. (See Total Contribution Of the Arabs to Education, p. 57.) "I have certificated you (may God grant you success) in everything. I have learned from my teachers in Spain, Africa, Egypt, and the Hijaz, and in everything in which I was, myself, licensed to teach in Syria and Iraq." (In addition to being signed, an idjaza would be dated).

heard him deliver Traditions, and with the licences to teach which he had granted to his disciples. He lived to so advanced an age that he remained without a rival, and his conduct was uniformly marked by piety and virtue."¹ Sometimes a request for a licence was refused. There is the interesting case of the Hafiz al-Silafi, president of a college and a great teacher himself being refused by as-Zamakhshari.² On the first request proving abortive, Silafi communicated with Zamakhshari a second time, asking for a licence to teach his works and also the information which he had gathered from Zamakhshari's own lips. Here is the reply³ which he received:-

"Learning is a city which none can enter but by knowledge acquired from books or oral transmissions; these are its two gates. --- As for the knowledge I

1. See. Ibn Khallikan. II. p.388. Also III. p.503.

2. Ibid. III. p.324.

3. De Slane considers this ironical. See Note 16 Ibn Khallikan. III. p.328.

have acquired from oral transmission, I derived it from a low and shallow source, and it cannot be traced up to men versed in erudition or illustrious for talents; as for the knowledge I have acquired from books, it is the residue of a bottle and not great enough to reach the mouth; a slight drop insufficient to wet the lips."

Al-Silafi¹ was born in Ispahan (472) and died in Alexandria (576) being buried near the Green Gate. "When al-Adil was nominated governor of Alexandria, some time after the arrival of al-Hafiz al-Silafi² in that city, he treated the learned doctor with marked attention and honour. A college was then built by his orders, and the professorship therein entrusted to Al-Silafi, by whose name it is still known. No other Shafite college but that existed at Alexandria.³ Ibn

1. See his life. Ibn Khallikan I. pp.86-89. ff.

2. Ibid I. p.86. He came to Alexandria in 511, and "having fixed his dwelling in that city he was visited by persons from the farthest countries who came to attend his lessons and profit by his tuition." (Ib.p.87.)

3. Ibid. II. p. 351.

Khallikan met in Syria and in Egypt a number of Silafi's pupils who possessed his ijaza.¹ Another of his dāsciples, - Makdisi "professed in that city at the college which bears his name; he then removed to Cairo and continued, till his death, to fill the place of professor in the Sahibiyyah College."²

The teacher had his particular place³ to teach in the mosque, often by a pillar, which was his madjlis and also for his successors. Some teachers considered it irregular to teach while standing up, so the majority taught while sitting on a rug or mat, and the students in a circle, literally sat at the feet of their master. The Maliki Imam Muhammad al Nu-ali in Egypt (d. 380) had such a large class that it occupied the whole area around seventeen pillars in the mosque. Some lectured on one subject only - others on many. Lectures were

1. Ibid. I. p. 87.

2. Ibid II. p. 235.

3. Of al-Ghazzali we read (Ibid II. p. 622.) that, "during his residence in that city (i.e. Damascus) he gave lessons in a corner of the great mosque ---"

delivered any time from sunrise till late in the evening, so long as the time for prayers was not encroached upon. Vacation commenced when the course of lectures ended. Regular vacations and terms had not come into vogue. Some professors lectured once a day, others only once a week. All teachers enjoyed perfect freedom as regards choice of subject. The public could complain, and the State could interfere if there were any danger to religion or morals.¹ There was a convention that the first question after the termination of a lecture, be asked by the student nearest the lecturer. Anyone was free to join a halka (class) in the mosques to hear a teacher. Lecturers (and even preachers) could be interrupted and questions fired at them. They held discussions on their subjects and were subjected to criticism. This made them careful. Many a student who felt that he knew enough to begin teaching found this

1. There was the famous case of Dun-Nun who had to travel from Egypt to Baghdad to answer charges brought against him, before the Caliph Mutawakil.

criticism so severe that he resumed life as a student again. Teachers were often jealous of each other. Moh. Ibn Yahya forbade admission to those who held the views of his opponent Bukhari. Maqrizi saw the lecture hall at the Nadari^{ah} Mosque Cairo, guarded by police to prevent rival schools from indulging in a free fight. Love of discussion was very strong, but rather than cease, the disputants often continued until they were talking utter nonsense. Defeat in argument spelt shame indelible, so it became one of the delights of these learned disputations not so much to excel at genial sallies of wit, as to hurt feelings of opponents with clever witticisms.

In the earlier madrassahs the teachers slept and ate in their classrooms, but it was not the custom to live in a mosque. There were exceptions, - al-Ghazzali lived in the Mosque of the Umayyads, Ibn Khallikan was born in the college at Arbela founded by K^ukuburi 608. De Slane¹ says this proves that his father was lodged in

1. Ibn Khallikan IV. p. vii.

the college, - probably by special favour. The head of Salahdiyyah College Cairo had his home within the building. A madrassah often took its name from some famous teacher, for example, the Ghaznawdiyyah in Cairo.

Kait Bey built lodgings for foreign students, and even today the eastern door of Ibn Tulun Mosque, is known as the Bab al Shorba (Gate of Soup.)

Some students never changed their status, but wandered from one teacher to another, visiting various countries, collecting licences which they would never use, and eking out a miserable existence by doing a little teaching or transcribing of MSS. occasionally. One student lived on cabbage leaves that were thrown to him; another sold his trousers to buy writing paper. Tabari when penniless had to sell the sleeves of his shirt to procure bread. Nevertheless there was no lack of 'books,' although there was a popular saying to the effect that, "the glory of the learned man is in what he knows by heart." We find learned men scolded by their wives for possessing great numbers of books. One unfortunate bibliophile even met his death through his obsession. He had heaped a pile of folios around him on the floor, and

they fell upon him, with fatal consequences.

In all that they did, there is little to suggest that the Arabs regarded books with disrespect.¹ It was common for libraries to be bequeathed to mosques. The Bait al-Hikma founded (198-202) by al-Mamoun in Baghdad, had a large library rich in translations, and an astronomical observatory.² The dar al ilm in Mawsil had a good science library, and students therein were supplied with free paper. In the library founded by

1. For an impartial treatment of the evidence, as to whether the Muslims wilfully destroyed the Alexandrian Library see, in addition to what has been said in Section B of this Thesis, -

pp. 39 ff. The Early Development Of Mohammedanism D.S. Margoliouth. Lond. 1914.

Chao XXV. The Arab Conquest Of Egypt. Alfred J. Butler. Oxford 1902.

2. The first observatory in Europe, was built by the Arabs in Seville. It was erected under the supervision of the great mathematician Jaabir Ibn Afiah. After the expulsion of the Moors it was turned into a belfry, the Spaniards not knowing what to do with it. See. p.349.

"The Spirit Of Islam" Syed Ameer Ali. Calculta 1902.

Adud al-Dawla (367-372) in Shiraz, the books were arranged in cases, and listed in catalogues. The library at the palace of the Fatimids in Cairo was reputed to be the largest in Islam. Forty rooms were full of books in all branches of knowledge, among which were one thousand two hundred copies of al-Tabari's famous History, and eighteen thousand books on the old learning. When al-Hakim (395) founded his dar al ilm or dar al-hikmah, he saw to it that there was a library and a reading room, both in the charge of a trained librarian. Again there were books on all sorts of subjects including Medicine and astronomy.

In 435 al-Sanbadi saw a library in Cairo which contained six thousand five hundred books on astronomy, handasa and falsafa.

Ar-Rais Ibn Sina (Avicenna) when he was not yet eighteen years of age, visited the library of Nuh Ibn Mansur on his own account and found a great number of rooms and trunks filled with books. One room had philological and poetical works, another jurisprudence, and so on, each science having a separate room. Ibn

Sina relates¹ that he then read the catalogue of the ancient (i.e. Greek) authors, and found therein all he required; he saw many books, the very titles of which were unknown to most persons, and others which he had never met with before nor since. Political disputes caused al-Hakim's institution to be closed, but soon afterwards (517) it was re-opened by al-Mamoun in another part of the building. In the reign of Al-Mustansir there was a famine, and it was plundered. In 461 an eye-witness saw twenty-five camels carrying books from the palace library; where they went nobody known. It was closed in 567 with the end of the Fatimid Dynasty; the books were sold, - many were burned, or thrown into the Nile, and others used to supply soldiers with sole leather. Although a huge number of books perished in this way, nevertheless many were saved and became the nuclei for new libraries.

1. Ibn Kallikan. I. p. 440.

The Kadi al-Fadil secured one hundred and twenty thousand volumes. This was not an attack on books, but a result of the reaction against the Shiis.

The Mustansiriyyah (Baghdad) had a good library. It is recorded¹ that on the death of the Hafiz al-Silafi a well-known book agent of Cairo came to Alexandria to buy his library.

The great Arab geographer, - Yaqut i Hamwi, did much of his research in the libraries of Merv. Professor Margoliouth in his lecture on the historians of the second century says,² - "What we clearly find in this period is the growth of the practice of accumulating libraries --- We are told that Abu Aun b. al Ata had his home piled up to the ceiling with books; he died in 154, i.e., at a time when prose literature had only commenced.

1. Ibid I. p. 178.

2. pp. 96-97. Lectures On Arabic Historians. (Delivered Before the University of Calcutta February 1929.) by D.S. Margoliouth. Pub. Univ. of Calcutta Press. 1930.

Abu Aun before his death, it is added, burned his library, a practice which is recorded of not a few persons. There is a letter preserved of Adu Hayyan Tauhidi of about the year 400, wherein he defends his conduct in doing this by citing the example of many eminent men. The main motive, one fancies, was the desire to be regarded as the ultimate authority on a subject: if a writer's written sources were preserved, probably those who followed after would prefer to cite these sources than some work based on them. The wording of the passage in Abu Aun's case indicated that this was done as an act of piety: either this archaeologist had returned to the view that it was unlawful to write books, or he thought their content frivolous. --- Al-Khatib of Baghdad 392-463, had access to a library collected by one Ghaith b. Ali of Tyre who at his death left twelve bales of books with a sister."

V.

With so much teaching going on, and such delight being taken therein, it was only natural that pedagogical matters claimed a great deal of attention. The modern Egyptian's intense liking for codes, rules and regulations, he no doubt has inherited from his Arab ancestors. Al Abdari recommended that the following¹ be observed in the conduct of a model lecture :-

- (a) The lecturer is to commence by uttering "la hawla wala qu watta &c." (There is no power and no might save God.)
- (b) He is to pray to the Almighty against slips of the tongue.
- (c) Then he is to present his material.
- (d) ^{He should give} all references to works of other scholars.
- (e) He should state his proposition and then proceed to substantiate it.
- (f) Listeners are to be given an opportunity to

1. Quoted by Totah. p.60. The Contribution Of The Arabs to Education. These instructions might with equal propriety have been given to a young candidate about to address his first political meeting!

discuss matters arising out of the lecture.

(g) In no circumstance is he to lose his poise when being heckled.

It was also customary to offer up prayer at the conclusion of a lecture. Al-Khilai who was born in Old Cairo in 405, and who died there in 492, - used to pray as follows¹ at the conclusion of his lectures on Traditions.-

"Oh God! complete the favours which Thou has granted; take not away the graces which thou has bestowed; discover not the faults over which thou hast cast a veil, and pardon those which thou hast render public."

Considerable importance was attached to memory training. According to Aubrey, Fuller² had such a good memory that "he would repeat forwards and backwards all the signes from Ludgate to Charing Cross." This achievement is easily eclipsed by that feat of memory of Abu'l'Ala al-

1. Quoted in Ibn Khallikan II. p.261.

2. Author of Fuller's Worthies. 1662.

Maarri¹ who on hearing a long conversation in Azarbaijan - a tongue unknown to him, was able to repeat the whole verbatim. The secret of a good memory was repetition. What was learnt yesterday was repeated five times today; that of the day before four times and so forth. It was believed that while repetition² was going on Allah produced knowledge in the heart. In fact the whole system of pedagogy was dependent upon Allah. Al-Zarnuji gives a list of aids to memory such as moderation in eating, the drinking of

1. Abu l'Ala. (363-449) blind as a result of attack of small-pox in childhood. -

"By loss of sight, confinement to my house,
And this vile body for my spirit's dwelling."
(p. 201. Vol. I. Luzumiyyat Cairo. 1891.).

He is one of the most interesting poets of Islam, a rationalist, philosopher, and ascetic,

"Take Reason for thy guide and do what she
Approves, the best of counsellors in sooth.
Accept no law the Pentateuch lays down;
Not there is what thou seekest - the plain truth."
(Ib. p. 394. Vol. 1.)

See pp. 313-324. Nicholson A.H. A Literary History Of The Arabs. C.U.P. 1930.

2. It is to their credit that they had a saying:- "An hour of debate is worth a month of repetition."

honey, the eating of 'kundur'¹ with sugar, and the consumption of twenty-one raisins before breakfast. We see superstition raising its head in the list of causes of forgetfulness. They were, - sin, grief, worry; the eating of damp coriander seed; the eating of sour apples; the reading of tomb-stone inscriptions; and the passing across camel-trains. Al-Zarnuji advocated mastering one subject before commencing the study of another. The Imam al-Shafii divided his night into three parts, to be devoted to study, prayer, and sleep respectively. Night-time was generally recommended for studying, as the mind then is more composed.

Muhammad ibn al-Hajj al-Abdari (737) advocated games and free periods, - "If a child is kept from play, and forced to work at his tasks without intermission, his spirit will be depressed; his power of thought and his freshness of mind will be destroyed; he will become sick of study, and his life will be overclouded, so that he will try all shifts to evade his lessons."

Ibn Khaldun devotes several chapters of the Introduction to his great history, to a consideration of

1. A Kind of resin. Several of my students were 'kundur addicts.'

the theory of education. According to him an educated man ought in an ideal State to be a master of all knowledge, but he realises that this is impossible, and so regretfully admits the existence of specialists. He allows two kinds of teaching, - direct and indirect,¹ the latter including conversation, intercourse and the force of example. Thus, to be limited to one teacher would be harmful, so he advises students to travel.

He divides the various branches of knowledge into two classes, distinguishing between those which are an end in themselves and those which assist in the study of others. In the first class are religious subjects, the physical sciences, and metaphysics; in the second, Arabic and arithmetic, which are necessary for the study of religious subjects, and logic which is

1. This may sound very elementary to our modern ears, but it has to be remembered that we are dealing with a period that knew not Sir Percy Nunn nor Professor James Welton.

needed for the proper study of philosophy, speculative theology and jurisprudence (fikh). This second class of subjects he regarded as tools, and considered a student ill-advised who spent too much time on them, for thus he ran the risk of failing to gain an adequate knowledge of those things which really profit the soul.

Ibn Khaldun advocated a progressive method of teaching. First of all a subject should be treated in bare outline; then the details mastered, and thirdly a recapitulation, nothing being omitted, all obscurities and matters of controversy being thoroughly mastered. He blames those teachers who kill the enthusiasm of beginners by proceeding immediately to the difficult parts of a subject, under the false impression that such is the effective way of improving and strengthening their minds. On the other hand, he admits that bright students might be able to dispose of one course and master a subject in two. Ibn Khaldun was very wisely prescribing a method to meet the needs of the 'average' student; he knew quite well that the brilliant ones would take care of themselves. He was against having long intervals between lessons, lest the student forget all he had

learned. He regarded knowledge as a habit formed by the continuous repetition of an action. It was on this ground that he advised the study of only one subject at a time, for more than one would be apt to distract the learner's mind.

He believed that the education of children must be based upon the Koran, to produce a strong faith in God, and because knowledge thereof is the best shield against the madness of youth. He commends and criticises the system proposed by the Qadi Abu Bekr ibn ul-Arabi, who had suggested that subjects should be studied in the following order:-¹

- (a) Arabic and poetry, as in Spain;
- (b) Arithmetic, so that the rules are grasped;
- (c) The Koran, because a boy cannot understand it;
- (d) Principles of Religion;
- (e) Principles of Fikh, (Jurisprudence);
- (f) Syllogism;
- (g) Tradition.

1. From a pamphlet in my possession (pp.7.ff) Arab Theories of Education, by Dr. A.S. Tritton, Muslim University, Aligarh. (Date and place of publication unknown).

Ibn Khaldun criticised it on the grounds that two subjects were being taught at once, and that it did not allow for the religious value of the Koran to the young.¹

Ibn Khaldun insisted on the value of cordial relationships between parent and child, teacher and pupil. He sees no good in undue severity which changes the pupils into lazy, lying hypocrites. The maximum punishment should not exceed three strokes with a whip. He quotes with obvious approval the instructions² of the Caliph Haroun to the tutor of his sons:- "The Commander of the Faithful has committed to you the apple of his eye and the fruit of his heart; stretch out your hand over them (in care). They must obey you. Occupy the position the Commander of the Faithful has given you. Teach them the Qur'an and history,³ make

1. Of course, we must remember that a very strong religious feeling underlies Ibn Khaldun's views on education.
2. Ib. p.4.
3. This naturally, would delight the heart of the historian.

them learn poetry and the practices of religion and instruct them in the use of language. Restrain them from mirth, save in its due place. Make them reverence the heads of the sons of Hashim when they meet them, and honour nobles when they come to them in audience. Let no moment go by without wresting some profit from it. But do not depress or destroy their spirit. Be not too easy with them, and let them appreciate leisure. As far as possible train them in a spirit of kindness and gentleness, but if this fails, use severity and harshness."

Most of what Ibn Khaldun advocated had more than a surface dressing of common-sense. He could see no profit in the mere multiplication of books; life was too short for that, and besides the knowledge thus acquired would be a disease. He condemned summaries of big books, because they confused the fundamental with the unimportant, and corrupted style. He put right thinking as the aim of education, and regarded words and confusion of thought as the chief obstacles to the attainment thereof. Clear thinking and the right use of words could not be dissociated. He pointed out the danger of

becoming entangled in words and so never reaching or grasping the meanings behind them. Full appreciation of the truth would be unattainable with imperfect command of language. The links in the chain of thought were four, namely, - the association of the written words with the spoken; the association of the spoken word with the meaning; the 'sorting out' of this meaning logically so as to lead to a conclusion; and finally the attainment of the object sought through the medium of these intellectual processes. But should the understanding fail in any of these processes, or the intellect not succeed in piercing the veil of obscurity, Ibn Khaldun prescribes a remedy,¹ "If you are troubled by these two difficulties and your mind is confused and perplexed by ambiguities, leave them on one side. Tear the veils of words and hampering ambiguities, let the artificial (logic) alone entirely and rely on pure natural thought in which you are created. Let your glance roam over it,

1. Quoted Ibid. p.6.

concentrate your mind to plunge into it, looking at it as great observers before you looked at it, and demanding an opening from God as he opened their minds by his mercy and taught them what they did not know. If you do this, the light of opening from God will shine on you, giving a grasp of your object, and the brain which God made a condition of thought will arrive at the object.¹ Then go back to the forms and modes of proof, put your object in them and give it its right according to the artificial rules (of logic). Clothe it in words, send it into the world of speech in orderly and closely knit words."

But it was left to the saintly and erudite al-Ghazzali (505) to bring the problem of education into line with a profound ethical system. For him the sole purpose of knowledge, was the service of God. In chapter VI.²

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1. Is not this the modern doctrine of letting the unconscious mind find the solution?
 2. Not Chap. V. as quoted by Totah p.69.
The Contribution Of The Arabs To Education.

of his Fatihah al-Ulum (Introduction to Learning)¹ al-Ghazzali classifies the duties of the pupil and the teacher. They are as follows²:-

1. Purity of mind and purpose.
2. Freedom from ties of home and country.
3. Submission to your teacher. "If your teacher goes astray it is better for you than if you go right by yourself."
4. Only sure facts are to be learnt first, controversial questions are to be left until later.
5. The student should never forget that the aim of all knowledge is God.
6. Teaching must be graduated, - the important matters being mastered first.

1. I am deeply indebted to my friend, John Walker, Arabic Coins Dept., British Museum, for the loan of his MS. containing his translation of al-Ghazzali's Introduction to Learning. Although the MS. is a severe test of palaeographic ability, nevertheless, I have derived considerable help from a laborious perusal of it.

2. Here I follow Dr Tritton's afore-mentioned pamphlet p.5.

7. No subject is to be studied until that upon which it depends has been mastered.
8. The relative value and importance of different subjects is to be realised.
9. The aim of learning is the development of the self.
10. The pupil must know the relations of the various subjects to God.

The duties he would like to impress upon teachers are:-

1. Kindness to the pupil.
- 2 The teacher should not make material reward his aim.
3. The pupil must not be taught a subject till he is mentally ripe for studying it.
4. The pupil must be warned against evil habits by indirect methods, and by implication, not by direct teaching.
5. He must not make fun of subjects he does not teach.
6. His teaching must be on a level with the capacity and understanding of the pupil.
7. He must ^{not} discourage a backward pupil by disclosing the vast amount of knowledge he has yet to acquire.
8. The teacher must live up to his teaching; for while the father gives his son a body, the teacher

gives him life everlasting.¹

Prof. Duncan Black Macdonald states,² "There seems to have been no science of education, in the modern sense, amongst Muslims; at least, I can find no department of Arabic Literature dealing specifically with pedagogy. The nearest approach to such a science is to be found in books on ethical and religious training, which are connected, though remotely, with the Greek treatises on ethics. These, however, tell mostly what a boy should be taught, and only very occasionally how he may best be taught." We feel that Professor Macdonald here, is drawing an unnecessary distinction. Muslim pedagogy in its very essence was ethical and religious. And this is exactly what we find in Ghazzali's work. He himself tells us that in The Introduction to Learning, we shall find "the conditions, virtues, requirements, adjuncts, damages, and mischief of knowledge, its culture and its obligations, along with the story of

1. Sufi influence is clearly seen in the position al-Ghazzali assigns to the teacher.

2. p. 297. Aspects Of Islam. New York 1911.

past scholars and the distinguishing marks of wordly and unwordly teachers." All this is disclosed in seven chapters as follows:-

- I. The Virtue of Knowledge.
- II. The Rectification of Motive in the Pursuit of Knowledge.
- III. The signs that differentiate wordly and unwordly teachers.
- IV. Important sciences and their divisions.
- V. Conditions of Debate and its Mischiefs.
- VI. Etiquette of Teacher and Student.
- VII. What Teachers may lawfully take of the bounties of Sultans.

A few extracts will show, - better^{than} any words of mine, - the ethical and religious character of one of the most important works on pedagogy in Islam:- "The Source of Guidance and Experience is the information that the allurements and embellishments of this world are delusive possessions, and that the next world is the abode of Peace. This experience characterises men of knowledge, because their experience is derived from signs that lead to it, and such signs are only made clear to men of knowledge.

God Most High said, "But it is clear signs in the breasts of those to whom knowledge has been given."¹ Next He (Praise and Exhaultation be His) attributed to them the removing of the darkness of Ignorance from the hearts of all people after the Apostle of God (Pray for him and salute). And God Most High said,² 'But if they would report it³ to the Apostle, and to those who are in authority among them, those who seek information would learn it from them.' Again He (Praise and Exhaultation be His!) attributed to them the fear⁴ which is the beginning of Wisdom. God Most High said,⁵ 'Such only of

1. Koran XXIX. 48.

2. Ibid. IV. 85.

3. i.e. any matter of moment.

4. See p of this Thesis.

5. Koran XXXV. 25.

His servants as are possessed of knowledge fear God'. " We have to confess that it is vague and too long drawn out. But the Arabs loved words, - long ones and many of them. However scattered here and there are refreshing little anecdotes like the following¹:- "It is related on the authority of Kathir b. Kais that he said: I came to Abu'l-Darda² while he was sitting in the Mosque at Damascus, and said, Oh, Abu'l-Darda, I have come to you from the City of the Apostle of God (Pray for him and salute!) in search of a Tradition (hadith) which, I have been told, you relate on the authority of the Apostle of God (Pray for him and salute!). Then he said, No necessity or business except this tradition has brought you? I said: Even so. He said: Then verily I heard the Apostle of God saying, - He who travels a road in

1. I am including these extracts from the MS of John Walker because (a) he is a scholar with a passion for accuracy; (b) the great importance of the dominating figure of al-Ghazzali.

2. Abu'l-Darda - a contemporary of Muhammad, who became famous for his learning. He died at Damascus in 31.

the pursuit of Knowledge God will prepare for him one of the roads of Paradise. Verily the Angels will lower their wings to the one who pursues knowledge as a homage to what he accomplishes. Verily the excellence of the Learned man over the layman is as the excellence of the moon on the night of full moon over the rest of the heavenly bodies. All in heaven and in the earth even the fishes in the depths of the sea ask forgiveness of the learned. Learned men are the heirs of the Prophets, who bequeathed neither gold nor silver but only Knowledge. So whoever takes it, takes bountiful good fortune."

"The Apostle said: Nothing serves God more excellently than Jurisprudence (Fikh) in Religion and one Jurist (Fakih) is more potent against Satan than a thousand laymen. For everything has a support; and the support of Religion is Jurisprudence. He also said: In order that you may progress study a chapter of Knowledge. It will be better for you than a prayer of a hundred rikas."

"In a tradition of Abu Dharr¹ (May God be pleased

1. Abu Dharr, - a pious Companion of the Prophet, and a celebrated Traditionist. He died in 32 or 33.

with him!) it says; the Apostle said: Attendance at a society for Knowledge is more excellent than a prayer of a thousand rikas; than the visitation of a thousand sick persons, and than the presence at a thousand funerals ---"

"Said the Apostle: Verily God Most High and His Angels and the people in heaven and earth, even the ant in its hole and even the fish in the sea will pray for the good teacher of the people. The Apostle went out on a certain day and saw two groups of men sitting. One group were praying to God Most High, and petitioning Him; while the second group were teaching the people. Then the Apostle said; As for the former, they are begging God if He wills He will grant them, and if He wills He will refuse them; but as for the latter, they are teaching the people, and I was sent only as a teacher. And he went to them and sat along with them." "And the Apostle said; He who teaches people to know by heart forty traditions pertaining to what benefits them in the matter of their religion, God will raise him on the Day of Resurrection amongst the Learned. For the excellence of the Learned above the Laity is seventy degrees. God

knows what is between every two degrees. All this establishes the Virtue of Knowledge and Instruction according to Tradition, but let us mention its Rational Testimonies." Then he proceeds to review these in a calm, thorough, and unhurried manner.

Al-Ghazzali warns with the greatest solemnity those teachers who did not adorn their profession. I shall quote certain passages both because of their intrinsic interest, and also to show the infiltration of Christian love into Islam :- "--- Know, then that the Learned man who is the happiest of the happy, is in danger lest he come to be the vilest of the vile. Such is the Learned man who does not practise his knowledge. The story of Balaam¹ son of Baur, is good guidance for you in this matter, for he had perfection of Knowledge to a degree. --- And the Apostle of God has called, saying, 'Verily the most severely punished on the Day of

1. See Sura Vl 174-5, and then New Testament II Peter ii 15 and 22. See also under Balaam in Bible Characters in the Koran. John Walker Paisley, 1931.

Resurrection is a learned man by whose knowledge God has not benefited.' And again, 'He who increaseth in knowledge and does not increase in guidance will not advance into God unless (except ?) at a distance!'

Totah¹ mentions the above work, and gives the table of contents as follows:-

- I. The Virtue in Studentship.
- II. The Virtue in Teaching and Guiding.
- III. Rational Proofs on the Nobility of Teaching.
- IV. Divisions of Knowledge.
- V. Duties of the Teacher and the Student.

This epitome, however, does not agree with the Chapter divisions of the Cairo edition which he cites (1322 A.H. at the Husainiyyah Pres), for the latter contains seven babs, with sub-sections as follows:-

- I. The Virtue of Knowledge and the censuring of false teachers (p.2.)
 - (a) The Virtue of Knowledge (pp. 2-3.ff).
 - (b) The Virtue of the pursuit of Knowledge (pp.3-4.)

1. p.69. The Contribution Of The Arabs To Education.

- (c) The Virtue of proper Guidance and Instruction (p.4.)
- (d) Rational proofs of the nobility of Knowledge and Instruction (pp.4-7 ff.)
- (e) Censuring of false teachers and their status before God. (pp.7-8 ff.)

II. The Rectification of Motive in the Pursuit of Knowledge (pp. 8-17.)

III. The Sign that differentiates wordly from unwordly teachers. (pp. 17-29 ff.)

- (a) Extracts from the Lives of the Imams of the Theological Schools (Shafii; Malik b. Anas; Abu Hanifa; and Ibn Hanbal) (pp, 29-35. ff).

IV. The Divisions of Knowledge (p.35).

- (a) The divisions of Knowledge (pp. 35-36 ff.)
- (b) The explanation of the necessary duties of Complete Knowledge. (pp. 36-38 ff.)
- (c) Concerning what Knowledge is obligatory only for an adequate number of Moslems. (pp.38-39.)
- (d) The Explanation of the Division of the Spiritual Sciences (pp. 39-42).
- (e) The Explanation of Farthest Science and the relation of the Sciences to it. (pp. 42-47).

V. The Conditions of Discussion and its Dangers. (pp. 47-49.)

- (a) Explanation of the conditions of Discussion. (pp. 49-52.)
- (b) Explanation of the Mischiefs of and the Dangers to Morals arising therefrom (pp.52-56).

VI. The Behaviour and Duties of Teacher and Student. (pp. 56-60.)

- (a) Knowledge, - its tasks and its Culture (pp. 60-63.)

VII. On what the Learned may lawfully take of wealth (p.63)

- (a) On the Virtue of Godliness (or Abstention ?) (pp. 63-64.)
- (b) The Degrees of Godliness (pp. 64 - 67.)
- (c) On what the Learned take of the wealth of the Sultans (pp. 67-69.)
- (d) On the unavoidableness of the Wealth of the Wicked and the need to abstain from it (p.69).
- (e) In conclusion, - details of Godliness (pp.69-70).

Text 70.pp. + (I) of fihrist.

For the remainder of this Section, I propose to review briefly, a number of Arabic pedagogical works, including, -

Ihya illum al-Din (The Revivification of Religious Learning) by the 'Proof of Islam' the famous Imam Ghazzali of Tus, who died in 505. Ma'luf gives it high praise, - "He (i.e. Ghazzali) arranged it into four sections. A number of literary people have abbreviated it. It has been published in whole and in abbreviated form, many times in Cairo and elsewhere. The author, in the course of his investigation, has useful opinions on studying and teaching. - - - How would it be otherwise since he was the greatest professor of his age and taught in the Nizamiah College at Baghdad and in other great colleges."

Ma'luf gives another Ghazzalian treatise entitled "The Manners of Studying,¹ in the Zahiriyah Library at Damascus. (pp. 48 ff.)

1. Not mentioned by Totah or Brockelmann.

Mizan al-Amal (The Balance of Action) by al-Ghazzali.
 Pub. Cairo. 1342.¹ (2nd edition pp.175 ff. Work divisible into 37 sections.)

The most interesting section is that which ascribed different functions to different parts of the brain:-

- (a) The reasoning faculty is situated in the centre of the brain, just like a king who lives in the middle of his kingdom.
- (b) The function of the imaginative faculty is to gather news, and it is located in the front of the brain.
- (c) The retentive power is in the back of the brain, thus resembling a servant.

1. See Totah pp. 69-70. ff. (Not in Ma'luf).
 It has been translated into Hebrew, 'Compendium doctrinae ethicae auctore Al Gazali Tusensi de arabico hebraice conversum ab Abrahamo ben Chasdai Barcinonensi, ed. J. Goldenthal. Lipsiae, Parisiis, 1839.' (Brockelmann I. 422.)

(d) The power of speech fulfils the function of an interpreter.

(e) The senses are the spies.

Kitab al - Muallimin (The Book of Teachers) by al Jahiz 258/869. "This is mentioned by Yaqut in his Dictionary of Learned Men, Vol. VI, p.76, when giving the life of the author. Nothing is ~~hinted~~ at about the contents of this book, but the fact that al-Jahiz interested himself in school matters, as is proved by his chapter "al-Bayan wal-Tabyin," where he made a strong defense of teachers' social status, may well corroborate Yaqut's reference."¹

Riyadat -al- Mutallim. (The Training of the Student) by Abu Abdallah b. al Zubair known as the blind al-Zubair² of Basra, who died in 320/932.³

1. So Totah. p.67. Ma'luf does not mention it. The date 258/869 seems out of place for Al Jahiz died 255/868. 258 A.H. could not be 869 A.D. (258 = 871. Nov.18.Begins).
2. See Life of this Author in Ibn Khallikam 1. p.532.
3. Totah robs this author of 3 years of life. He makes him die 317/929.

Kitab al-Ilm wattalim, (The Book of Knowledge and instruction) by the Imam Abu Zaid Ahmad b. Sahl al-Balkhi, who died 322/933.¹ Yaqut states he was a schoolmaster of boys. (muallim kuttab), who later reached a high position on account of his learning. He is also mentioned by Hajji Khalifa Vol. V, p.119, 'Kitab el-ilm we el-ta'lim, liber scientiae et institutionis, auctore Imam Abu Zaid Ahmed Ben Sahl Balkhi post annum 322 mortuo.'

Kitab al Alim wal Mutaallim (The Book of Teacher and Student) by the Imam Abu Hatim Muhammad b. Hayyan al Tamimi al Busti, who died in 354²/965 Hajji Khalifa (Vol. V. p. 113) attributes this book to Abu Hanifa.

Al-Durr al-Nazim fi Ahwal al-Ulum wal-Ta'lim. (the Pearls Strung, or the Conditions of Learning and Instruction by Ibn Sina 428/1036. Brockelmann believes that it is wrongly attributed to Ibn Sina.³

1. Totah p.68. 322/934, - an impossibility.
2. Dr Totah's 254/965 must be a printer's error. al-Tamimi is also omitted from the author's name. I shall make no further references of this nature to Totah, for his is a useful work, so long as its treated sceptically.
3. See Hajji Khalifa. Vol. II. p.137.

Adab al-Ilm (The Conduct of Learning) by Shaikh al-Imam al-Hafiz abu Amr Yusuf b. Abdallah b. Abd al-Barr al-Namiri al-Kurtubi, who died 463/1070.¹

Al-Sifat wal-Adawat allati yabtadi biha al-Ahdath.
(The Qualities and equipment with which the young begin)
by Abdallah b. Ali al-Harawi al-Muaddib, who died 489/1095.
Mentioned by Totah p.69. No mention of it in Hajji Khalifa.

Talim al-Mutallim Tarik al-Tallum. (Instruction of the Student in the Path of Study) by Burhan al-Din al-Zarnuji, of the sixth century of the Hejira, the twelfth of the Christian Era.

Totah states (p.70) This is, perhaps, the best-known Arabic treatise on teaching. It was published in Latin under the title Enchiridion Studiosi, by H. Reland, 1709, and also by Caspari in 1838. Brokelmann says it is in almost every library. I have a copy printed by the

1. Totah. p.69. gives what appears to be the same work under another title, - "Jami Bayan al-Ilm." (The Whole Control of Learning) by Abu Umar Yusuf ibn Aba al-Barr al Namari al Qurtubi, 463/1071.

Khairiyyah Press in Cairo in 1332 A.H.,¹ with a commentary by al-Shaikh ibn Ismail. It contains 48 pages."

Contents.

- I. The Essence and Value of Learning and Jurisprudence.
- II. The Motive of Studying.
- III. The Selection of the Subject, Professor, School-master, and adherence Thereto.
- IV. The Reverence Due to Learning and the Learned.
- V. Application, Perseverance, and Diligence.
- VI. Beginning, Extent, and Arrangement of a Lesson.
- VII. Concentration.
- VIII. Time of Study.
- IX. The Sympathy and Advice needed by Students.
- X. The Acquisition of Knowledge.
- XI. Piety.
- XII. Causes of Retention and Forgetfulness.
- XIII. That Which Brings Sustenance (Spiritual and Physical) Given by God.

Muktataf p. 367. "This book has been printed in India, Europe, Cairo and Constantinople with the commentary

1. This must have been the second edition.

on it of Ibn Ismail of the tenth century of the Hejira; the seventeenth of the Christian era. In my library are many manuscript copies of the text and commentary corrected and certified together with marginal notes. Shaikh Abd al-Magid b. Nasuh b. Israil translated it into Turkish under the name of 'The Right Guidance of Enquirers in the Instruction of Students.' Tanbih al Talib wa Irshad al-Darīs fi Tawarikh Al-Madaris (The Students Guide in the Annals of Madrassahs)¹ by Abd al-Kadir al-Nuaimi 927/1521. It is an account of scholastic institutions in Damascus, but I include it to show the variety of such establishments in Islam. The book deals with the following, - Koran Schools; Hadith schools; Shafiite Madrassahs; Hanafite Madrassahs; Malakite Madrassahs; Hanbalite Madrassahs; Medical Schools, Convents; Shrines; Cemeteries; and Mosques.

Shifa al-Muballim fi Adab al-Mutallim. (The Healing of the Sufferer from the manners of the Student) by Shaikh Abd al-Latif b. Abd al-Rahman al-Makdisi (died 856/1452). The author arranged this work into Introduction, three

1. See pp. 73-74. ff. Totah.

babs, and a Conclusion. In the Introduction, he deals with uniting of the Nobility and Excellence of Learning.

Chap. I. On the Manners of the Student.

Chap. II. On the manners of the Teacher.

Chap III. On the Knowledge of the Divisions of Learning.

Conclusion - What God collected together for his

Creatures of the Manners and Conditions of Learning.

Ma'luf p. 368 adds, "This book is the most complete, the most detailed and most useful of its kind known."¹

Al-Lulu al-Nazim fi Raum al-Taallum wal Taatim. (8 Pearls Strung in the Ear (?) of Learning and Instruction)² by Al-Kadi Zain al-Din Abu Yahya Zakarya al-Ansari, who died 926/1519.

It mentions (a) Kinds of Learning.

(b) Limits of Learning.

(c) Manners of Learning, and what pertains to the acquisition thereof. M.S. copy in Berlin with Comments. There is a copy in Cairo Library written in 1105/1693.

The greatest of the works which we have been reviewing

1. See Totah p.73 and Hajji Khalifa. IV.pp.63-64 ff.

2. See p. 369. Ma'luf.

are these by al-Ghazzali and by al-Zarnuji. In al-Ghazzali's utterances, we detect the voice of the true teacher. Most of the other writers were guilty of plagiarism, facts and ideas being appropriated without permission or acknowledgement.¹ These old writers wearied the reader by the detailed emphasis they laid upon unimportant matters. Arab etiquette for teachers, was a subject that never wearied them. But we must not forget that Arab writers on pedagogy had a public, capable of not only enduring much repetition, and much discussion of petty details, but could even enjoy them.

The ideal in Education was educative pure and simple; it had to have a deep theological tint. So often the 'Journey's End' of a Muslim student did not turn out as expected. Many young students sought learning that they might acquire wordly advantages, but it led them to renounce the world.² On the other hand, learned doctors of law were not always averse from making a trade of their

1. The same thing went on in England for centuries. Who more guilty of the practice than Shakespeare himself?

2. See Ibn Khallikan II, p.13.

learning - especially of theology. In one of the poems of Abd allah b al-Mubarak (118-181) are the following lines, which no doubt, refer to this vice:-

"Other men open shops to sell their goods, but you have opened a shop that you may sell religion, - a shop between the columns (i.e. of the mosque) and without a lock, where you give religion in exchange for the money of the poor. You have made of religion a falcon wherewith to catch your prey, but falconers never acquire riches by their trade."¹

1. Ibid. II. p.13.

V.

On page 74 of a book called Tribute,¹
we come across the following lines:-

Aristotle's vast unique
Hosts found lodging in a Greek.
Many a dead white city's sack
Turned them into Syriac,
Whence another conjuring trick
Palmed them off as Arabic.
So they passed to Crypto-Jews
Burrowed in Toledo, whose
Bare acquaintance was picked up
By a Christian scholar pup.
He arranged the bastards pat in
His adulterated Latin.
Then they found their way to college,
Smart enough to pass for knowledge.

Dr O'Leary² writes, -"In fact this Muslim
culture was at bottom essentially a part of the

-
1. By Sir Robert Vansittart Lond. 1926. (See Who's Who.)
 2. Arabic Thought And Its Place In History. Lond. 1922.
See the Foreword.

Hellenistic-Roman material - - - and its development had taken place in surroundings so different that it seems a strange and alien thing. Its greatest power lay in the fact that it presented the old material in an entirely fresh form."

Andre Servier is more severe, - "Islam itself is not an original doctrine; it is a compilation of Greco-Latin Traditions, biblical and Christian.¹ --- To sum up; the Arab has borrowed everything from other nations,

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1. p. 12. Islam And The Psychology Of The Musulman. Trans. A.S. Moss-Blundell, Lond. 1924.
 In this connexion the views of J. Wellhausen (p.18. The Arab Kingdom And Its Fall) are interesting, -
 "Muhammad started from the conviction that his religion was exactly the same in substance as the Judaic and Christian, and so expected that the Jews in Medina would receive him with open arms, but he was bitterly disappointed in them. They did not recognise him as a prophet nor his revelation as identical with theirs, although at first, out of policy, they entered into the Umma which he had founded." The result was that Muhammad removed points of similarity; Friday was made the Holy Day, the adhan (call to prayer) for bells, the feast of Ashura (Atonement) was abolished, and Ramadan substituted for Lent.

literature, art, science, and even his religious ideas."¹

"I was made of iron," Autar exclaims, "and of a heart more stubborn still; I have drunk the blood of mine enemies in the hollow of their skulls am not surfeited."²

"Islam is Christianity adapted to Arab mentality."³

"Islam was not a torch, as has been claimed, but an extinguisher, conceived in a barbarous brain for the use of a barbarous people, it was, and it remains incapable of adapting itself to civilization. Whenever it has dominated, it has broken the impulse towards progress and checked the evolution of society."⁴

1. p. 13. Ibid.

2. p. 21. Ibid. cf. "Soon, in the splendid hall of Odin, we shall drink Beer out of the skulls of our enemies --- I shall quaff full goblets among the gods. The hours of my life are past away. I die laughing." (From Ode of Regner Lodbrog. See Thomas Percy Five Runic Pieces. Pub. 1763. This proves that what appears to be plagiarism is very often only coincidence.)

3. p. 61. Ibid.

4. p. 153. Ibid.

"There is a Greek civilization, and a Latin civilization; there is no Arab civilization, if by that word is meant the effort personal and original of a people towards progress. There may, perhaps, be a Musulman civilization, but it owes nothing to the Arabs, nor even to Islam. Nations converted to Mahometanism only made progress because they belonged to other races than the Arab. And because they had not yet received too deeply the impress of Islam. Their effort was accomplished in spite of the Arabs, and in spite of Islamic dogma."¹

"The thought of the Greek authors was drowned in the religious formulae imposed by Islamic dogma; the name of the author translated was not mentioned, so that European scholars could have no suspicion that the work before them was a translation, an imitation, or an adaptation; and so they attributed to the Arabs what really belonged to the Greeks."²

John Hermann Baas believes that most of what is worth while in Arabian medicine depends on Grecian

1. p. 9. Ibid.

2. p. 7. Ibid.

foundation.¹

Theodor Puschmann writes,² "The Arabian doctors gave great attention to the examination of the body of the patient. They noted all the symptoms of disease, but attached most importance to the character of the pulse and the peculiarities of the urine. They attained to a remarkable ability in prognosis. They paid a fitting attention to dietetics and enlarged the pharmacopoeia by the addition of numerous remedies."

And one more quotation to show how every writer has his bias. James J. Walsh who has set out to prove in his book³, that the Church so far from having

-
1. See pp.215.ff. Outlines Of The History Of Medicine And The Medical Profession. Trans. H.E.Henderson. New York. 1889.
 2. p.164. A History Of Medical Education. Theodor Puschmann. Trans. Evan H. Hare. Lond 1891.
See also Chap. XVI (Bringing Medicine And Surgery Into Arabia) of The Arab At Home. Paul W. Harrison, Lond.1924.
Also Chap XI (Medicine & Literature) of The Caliphs And Their Non-Muslim Subjects. A.S. Tritton. O.U.P. Mysore City 1930.
 3. The Popes And Science. p.170. (Catholic Truth Society) Lond. 1912.

obstructed the progress of science in the Middle Ages, actually fostered and encouraged it, and so he disowns any indebtedness to Arabic sources. To do this, he quotes from Dr. E. Gurlt's History of Surgery,¹ "--- though Arabian writings on surgery had been brought over to Italy by Constantine Africans a hundred years before Roger's² time, those exercised no influence over Italian surgery in the next century, and there is not a trace of the surgical knowledge of the Arabs to be found in Roger's work." Walsh adds, "There are no traces of Arabisms to be found in Roger's writing while they are full of Grecisms." Naturally, for the study of Ibn Sina and other independent Arabic writers had hardly begun before the middle of the thirteenth century.

Servier is very convincing, with the conviction that comes from a half-stated truth. I now propose to attempt an evaluation of the Arabian contribution to medical knowledge.

1. p. 701. Vol.1.

2. Roger was the first of the great Italian Surgeons of the thirteenth century.

A long interval separated the decay of Greek learning from the Renaissance. During this dark period the guardians of the ancient wisdom were the Arab peoples, and the principal source from which Europe derived her scientific and philosophic ideas, was Arabic.

The Abbasids in the second century A.H. encouraged the development of all scientific knowledge. Under their enlightened patronage the Greek classics were translated into Syriac and Arabic, by scholars who were mostly Syrians, Jews or Persians. Greek culture and learning began to enter Islam, and when it re-appeared it was in an Arabic dress. In the countries conquered by Islam the Graeco-Latin civilisation did not die out at once - though the inhabitants might have become Muslims. Arabic became the official Language, but these people would continue to think in Greek, Latin, Aramaic, or Spanish. The Syrians especially were abreast of the latest advances in Science, Art and the Philosophy of the Graeco-Latin Schools, and numerous Syriac translations from the Greek existed. It was due to the ingenuity of Syrian architects in combining Greek with Persian art that Byzantine art came into being. There is no doubt that the uneducated Arabs from the desert wastes were

influenced by this alien civilisation, and it stands to reason that they could not but learn. The Abbassids showed favour to men of learning, and caused translations to be made by Syrian and Persian scribes, of the chief Greek authors,¹ - Aristotle, Hippocrates, Galen, Dioscorides, Archimedes, and Ptolemy, and it was through these translations that the Arabs learnt of the scientific discoveries of antiquity. In 529 A. D. Justinian banished the 'heathen philosophers' from Athens and Alexandria. These migrated eastward.

Many found a sanctuary at the Court of that genial and tolerant 'barbarian' Chosroes. The Arabs came into contact with Greek medicine at Alexandria, where the sixteen books of Galen were being studied in detail. From the eighth to the twelfth century A.D. Arabic

1. Chaucer's Doctour Of Physik knew the Arabic as well as the European writers on Medicine:-

'Wel knew he the olde Esculapius
And Deyscorides, and elk Rufus
Olde Ypocras, Haly and Galyen,
Serapion, Razis and Avycen.
Averrois, Damascien and Constantyn,
Bernard and Gatesden and Gilbertyn.'
C.T. Prologue. ll. 429-434.

translators were busy. Yahyah Ibn Maseweih (780-857 A.D.) and his pupil Hunayn Ibn Ishak were famous, - the latter for his translation and elaboration of the Galenic doctrine of forces and humours. His sons, Ishak and Daud were also good translators. Yahyah Ibn Serabi of Damascus (802-849 A.D.) compiled his 'Aggregator' in Syriac, but it was translated into Arabic.

Abul Abbas Ahmed b. Muhammad b. Merwan Ibn El Tayib el Serachfi (d. 899 A.D.) translated a book of Hippocrates and also wrote an "Introductio in artem medicam."

The great Rhazes (Ibn Zackariyah Abu Bekr Er Razi (b. 850 A.D.) followed Gallen in almost everything. Ali b. El-Abbas (d.994 A.D.) followed the Arabians in materia medica. His works were translated into Latin by Constantinus Africanus. That erudite practitioner - 'Avicenna,' - Abu Ali El-Hossein Ibn Abdallah Ibu Sina the author of the 'Canon,'¹ a master of Aristotelian

1. The Canon or Qanun was 1,000,000 words long. It was an attempt to reconcile the doctrine of Galen with that of Aristotle. It was divided into five Books. 1 & 2. Physiology & Hygiene. 3 & 4. Treatment, 5. Materia medica. This huge work was the final codification of all Graeco-Arabic medicine, and it represented one half the curriculum of European Universities 1450-1500. It was a text-book, down to 1650 at Montpellier and Louvain.

philosophy, was a ruling authority not only among the Arabians, but also among Christians. Many commentaries on his works appeared.

Both Abd El Malik Abn Merwan Ibn Zohr and Averroes, contradicted Galen, thus showing that some Arab physicians were not slavish imitators of the Greeks.

It was due to the labours of these men that certain Greek works have been preserved, for in many cases the original Greek Manuscript has been lost. It has been maintained that the first works bearing the name of Aristotle to reach the Schools of Paris were not really translations from the original, but of the paraphrase of Ibn Sina, which like the commentaries of Averroes was not translated from the original Greek, but from the Syriac.¹

1. And the nominal translator of the paraphrase of Ibn Sina, and the Commentaries of Averroes, was a Latin ecclesiastic, "who gave his name to the work - was commonly as ignorant of the Arabic as he was of the original Greek." See pp 354. ff. Vol. I. The Universities Of Europe In The Middle Ages. Hastings Rashdall. 2 vols. Oxford. 1895.
See Also Chaps X & XI. Arabic Thought And Its Place in History, De Lacy O'Leary. Lond. 1922.
And Chap. VII. (Translators in Syria During the Crusades) Studies In The History Of Mediaeval Science. Ch. Homer Haskins, 1924.
Arabian Medicine And Its Influence On The Middle Ages. Dr Donalds Campbell. 2 Vols. Lond. 1926.
Arabian Medicine, Ed. G. Browne, C.U.P. 1921.

Stephen of Pisa, who had been trained in the schools of Salerno, was at Antioch in 1127.A.D. translating the writings of Ali-ben-Abbas, whose al-Malaki was a comprehensive treatise on medicine. Stephen's translation, - The Regalis dispositio, had a glossary of the technical terms in Dioscorides, - 'Medicaminum omnium breviarum, - an alphabetical list in Greek, Arabic, and Latin. Stephen expresses the hope that he may be spared to translate something out of "all the secrets of philosophy which lie hidden in the Arabic tongue," thus passing from the things that concern the body only to those higher ones that deal with the mind.

Gerard of Cremona translated Ptolemy's Almagest from the Arabic into Latin in 1175 A.D.¹

In Europe the best translators from the Arabic were Hermann the German, Gerard of Cremona, and Scot, whose translations began to appear in Europe shortly before 1230.A.D. Mediaeval translators unwittingly rendered posterity a service, - for whenever they were

1. It was not until 1451, that a translation was made from the original Greek.

unable to construe a word in the original, they simply transliterated it.

Before Muhammad was born, the great medical school at Jundi-Sha-pur (S.W. Persia) was at the height of its fame. The medical teaching there was mainly Greek with a Persian element especially in pharmacology. We have already referred to the medical schools at Alexandria. On the other side of the Mediterranean, were more Schools under Greek influence - so Islam was surrounded as it were, by Greek influences. Arabic words were coined to represent Greek technical terms, e.g. Diagnosis was rendered very sensibly by tashkhis, which means the identification of a person; vertigo by guwar from dawar (to turn); sea-sickness by buhar from bahr (sea); and a headache 'the morning after the night before' by khumar from khamr (wine).

Greek and other physicians were allowed to sojourn among the Arabians. The better physicians were for the rulers and wealthy only. The masses had to rely on conjurers, jugglers, and quacks (tubib) in general. So it is small wonder to find that a Greek work on medicine had gathered to itself ancient Egyptian charms en route through Syriac into Arabic, into Latin. According

to the Koran the study and practice of medicine was simply tolerated, and devout believers considered the practice of medicine to be a definite encroachment upon what was the province of Allah. The Caliph al-Muqtadir in 931 A.D. issued an order that all medical practitioners should submit to a qualifying examination. In all, eight hundred and sixty had to attempt to satisfy Sinan Ibn Thabit of their competency. One old man, at the first question of the President drew forth a purse of money and shook out its contents. He was allowed to continue in practice, and advised to keep to sirkangabin (oxymel) and jullab (jalap.)

To sum up, - (a) The Arabians created new life out of the Ancients, but Arabians included Orientals, Syrians, Persians, Christians and Jews. Even Goldziher, one of the greatest of Arabic scholars is of opinion that the contribution of the non-Arabs is by far the greater.

(b) They cultivated the study of the Greek classics, which they translated and made them once more accessible to the West, until at the Renaissance, they could be once more studied in the original. Hitherto unknown Greek physicians were introduced to Western Europe from Arabic sources. They were

the trustees of many Greek classics during the Dark Ages.

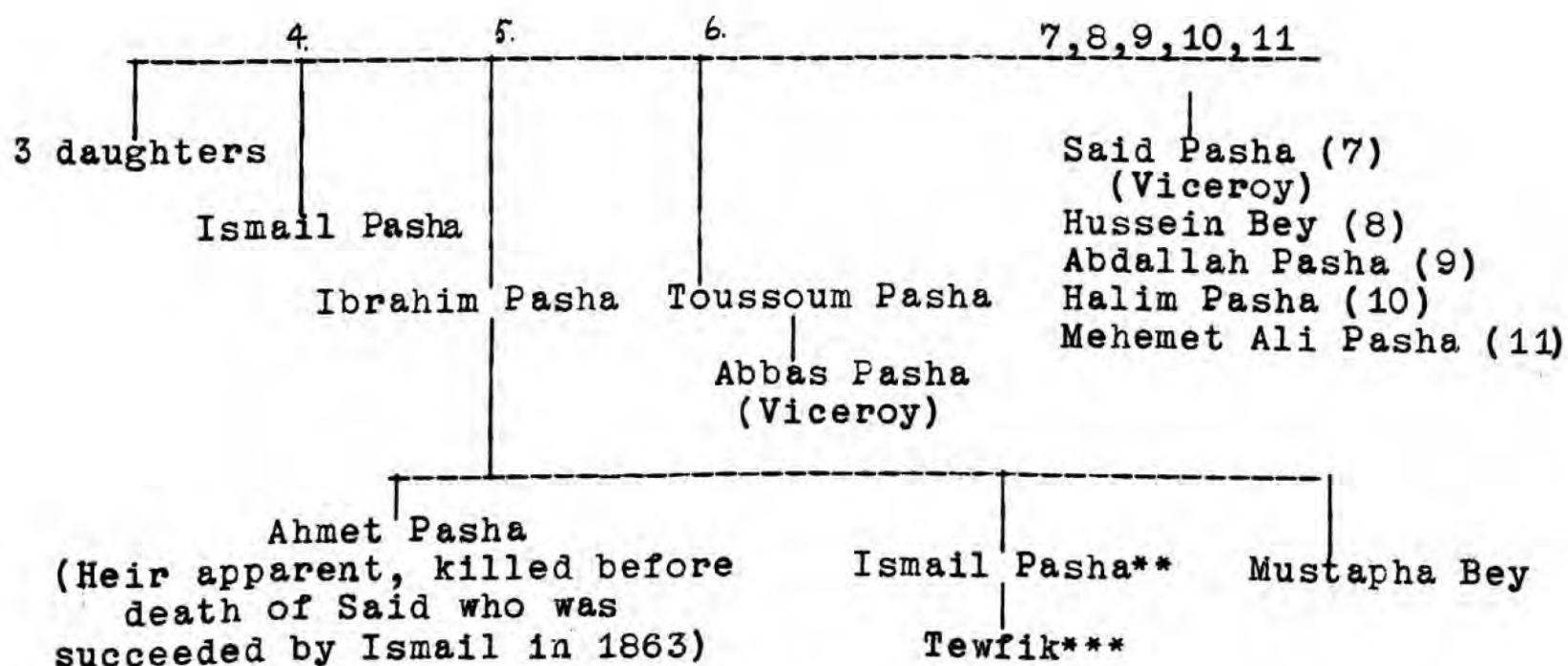
- (c) They did more than plagiarise and imitate. They introduced a great number of new remedies, and virtually created the department of Chemistry.
- (d) They introduced chemical remedies.
- (e) They advocated the clinical method of instruction.
- (f) It preserved a lay medicine at a time when the sick of Europe were being treated by priests and monks with superstitious and supernatural remedies.
- (g) The Arabic contribution to the study of botany was very valuable.
- (h) It did Greek civilisation a great service, by putting at the disposal of Hellenism the Arabic language, thereby supplying opportunities for very wide diffusion.
- (i) If they plagiarised on a grand scale, it was because to the Arabs all things were new, and they coveted them because they valued them.

D
E P I L O G U E

Mehemet Ali and his Descendants

	<u>Born</u>	<u>Died</u>	<u>Ruled Egypt from</u>
Mehemet Ali	1769	1849	1811 to 1848
Ibrahim (Regent)	1789	1848	July to Nov. 1848
Abbas I	1813	1854	1848 to 1854
Said	1822	1863	1854 to 1863
Ismail	1830	1895	1863 to 1879
Tewfik	1852	1892	1879 to 1892

Mehemet Ali*



(Footnotes on next page)

I

When we realize that Mehemet Ali, Napoleon and Wellington were born in 1769, we feel that fate is taking a hand in the game, for these three were all to take leading parts in the Drama of Modern Egypt.

Mehemet Ali was the creator of modern Egypt, and in a selfish way he took a genuine pride in the country of his adoption. He is reported to have told Burckhardt, "I love Egypt with the ardour of a lover, and if I had ten thousand lives, I would willingly sacrifice them all to possess her." He never learnt to speak Arabic, yet he rescued Egypt from the obscurity and degradation with which she had sunk after being incorporated into the dominions of the Ottoman Empire, by Selim the Conqueror in 1517. He did more, for he gave Egypt for the first time a place and a name in modern history. For the multifarious exactions of the army of Turkish officials who battered at the

[Footnotes from previous page]

In 1866 Ismail Pasha** obtained Firman securing the succession in the direct line, so on his deposition in 1879 Tewfik*** succeeded.

*Mehemet Ali had 77 other children, who died young.

expense of the fellahin, he substituted his own extortions which were somewhat more equable.

Nevertheless both Mehemet Ali and his successors regarded the Egyptians as their chattels, and it was not until the British Occupation that an Egyptian could call his soul his own.

Abbas I spent most of his time until he was murdered (12 July 1854) in undoing most of the good which Mehemet Ali had done.

He was succeeded by Said, a younger son of Mehemet Ali, but possessed none of his ability. Educated in France, he was genial and tolerant, and as a host he was charming. He hated unpleasantness and tried to keep on good terms with the great Powers. He had known and liked Lesseps¹ from his boyhood so he granted in 1856 the original concession for the construction of the Suez Canal. He was the first to float a foreign loan, thereby starting Egypt on the path that led her to financial chaos.

1. M. de Lesseps was a violent anglophobe. His evidence has to be sifted.

On his death (in 1863) he was succeeded by his nephew Ismail, who applied his genius to the acceleration of Egyptian bankruptcy. How well he succeeded is now matter of common knowledge.

The final crash came in 1876, with the suspension of payment of Egyptian Treasury bills. The public debt had risen to over £94,090,000. Ismail had added £7,000,000 a year to the debt of Egypt for thirteen years. Except for £16,000,000 spent on the Suez Canal, all the borrowed money had been squandered.

In 1877 Evelyn Baring, who was later to be known as Lord Cromer, arrived as the British representative on the Caisse de la Dette Publique.

II

The following transcript of a MS. by Vidal Pasha gives in a concise form the chief events in the history of education in the eighteenth century:-

INSTITUT d'ÉGYPTÉ

Copie d'un MANUSCRIT de feu S. E. Vidal Pacha, fondateur de l'Ecole de Droit du Caire.

L'histoire des vicissitudes de l'instruction publique en Egypte au XIX^{ème} siècle n'est qu'une vérification d'une grande loi de la Nature, à laquelle rien n'échappe; c'est l'inévitable principe que toute action entraîne une réaction, et que l'énergie de celle-ci est nécessairement proportionnée à l'énergie de celle-là. Ainsi le pendule, éloigné de la verticale, y revient par une série d'oscillations en sens contraires, d'autant plus grandes que l'écartement primitif a été plus considérable, mais dont l'amplitude décroît progressivement.

1^o Avec Méhemet Ali, développement sur une grande échelle de l'instruction publique - Création multiples d'écoles - Composition et traductions d'ouvrages

classiques en tous genres - Professeurs étrangers très distingués et méthodes européennes d'enseignement - Mission d'éducation en Europe.

2^o Sous Abbas Pacha, revirement complet - Grand nombre d'écoles fermées - Idées européennes proscrites - Maîtres européens mis à l'écart - Mission à l'étranger supprimés - Cette première période de réaction dure une dizaine d'année.

3^o Sous Saïd Pacha, après un temps d'hésitation, quelques écoles sont rouvertes - Clot Bey est rappelé, et l'Ecole de médecine relevée - De bons professeurs sont rappelés d'Europe. Le mouvement progressif continue à l'avènement d'Ismail Pacha. L'instruction publique est prospère sous le ministère de Chérif Pacha. - Développement des écoles primaires et préparatoires - 4 écoles militaires sont organisées - On ouvre l'école vétérinaire, Ecole des Arts et métiers, Ecole de Droit et d'Administration - Ecole polytechnique est reconstituée - Les écoles sont groupées méthodiquement et largement dotées - A chaque professeur de mérite est adjoint un répétiteur qu'il forme peu à peu - On installe un Conseil d'Instruction publique - Programmes systématiques d'enseignement - Rédaction d'ouvrages

adaptés au pays - Cabinet de physique - Bibliothèque - Cours spécial de chimie analytique, de géologie, etc - Musée de Boulaq largement subventionnée - Fondation de l'Institut Egyptien, Encouragements donnés aux écoles libres, etc -

Cette 3^{ème} période a une durée moindre que la première.

4^o Mouvement rétrograde qui dure quelques années de moins que la période précédente - Ecoles militaires réduites - Ecole vétérinaire, laboratoire de chimie pratique supprimés - L'Ecole d'Arts et métiers ne doit plus former que des ouvriers - Abandon des vues élevées sur l'Ecole de Droit - Ralentissement des fouilles et de la description des anciens monuments - etc.

5^o Sous le Ministère de Riaz Pacha, et par les soins de Dor Bey, vers 1875 nouvelle oscillation en sens inverse - L'attention se porte de nouveau sur les écoles - Extension de l'Ecole des Arts et métiers - Période définitive de développement de l'Ecole de Droit - Dar el Oloum - Statistiques des Ecoles - Commission d'enquête de 1880. Le mouvement n'est pas arrêté par la mort de Dor Bey et par la crise

financière - Accroissement du Budget de l'Instruction Publique - Ecole normale - Projets d'Ecole vétérinaire et d'Ecole d'Agriculture - Ecole d'aveugles et de sourds et muets - 2 écoles pour les filles - Ecole des enfants de troupe de Stone Pacha, etc.

6^o Réaction pendant quelques années - Abandon de tous projets d'écoles nouvelles - Les deux écoles de filles réduites à une seule dont le niveau est très abaissé - Plus de statistiques, d'archives, d'inspections sérieuses - Professeurs expérimentés remplacés par des jeunes gens - Réduction du personnel, du matériel, des Subventions - Les idées et les personnes européenne poursuivies à l'époque d'Arabi, etc.

La durée de la 6^{ème} est plus courte que celle de la 5^{ème}.

7^o Mouvement actuel en avant - Réformes et améliorations - Nouveau programme - Nouveaux règlements - Projet d'un Conseil d'Instruction publique, etc. ...

En jetant un coup d'oeil d'ensemble sur toutes ces vicissitudes, il se dégage un fait rassurant pour l'avenir de l'Egypte, Depuis les grandes créations de

Méhéméd Ali, la durée des périodes de rétrogradation a été sans cesse en diminuant; les destructions périodiques sont de moins en moins graves; un nombre de plus en plus grand de mesures utiles se perpétue; les bonnes méthodes sont de moins en moins combattues; elles s'acclimatent de plus en plus.

L'espérance est permise.

Le Caire, le 3 Avril 1887.

III

The French occupation had been too short for educational reform, but twenty-five years later Mehemet Ali started the work. He wanted officers for his campaigns, so in 1825 he opened a staff school at Cairo under the direction of a Turk trained in France. In 1826 forty young men were sent to France, and placed under the charge of M. Jamard, who appears to have looked after his charges in an efficient manner. Between 1826 and 1841 over 114 students were sent to France, and a few to England. On their return they were employed as masters in the different schools, marine, military, or medical. In 1827 Dr. Clot Bey was allowed to start a medical school, first at Abu Zabal, and then at Kasr-el-Aini, and to organize military hospitals. Today Kasr-el-Aini is the finest medical school in the Near East. It has had a strange history. The palace of Qasr-el-Aini and its founder Ibn-el-Aini are referred to in the history of Ibn Iyas. Just before the French invasion it was the palace of the Mameluke Ibrahim Bey. The

French converted it into a military hospital, but they left within three years, and Kasr-el-Aini became a barrack. From 1825-1827 it was a preparatory college for army cadets. Then it became a medical school under the able directorship of Clot Bey, surgeon general to the Egyptian army. In ten years it had produced over four hundred medical Officers. Clot Bey had difficulty in getting permission to dissect. He began by using dogs, but later he was allowed to use black slaves. Then there was the difficulty of textbooks. He founded a school where the medical students learnt French. In 1832 he sent twelve selected graduates to France where they acquitted themselves well. On their return they translated fifty books into Arabic. Subsequent to this there were always sixteen Egyptian medical students in France.

The course at Kasr-el-Aini was five years, and three hundred students were fed, clothed, lodged and provided with pocket money at the expense of the Government.¹

1. The Report of the Minister for Public Instruction for 1886 refers to the objection many parents had to paying fees for their children, because they themselves had been educated free of charge under Mehemet Ali.

Mr. J. A. St. John says that there were 1200 students at Ka^z-El-Aini under military discipline, that little regard was paid to health or morals, and that in April, 1832 about 300 of these lads were sent off en masse to Abu Zabal afflicted with syphilis, opthalmia, or the itch.¹ In 1838 the school for mid-wives was opened under the direction of Mlle. Leweillon. The report of Prof. Lallemand who inspected the school in 1849 was very favourable; he adjudged it efficient, well-staffed and up-to-date.

Mehemet Ali who had supported the school died in 1849, ~~and~~ was succeeded by Abbas, who secured some excellent German professors, the most famous being Griesinger, Reyer and Bilharz.² Clot Bey retired to France in disgust. His conversation with Mr. Nassau Senior,³ is rather pathetic - "The destruction of that school is the public event which, of all I have witnessed, has given me most pain, I

1. See p. 213, Egypt in the Nineteenth Century, D. A. Cameron, London, 1898.

2. He announced in 1851 his discovery of the disease which now bears his name.

3. p.205, Vol. II, Conversations and Journals in Egypt and Malta, 2 Vols., Lond., 1882.

had there 150 students; they remained for five years, and therefore, if all practised their profession, would have added every year thirty to the medical men in Egypt. Allowing for those who failed, they actually did furnish every year about twenty-five. In twenty years this amounted to 500, or about one medical man to every 8,000 souls.¹ The proportion in France is one to 1500 souls. Mehemet Ali intended to increase the school so as to enable it to furnish 1,000 medical men, or one to every 4,000 souls. I saw Said Pasha the day after that on which my students had been drafted into the army. I was - and looked - very wretched.

'What is the matter with you?' he inquired.

'Your Highness need scarcely ask me,' I answered, 'When I have seen in one day the destruction of the labours of my whole life.'

The above version has the ring of sincerity and truth, but not so the account given by De Lesseps, who never ceased to exercise an undesirable influence

1. The ancient population of Egypt in the time of Sesostris according to Strabo was 6-7 millions.
 In the time of Diodorus Siculus about $3\frac{1}{2}$ millions, 1841 about 2 millions.
 Mehemet Ali estimated it at 3,200,000, but a Census taken during his reign gave $5\frac{1}{2}$ millions, (Many were bastinadoed for making false returns, so this figure may be below the truth.)
 Clot Bey at 3,000,000.
 Lane at 2,000,000.

upon Said. De Lesseps told Senior¹. "Abbas Pasha hated knowledge and schools, as he hated everything European. He discouraged the schools, and if he had lived Egypt would have relapsed into utter ignorance. Said Pasha has not had time to repair much of the harm done by his predecessor, but is doing so more quickly than was even hoped by those who know how much he has to do, and how few there are to assist him. He has suppressed two schools in Cairo, and for sufficient reasons; one was the Medical School, in which it had become a trade to deliver fraudulent certificates of ill-health, as exemption from military service; he is educating a lot of young medical men, but not in a school. The other was a military school which Abbas Pasha had turned into a seminary of the most atrocious vice."

This is what De Lesseps would have us believe of a man when crossed shouted hysterically that he would throw the Barrage, and the temples, and the villages of Egypt into the Nile, and so devastate the country that it would take 300 years to make it again

1. p.140, Vol. I, Conversations &c.

habitable.

"Well", he shrieked,¹ I govern Egypt; je suis bon enfant; on peut tout avec moi par de bons procédés. Mais si l'on me traite avec orgueil, ils verront de quoi je suis capable."

By 1855 Kasr-el-Aini medical school was in such confusion that Said drafted all the students into the army and closed it. By the following year he had realized his folly, and recalled Clot Bey from his retirement in France. This great man, who deserved so well of Egypt, did his best, but ill-health forced him to give up in 1858, and leave Egypt. Three Frenchmen, Vambéry, Burguières and Annoux carried on till Ismail's accession in 1863. Ismail appointed Muhammad Ali Pasha el Bakly as Principal, and he held office for eleven years. Quarrels and intrigues marred the progress and harmony of the school from 1879-1883. Its appalling state has been described by Dr. Sandwith in his report.² Huge lebbek trees kept

1. See p.88, Vol. II, Senior, Conversations &c.

2. See pp.29-31. The Egyptian Problem, Sir Valentine Chirol, London, 1920.

air and light from the windows. Living snakes swarmed in the walls owing to the plaster having crumbled away. 'The floors were made of broken, ill-fitting 'ballats'¹ which, being porous, soaked in any septic liquids, while the rough walls and wooden ceilings were infested with bugs. ... But the pervading horror of the hospital was the smell from the privies, which were built in the walls, and communicated directly with huge underground culverts, blocked at Low Nile, and at other times allowed to empty themselves into the river. The so-called drains from the dissecting room and dead-house also flowed into the Nile about a mile above the intake of the water supply of the city." Not a soul went into this hospital of his own free will, except beggars who were driven there by poverty. The populace of Cairo regarded it as the prelude to the cemetery - and believed that the patients were first of all beaten by the attendants, and then poisoned by the doctors. Medical diagnosis was either 'anaemia' or 'gastric catarrh'. The medicine doses for the twenty-four hours were administered as one. Major operations were done without

1. Porous floor-tiles made of sandstone.

anaesthetics. Refractory patients¹ were confined in chains, anklets and handcuffs - probably beaten. The notes used by the Professors were out of date, and there were no microscopes, no pathology, no laboratories, and no practical work of any kind.

This was the state of affairs at the commencement of the British Control.

Mehemet Ali has been lauded as a cultured monarch who gave his people education. What are the true facts about this able barbarian? In comparison with his dissolute descendants he naturally shows up well. But he never could write, and could not read until he was 47 years of age, and then only imperfectly. He was full of the most disarming candour as when he confessed, "My difficulty is not to read Turkish, but to read anything. He showed no respect or regard for the ancient monuments of Egypt. In this respect he had the materialistic outlook of the Turk. He pulled down the temple of Abydos and Arsinoe in order to have stone wherewith to build his factories. He tried

1. We are inclined to think of those who 'were dead but wouldn't lie down.'

to make his subjects, soldiers, sailors and factory hands instead of improving them morally and intellectually. He made the extraordinary mistake of not realizing that the wealth of Egypt was dependent upon its agriculture. Lesseps blandly tells Senior¹ that Mehemet Ali founded hundreds of schools for one factory. The statement is ridiculous. Thomas Waghorn who was a Steam Agent in Egypt, gives the following figures:²

Primary Schools

3 at Cairo with 600 scholars

1 „ Alexandria with 200 scholars

1 „ Sious „ 200 „

45 in other towns of the provinces with about 100 scholars each, giving a total of 50 schools and 5,500 scholars. These scholars were taught reading and writing and the four rules of Arithmetic. After a period of three years' study certain scholars were chosen (or drafted?) to the two preparatory schools

1 at Abou Zabel with 1,500 scholars

1 at Alexandria „ 800 „

Total 2,300 „

1. p.140, Vol. I.

2. p.47, ff. Egypt As It Is In 1838, Lond., 1838.

Arabic, Persian, Turkish, a complete course of arithmetic, mathematics and drawing were taught in these two schools. After four years of study, the scholars were sent to the special schools which were ten in number.

The School of Medicine with 300 scholars

"	"	"	Veterinary	"	120	"
			Surgery			
"	"	"	for Cavalry	"	300	"
"	"	"	Artillery	"	300	"
"	"	"	Infantry	"	800	"
"	"	"	of Languages	"	150	"
"	"	"	Music	"	150	"
"	"	"	Agriculture	"	50	"
"	"	"	Midwifery	"	20	"

The Polytechnic School " 225 "

A Total of 10 Special schools with 2,415 scholars

"	"	"	2 Preparatory	"	2,300	"
"	"	"	50 Primary	"	5,500	"

A Grand Total of 62
Schools with 10,215 "

All these schools had foreign professors as well as native. The duration of the course of study varied from three to five years. The scholars were lodged and were subjected to military discipline. In addition to being clothed, and housed, and fed, they received monthly sums of pocketmoney in piastres as follows:-

	1st	2nd	3rd	4th	5th Year
In the Primary Schools	8	10	12		
" " Preparatory "	15	20	25	30	
" " Special "	40	50	60	70	80

Discipline was further strengthened by promoting certain of the most distinguished boys to the ranks of corporals, serjeants and serjeant-majors, who received an extra five, ten and fifteen piastres a month.

In addition to the above schools there were special regimental schools for soldiers, the mosque schools, and educational institutions established by

foreigners. Hekekyan Bey in a conversation with Mr. Senior¹ refers to these private schools of a later date. He said that both Muslims and Christians had good private schools. He mentioned the good Coptic,² Armenian, and Greek schools in Cairo; a very good school established by the Soeurs de la Charité, and a good one for boys by some French monks, where even Turks went to be educated. Mrs. Lieder had an excellent Girls' school under the auspices of the Church Missionary Society.³ The C.M.S. also started a boys' school but it had to be closed for lack of funds. The Jews and the Greeks had two fine schools at Alexandria.

Although his own schools were so unpopular that mothers blinded their children to keep them away from school, yet Mehemet Ali cheerfully gave land for building a Protestant Church in Cairo; invited the

1. pp.214, ff. Vol. II.

2. Before the British Occupation the Copts had 14 schools in Cairo and 2 in Alexandria, one of which was attached to the Patriarchate and had 302 Copts, 16 Muslims, 1 Jew, 8 Armenians and 1 Syrian as students. There were 13 masters, and they taught Arabic, Coptic, English, French, Geography, Calligraphy and Singing.

3. This was before Miss Mary Whateley and other ladies of the American Mission had a school.

Lazarites to Egypt to diffuse education, and asked the Sisters of Mercy to settle in Egypt to be patterns of Christian charity. It should be remembered that all these religious foundations conducted a school of some sort. It was in such ways that he proved himself progressive. Napoleon always boasted that he went with his age - Mehemet Ali made no such boast, but he cheerfully and with the utmost unconcern went far and far beyond it. He was always willing to experiment and not afraid to use his own judgement. He liked and admired able men, but had no use for superior men - he needed instruments not advisers. When he was told that an 'Ecole d'Administration' would be a good thing he ordered one, much as a nouveau riche would order a Rolls Royce. But when he saw what the subjects were, that the students would be taught things like incidence of taxation, and the theory of government, he put an end instantly to the school. When he ordered the school he did not know what it would be like - he gave an order for one only. When it was founded he saw at once that it would not fit in with his scheme, so he abolished it. Much has been made of Mehemet Ali's

interest in education, but it was simply a means to an end. He was intelligent enough to realize the value of trained officers of all kinds, and he was willing to get the best foreign professors. His policy was justified ~~for~~ in 1832 when he began his rebellion against the Porte, the victories at Homs, Beylan, and Konia (Iconium) completely vindicated Mehemet Ali's educational policy. After the peace of 1840-41 his schools were without their raison d'être and he lost interest in them. At his death the number of students in them had sadly declined.

Mehemet Ali's policy has been severely criticized, and during his life-time too. Dr. R. R. Madden¹ does not mince his words, "The great misfortune," he says, "of the Pacha's mode of civilizing Egypt is, that he has begun at the wrong end of improvement: he has left the condition of the people in all its misery, and promulgated a magnificent programme of public instruction, with all the complex and expensive machinery of an extensive system of education presided over by a minister of public instruction, and administered

1. p.76 ff. Egypt And Mohammed Ali - Illustrative Of The Condition Of His Slaves And Subjects &c., &c., London, 1841.

by a council of inspectors and supervisors. The primary schools established in the towns are fifty, the number of scholars about 5,000. ... The schools, strictly speaking, for the people, are productive of little benefit, for the obvious reason, that the people have no reason to confide in the motives of Mohammed Ali. They believe that his object is to get hold of the children for the purpose of making soldiers of them.¹ In the neighbourhood of large towns, where his oppression is felt less severely, the children voluntarily enter the schools for the sake of the advantages given to them in the way of food and clothing; but in the country, nothing but compulsion can be made to triumph over the objections of the parents to part with their children."

While he commends Mehemet Ali's attempt to give education to the people, he bitterly laments the failure of it, and he draws attention to the mistaken notions which led to that failure, "The idea of taking from the people the means to live, of establishing a

1. Which was of course quite true.

system of government which renders them poor and abject, which is alike adverse to their interests and their habits, which deprives their chiefs and sheiks of their former property in the soil, and takes away the strength of their population for armies in foreign lands; and while these hardships are inflicted on them, and are most severely felt, to think of forcing education on them is so obviously absurd, and impracticable, that it is only surprising how the attempt could have been made with any expectation of its success." Dr. Madden proceeds to give Mehemet Ali the most excellent advice, "If Mohammed Ali would civilize his people, he must begin by bettering their condition: if he would educate the children of the fellahs, he must leave the fathers bread; if he would fill the schools, he must disband his armies; if he would send 'the schoolmaster abroad' in Egypt, he must limit the functions of the tax-gatherer, and the Turkish soldier; in a word, if he would humanize his people, he must soften their disposition by other means of improvement than by the constant use of the cudgel and the courbash."

Dr. Bowring admits that in 1837 the peasants were 'on the extremest edge of poverty' and that their condition was unchanged and scarcely better than under the Mameluks.

Whatever view we care to take of Mehemet Ali's efforts on behalf of education, if perhaps we be tempted to give him the benefit of the doubt, we have no such doubts when we come to consider what his descendants did, or omitted to do, for education.

IV

Succession in the direct line of descent was not secured until 1866 when Ismail obtained a Firman to that effect. It was thus small wonder if each successive Pasha throughout his Pashalik tried to squeeze as much as he could out of Egypt, for himself and his children.

Mehemet Ali is reported to have confided to Prince Pückler-Muska (p.189, Aus Mehemet Ali's Reich), "Some day my grandchildren will reap what I have sown. You know Egypt has once been the first country of the globe, and a shining example to all others. Now Europe has taken its place. In time, Egypt may possibly become again the seat of civilization." His grandchildren did reap what he had sown, but not in the glorious way that he had hoped.

A conversation between Mr. Senior and Hekekyan Bey sheds considerable light upon the activities of Abbas and Said:-

Senior: What has become I asked of the Council of
Public Instruction which presided over the whole?

Hekekyan: Abolished by Said.

S. Of the primary schools which were spread over all Egypt?

H. Abolished by Abbas and Said.

S. Of the Preparatory Schools?

H. One exists and the other was abolished by Abbas.

S. Of the Polytechnic School?

H. Abolished by Said.

S. Of the School of Languages?

H. Abolished by Abbas. Shepherd's Hotel in the Eshekeeyeh was built to receive it. Mr. Shepherd and his waiters are the successors of the Professors of Arabic, Persian, Turkish, French and English.

S. Of the Cavalry School?

H. Abolished by Abbas.

S. Of the Infantry School?

H. Abolished by Abbas.

S. Of the Artillery School?

H. Abolished by Abbas.

S. Of the Veterinary School?

H. Abolished by Abbas.

S. Of the Medical School?

H. Reduced by Abbas. The pupils that remained at Said's accession - about 100, instead of 150 when Mehemet Ali left there - were taken by Said, and all sent as privates in the army; young men who had given five or six years to the study of medicine and surgery, every one of whom would have diffused not only health, but knowledge over the country.

S. What then remains of the great provision made by Mehemet for public instruction?

H. Nothing except one Preparatory School. Abbas and Said, though they differ on every other question, agree in their hatred or their contempt of knowledge. Did you visit the Public Library at Cairo?

S. I did and found the shelves empty, and the rooms occupied by the clerks of the War Office.

H. There were there 50,000 volumes collected by Mehemet Ali; not perhaps very judiciously, but still constituting a valuable and useful library. Some have been given away, more stolen, and the rest are perishing by damp in the vaults under the rooms which they formerly filled. Said himself,

when prince, thought it princely to have a library of his own. He formed one at considerable expense; the other day he made a present of the whole to his house-painter. He has not kept a book.

Abbas had a general examination of both teachers and pupils held in his presence. He considered that both answered so badly that there was nothing he could do but declare public education to be worthless and suppress the schools. He did so, leaving open only the Mafrouza, a training establishment for soldiers. Into this he placed lads of fourteen and fifteen, taking them out two years later with the rank of colonels. This he did to acquire a certain number of military supporters. Then there was the case of Abdo Pasha - a Turk, who, when he first came to Cairo swept the streets. Becoming useful to Abbas¹ he was rewarded by being created Minister of Public Instruction. Said Pasha had the sense to put him out on quarter pay, but it was too late; Abdo had made his fortune during his three or four years in office.

1. In some questionable capacity, probably.

Mongil Bey told Senior¹ that Abbas was the mauvais idéal of selfishness, who cared for nothing but the gratification of his sensuality, of his vanity, and of his spite. When a boy he had his pastry-cook bastinadoed to death, and his grandfather (Mehemet Ali) reproved him mildly, just as we should reprove a child for killing a butterfly. 'To make the punishment fit the crime' is an idea that never enters the oriental mind, and so, what is it to us an atrocity, is, to them, only an act of vigour.

It is only fair to record anything that may relieve the sombre colours with which the character of Abbas has been painted. Nubar Pasha always referred to him as a true Turkish gentleman of the old school. D. A. Cameron states,² " ... there is much to be said in his defence ... He had seen the total collapse of Mehemet Ali's ambition; he was convinced of the folly of resisting Europe. The land needed peace and quiet, an abolition of shams, the removal of commercial monopolies. He found himself exposed to a pack of

1. See p.28, Vol. I.

2. pp.227-228. Egypt In The Nineteenth Century, London, 1898.

hungry Europeans and fawning natives, whose one desire was to enrich themselves at his expense; but he took refuge in flight. Visible only to a few of the consuls-general and his personal attendants, his life became a mystery to the public, and baffled intriguers delighted to load his memory with opprobrium. His conduct, perhaps, was ignoble, yet Egypt was saved from foreign pillage under his reign - a contrast to the days of Said and Ismail, on the adoption of an opposite policy." The reader will be able to judge for himself whether this completely vindicates his suppression of the Schools.

Said was easy-going, full of good intentions and prone to fits of utter indifference which Egyptians interpreted as weakness. He was the favourite son of Mehemet Ali. He is reported to have confided to M. Ferdinand de Lesseps - who was his evil genius - "My predecessors have done nothing but milk the cow; I shall try to feed her." An admirable sentiment had it been executed. He hated education of every kind. We have already discussed his contribution to the educational progress of the country. When his tutor Koenig Bey tried to persuade him to reopen the schools

his answer was, "Why open the eyes of the people? They will only be more difficult to rule." And of course Said hated bother of any kind. At his death in 1863 the Egyptian primary schools remained as the Saracens and Mameluks had left them.

However, Ismail re-opened several of the schools and sent educational missions to France. There were 100 Egyptian students in Paris in 1834. He is given the credit of having founded in Cairo the first school for girls ever opened within the dominions of the Caliphs.¹ In his reign was founded the Oriental Library by Ali Pasha Moubarak (1871) of which Dor Bey remarked -

"Toutes les splendeurs de l'arabesque, tout brillant coloris de miniatures orientales, tous les fanastiques caprices des majuscules Arabes se sont donné rendez-vous dans ces larges in folio, qui, par le fini du travail et la beauté des couleurs, surpassent de beaucoup les magnifiques missels ou livres d'heures qui font l'ornement de nos bibliothèques, les dessinateurs d'ornementation y trouveraient une mine inepuisable des richesses."

1. See p.29, Egypt Under Ismail Pacha, Blanchard, Jerrold, London, 1879.

In 1876 the Polytechnic School reckoned thirty-three pupils with thirteen professors. The course of study was six years. The Book-keeping and Surveying School had twenty pupils - all boarders, and twelve professors.

Ismail's wife (his first) supported seventy-six boarders, and seventy-one day-pupils in the girls' school.

Ismail was in Paris for about four months and spent £70,000 on different things and on women. Mr. Senior¹ had the following interesting conversation with an Englishman who had served Ismail as coachman in Paris and Cairo, and who was returning to England.

Senior: In what society did he live?

Coachman: The people he liked best to talk to were his servants: the lads who brought him his pipes and stood before him with their arms crossed. He sometimes sat on the sofa, and smoked, and talked to them for hours all about women and such things.

1. See pp.227-228, Vol. II.

S. In what language?

C. In French; it is the only language which he speaks fluently - he learned it from his nurses.

S. Did he ever read?

C. I have known him sometimes try to read a French novel, but he would be two hours getting through a page - once or twice I saw him attempt to write. His letters were half an inch high, like those of a child's copybook. I don't think that he ever finished a sentence.

S. Does he take any exercise?

C. None, except driving about in his carriages. He comes out of his hareem about eight or nine in the morning, smokes till he takes his drive, and when that is over he returns to his hareem, and does not show himself again until the next morning.

S. What sort of man is he in appearance?

C. Mean; about five feet, two inches high, and not strong for his size.

Senior adds the curt comment, "Rapid degeneracy, physical and moral, seems to characterize a Mussulman dynasty."

It only remains now to trace the vicissitudes of some of the other schools during this period.

(a) The School of Engineering.

As early as 1820 Mehemet Ali sent students to France to study engineering and brought Europeans to Egypt to teach it. In 1834 a School of Engineering was founded at Boulac, and in 1839 it had 211 students. Lambert Pasha was Principal from 1838-1844, and he was assisted by a staff of 14 teachers.

Ali Pasha Mombarak who later became Minister of Public Instruction, was Principal from 1849-1854. The number of students had declined to 135, and this in spite of the fact that the College had its own secondary and primary schools. In the days of Said the School was closed, that there was a 'school' of engineering at the Barrage where Mougel Bey had constructed the great dam. In 1866 the School was re-established by Ismail, first at Abbassieh,¹ and then at Darb-el-Gamameez;² its object being to train

1. At the Palace El Safaraniyyah.

2. At the Palace of Mustapha Fadel Pasha.

engineers for irrigation and the Army. A School of Accountancy to educate clerks and surveyors, was attached. In 1875 the number of students was 33 with 13 teachers. In 1879 fees were required from the students.

(b) Arts et Métiers.

Originally the special military academy founded by Mehemet Ali in 1839. Its first director was Joseph Hakikian, and its object was to train "engineers to be charged with driving engines, foremen of workshops, and improvers from manual work necessary for running factories and workshops." Later painting and road-making were included in the curriculum.

In 1868 the School was re-established by Ismail, with military and civil branches.

(c) The School of Agriculture.

This was re-established in 1836 by Mehemet Ali, at Abbasieh. It had to be closed in 1839 owing to lack of students. Ismail opened it in 1868 but in 1875 it had to be closed again for the same reason as before.

(d) The Veterinary School.

Established at Abu Zabal in 1831 it enjoyed a brief life and a few months later it was closed. In 1837 it was re-established at Abbasieh, and managed to keep upon till 1851 when it was again closed.

In 1867 it became associated with the School of Agriculture, and remained open till 1879.

(e) Dar-el-Ilm.

It was founded in 1872 for the propagation of learning generally, and in particular to encourage the study of Arabic and religious subjects. It aimed at training teachers of these subjects. It was housed in Darb-el-Geneina, Cairo.

(f) The School of Law.

It was founded by Ismail, and its first principal was Vidal Pasha, a distinguished Frenchman who had been recommended by the Emperor Napoleon III. Its original purpose was to train Egyptians for the administrative Government posts, but the curriculum included Arabic, French, Italian, History, Geography, and Book-keeping.

In 1886 it was re-organized, being divided into an English and a French side. The pupils had to choose one, and before long the majority were joining the English side.

(g) The Emma Tod School For Girls, Alexandria.

It commenced its historic career in 1861 in a rented house in the middle of the city. It was the first British school for girls in Alexandria, and it drew its pupils from the better class British and Jewish families. In 1876 it moved to a fine building by the sea-front, funds being supplied by Mr. Tod, a Scottish banker. The school bore the name of his wife 'Emma Tod'. The subsequent history of this school is one of great success due to a succession of devoted and very efficient teachers.

The Talmud states - "By the breath of the school children shall the State be saved."

Egypt is still waiting for salvation.

Note on

List of Works Consulted.

I have chosen to make use of this title rather than the more usual Bibliography. It is unfortunate that custom condones the use of the term Bibliography¹ when only a list of authorities is meant. I cannot help feeling that it is as bad as making a Derby winner draw a baker's van.

In this "List of Works Consulted" many well-known books have been omitted, and several others of seemingly trifling value included. But somewhere amid this miscellaneous collection of books lies the truth, and the attempt to endow it with words has afforded me considerable pleasure.

Sometimes I receive letters from some of my eccentric friends, dear folk who date their letters according to Saints' Days. Lord Cromer's remarks upon this kind of thing are very sound. "There are," he writes, "two habits which I have contracted, and which I have endeavoured to pass on to my children as I have found them useful. One is to shut the door after me when I leave the room, and the other is always to affix the day of the month and the year to every

1. For exactly what Bibliography stands for, see that very fine work, "An Introduction To Bibliography For Literary Students", by R.B.M^c Kerrow. Oxford. 2nd. imp. 1928.

b.

document, however unimportant, that I sign. I have received numbers of letters, not only from women, one of whose numerous privileges it is to be vague, but also from men in high official positions, dated with the day of the week only. When the document is important, such a proceeding is a fraud on posterity."

Some of the books in this List are undated. In such cases I have endeavoured to ascertain the date of publication.

A more unforgivable sin than that of using Saints' Days as a date, is committed by some writers, who refer to authors they have occasion to quote, by surname only, giving no initials nor supplying the date of publication of books thus referred to, - which moreover are usually not included in their Bibliography. In the Bodleian Catalogue names like Jones or Johnson fill at least two volumes each, so that it is very desirable that authors' initials be included in any List of Works Consulted. All the Works to which reference has been made in this Thesis can be seen in the British Museum and the Bodleian Library, except certain original documents whose whereabouts are stated. I have refrained from including books which can only be consulted in Cairo, Damascus, and the Continent of Europe. A complete list of Parliamentary Papers 1870-1882 is appended as it does not exist in this convenient form elsewhere.

In compiling this List I have been keenly aware that, "Neither does it so much require book-learning and scholarship, as good natural sense, to distinguish true and false, ~~and~~ to discern what is well proved and what is not."

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Year.	Number of Paper	Title.	Sessional Vol. & Page.
1870.	(C. 92)	Report on the Maritime Canal connecting the Mediterranean at Port Said with the Red Sea at Suez, by Capt. Richards, R.N., and Lieutenant-Colonel Clarke.	XLIV.807.
	(C.100)	Correspondence with the Turkish Ambassador respecting Loan contracted by the Khedive of Egypt.	LXIX.819.
	186	Report of the International Commission upon Consular Jurisdiction assembled at Cairo.	LVI.637
1872	(C.551)	Reports relative to British Consular Establishments, 1858 and 1871. Part V.	LXI.285.
	(C. 563)	Commercial Reports, No. 2, 1872. Report from His Majesty's Consuls on the Manufacture, Commerce, &c. of their Consular Districts.	LVII. 331

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1873.	(C.886)	Correspondence relating to the Dispute between the Egyptian Government and the Alexandria and Ramleh Railway Company.	LXXV.253.
1874.	(C.989)	Commercial No. 12, 1874. Correspondence between Sir D. Lange and the Admiral -xxx Board of Trade and the Admiralty respecting the passage of the Suez Canal.	LXVIII.889.
1876.	(C.1391)	Egypt, No. 1, 1876. Correspondence respecting the Purchase by Her Majesty's Government of the Suez Canal Shares belonging to the Egyptian Government.	LXXXIII. 131.
	(c.1392)	Egypt, No. 2, 1876. Correspondence respecting the Suez Canal (in continuation of Papers presented to Parliament in 1874).	LXXXIII.173.
	(C.1393)	Egypt, No. 3, 1876. Agreement between the British and Egyptian Governments respecting Judicial Reforms in Egypt, signed at Alexandria, 31st July, 1875.	LXXXIII.121.
	(c.1396)	Egypt, No. 4, 1876. Correspondence respecting Mr. Cave's Mission to Egypt.	LXXXIII.87.

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	(C.1416)	Egypt, No. 6, 1876. Concessions, Conventions, and Statutes of the Suez Canal Company with the Sultan's Firman.	LXXXIII.433.
	(C.1425)	Egypt, No. 7, 1876. Report by Mr. Cave on the Financial Condition of Egypt.	LXXXIII.99.
	(C.1484)	Egypt, No. 8, 1876. Correspondence respecting the Finances of Egypt.	LXXXIII.1.
	(C.1525)	Egypt, No. 9, 1876. Further Correspondence concerning the Suez Canal.	LXXXIII.347.
	(C.1579)	Suez Canal. Copy of Treasury Minute, dated 17th July 1876.	XLII.513.
1877.	(C.1766)	Egypt, No. 1, 1877. Correspondence with regard to the Suez Canal.	LXXXVIII.393.
	(C.1769)	Egypt. No. 2, 1877. Correspondence relative to the Arrest of Messrs Houghton and Barlow at Massawah, and the Return of the Abyssinian Envoy from Egypt.	LXXXVIII.329.

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	(C.1797)	Commercial, No. 14. 1877. Further Correspondence respecting the Affairs of the Suez Canal (in continuation of (C. 1525), Egypt, No. 9, 1876.	LXXXVIII.399.
1878	(C.1900)	Egypt, No. 1. 1878. Convention between the British and Egyptian Governments for the Suppression of the Slave Trade (signed at Alexandria, 4th August 1877.	LXVII. 485.
	(C.2012)	Commercial, No.13, 1878. Correspondence respecting the Affairs of the Suez Canal.	LXXVI.669.
	(C.2185)	Egypt, No. 2, 1878. Correspondence respecting the Finances of Egypt.	LXXVIII.217.
1879.	(C.2224)	Egypt, No. 2, 1879. Correspondence respecting the Appointment of Commissioners for the Management of the Daira Lands in Egypt.	LXXVIII.205.
	(C.2233)	Egypt, No.2, 1879. Further Correspondence respecting the Finances of Egypt (in continuation of Paper (C.1484) or 1876)	LXXVIII.221.
	(C.2352)	Egypt, No. 3, 1879. Further Correspondence respecting the Affairs of Egypt.	LXXVIII.1.

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	(C.2395)	Egypt, No. 4, 1879. Firmans granted by the Sultans to the Viceroys of Egypt, 1841-1873, with Correspondence rel- -ating thereto.	LXXVIII.573.
	(C.2397)	Egypt, No. 5, 1879. Further Correspondence respecting the Affairs of Egypt.	LXXVIII. 17.
	(C.2399).	Commercial, No. 23, 1879. Further Corres- -pondence respecting the Affairs of the Suez Canal (in continuation of "Commer- -cial, Nos. 12 & 13, 1878")	LXXIII.137.
1880.	(C.2549)	Egypt, No. 1, 1880. Correspondence respecting the Affairs of Egypt.	LXXIX. # 1
	(C.2550)	Egypt, No. 2, 1880. Further correspondence respecting the Affairs of Egypt.	LXIX. 175.
	(C.2606)	Egypt, No. 3, 1880. Despatch from Her Majesty's Agent and Consul-General of Egypt, forwarding Con- -sular Reports on the State of the Country.	LXXV. 751.
	(C. 2662)	Egypt, No. 4, 1880. Despatch from Her Majesty's Agent and Consul-General in Egypt, forwarding the Law of Liquidation.	LXIX.217.
1881	(C.2766)	Egypt, No. 1, 1881. Correspondence respecting the Affairs of Egypt.	XCVIII.477.

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1882.	(C.3105)	Egypt, No. 1, 1882. Despatch from Her Majesty's Agent and Consul-General at Cairo respecting the Affairs of Egypt.	LXXXII.1.
	(C.3106)	Egypt, No. 2, 1882. Despatch from Her Maj- -esty's Agent at Cairo, forwarding a Copy of the Note presented to the Khedive by the English and French Agents.	LXXXII.5.
	(C.3161)	Egypt, No. 3. 1882. Correspondence respecting the Affairs of Egypt.	LXXXII.9.
	(C.3188)	Egypt, No. 4. 1882. Return showing the Number of Foreigners in the Ser- -vice of the Egyptian Government.	LXXXII.89.
	(C.3230)	Egypt, No. 5. 1882. Correspondence respecting the Affairs of Egypt.(in continuation of (C.3161) of 1882.)	LXXXII.97.
	(C.3237)	Egypt, No. 6, 1882. Despatch from Sir E. Malet forwarding a List of Europeans in the Service of the Egyptian Govern- -ment (in continuation of (C.3188) of 1882.	LXXXII.189.

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	(C.3251)	Egypt, No. 8, 1882. Further Correspondence respecting the Affairs of Egypt (in continua- -tion of (C.3249) of 1882.	LXXXII.357.
	(C.3257)	Egypt, No. 9, 1882: Extract from a Despatch addressed to Viscount Lyons respecting the Affairs of Egypt.	LXXXII.435.
	(C.3258)	Egypt, No. 10, 1882. Copy of a Despatch from Earl Granville to the Earl of Dufferin respect- -ing the Affairs of Egypt.	LXXXII.439.
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	(C.3296)	Egypt, No. 12, 1882. Correspondence respecting the Conference at Constan- -tinople on Egyptian Affairs.	LXXXII.603.
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	(C. 3299)	Egypt, No. 14, 1882. Further Correspondence respecting the Affairs of Egypt.	LXXXII. 623.
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