XXVI. On the method of interpreting Egyptian Hieroglyphics by Young and Champollion, with a vindication of its correctness from the strictures of Sir George Cornewall Lewis. By REGINALD STUART POOLE, Esq.

Read May 15th, 1862.

THE subject on which I have the honour to address you is the correctness of the method of interpreting Hieroglyphics originated by Dr. Young and developed by Champollion. This method, after having long been generally accepted by scholars, is now seriously attacked, and the learning of the assailant demands as serious a defence. The question is one of much graver importance than at first appears. The immediate results of the interpretation of the hieroglyphic inscriptions seem meagre and uninteresting, but it will be found that these results have been largely used by almost all inquirers into the primæval period of the world's history. To abandon them is nothing less than to go back at least thirty years in this province of historical inquiry. If we have erred let us frankly acknowledge the fault and retrace our steps, but let this not be done without a careful consideration of the evidence before us.

Sir George Cornewall Lewis, in his "Historical Survey of the Astronomy of the Ancients," has called in question all that has been done by the Egyptologists; but as he admits that, if they can read and translate the inscriptions, they have a trustworthy basis of inquiry, I shall mainly confine my remarks to this one question, which I need not explain to be the question upon which the existence of Egyptology depends. My object will be to show the grounds on which I hold the method of Young and Champollion to be true. I wish to discuss as clearly as possible the means of interpretation, their application, and the evidence of the correctness of this application as shown by the effect of the results on historical inquiry.

The discovery of the Rosetta Stone, during the French occupation of Egypt, supplied what seemed to be a key for the interpretation of hieroglyphics. This tablet bears three inscriptions, the lowest of which is in Greek characters. The Greek inscription is a decree, ending with a statement that it was written in three

characters, sacred letters or hieroglyphics, enchorial or vulgar letters, and Greek letters. The first and second inscriptions are, therefore, Egyptian, and there can be no doubt that they represent the sacred and the vulgar dialects of the Egyptian language, spoken of by ancient writers. If the three inscriptions can in any way be closely compared, the first step towards the interpretation of the ancient Egyptian characters will be taken. The enchorial I shall only examine as an aid to the understanding of the hieroglyphics.

Before attempting any comparison it is necessary to endeavour to ascertain in what manner the hieroglyphic characters correspond to words, whether they are phonetic or ideographic, that is, letters or the like, or symbols. The Greek inscription ends with the words "of the first and the second," the rest of the last line being wanting. In the hieroglyphic inscription, we observe, in the last line, a sign occurring three times, having respectively beneath it, one stroke, two strokes, and three strokes. There can be no reasonable doubt that here we have arbitrary symbols for numerals; but this supposition does not warrant a similar opinion as to other signs.

The number of characters in the Egyptian inscriptions may throw light upon the nature of their signs. The hieroglyphic inscription is imperfect, the enchorial is almost complete, and the same is the case with the Greek. The enchorial inscription occupies nearly as much space as the Greek, and seems, as far as can be conjectured from its appearance, to contain not many fewer signs than the Greek contains letters, although the signs have far more forms than those letters. The enchorial character is evidently a kind of running hand, and there is therefore great difficulty in determining how many strokes compose a sign, and what the signs are meant to represent. Some signs, however, bear so unmistakeable a likeness to certain signs in the hieroglyphic inscription, that it is evident that the enchorial character is, at least in part, a degradation of the hieroglyphic.

A very careful comparison of the enchorial with the hieroglyphic inscription shows that their extent was originally the same. In preference, however, to determining on this basis the number of signs in the hieroglyphic inscription, it will be enough to calculate how many signs the remaining lines, when uninjured, must have contained. Those lines are 14; the lowest contains 104 characters, and has lost space which would about contain 16 characters; we thus gain a total of 120: the next line above, which is more defective, contains 135; and six above, all diminishing in contents through the injury, 120, 111, 112, 115, 108, 107, &c. The average number of characters in a full line would have

been at least 145, which would give 2,030 characters for the 14 lines. The original number of letters in the Greek inscription may be computed to be about 6804, a few being wanting. It is obvious that the proportion is too large to admit of the hieroglyphics being wholly symbols, or as they are now called ideographs. There are not 2,000 ideas in the Greek inscription. We can therefore only infer that at least some hieroglyphics are sometimes phonetic, representing either syllables or letters.

It may aid our judgment to consider the very different number of letters in which different languages express the same ideas. If we compare Hebrew with Greek, for instance in the first five verses of the 1st chapter of Genesis, we find in the Hebrew 197 letters and in the Septuagint 334. If written like Hebrew, the hieroglyphic inscription of the Rosetta Stone might be alphabetic.

Another indication of the nature of the hieroglyphic characters is discover-

able in the relative frequency of the occurrence of certain of them. paring the hieroglyphic inscription with the Greek, it will be seen that the number of distinct characters in the former is much greater than in the latter. Certain signs occur but once, others seldom, others often, and the hieroglyphics can be separated into two distinct classes, rare and common signs, a separation which the examination of other inscriptions amply confirms. The common signs must be phonetic if I am correct in supposing that some hieroglyphics must be of this nature in this inscription. It is important to compare the frequency of occurrence of these signs with that of the Greek letters. The half-circle occurs 118 times; the wavy line ~~~ 72; the mouth \bigcirc 60; the three straight lines side by side 11146; the single straight line 1 45; the sign of two parallel lines connected by a sloping line = 40; the bar? - 33; the cord > 33; the siphon \iint 32; the cerastes \longrightarrow 30; the mat \blacksquare 25; the reed \oint 24; the the two reeds 116; the three straight lines, one above another duckling 12; the owl 8; and the lion 6. The most frequent sign is therefore one to eleven and a half in the whole number $(1355 \div 118 = 11.4)$; the next is 1 to 18.8; the next 1 to 29.4; the next 1 to 30.1; the next 1 to 33.8; the rest 1 to 41 and above. Taking the first line of the Greek

inscription, two letters are 1 to 6, the next 1 to 9, then 1 to 11, 1 to 13, two 1 to 15, and the rest 1 to 20 and above. The most common hieroglyphic sign is as often repeated as T.

The following conclusion is the result of the first stage of the inquiry. Hieroglyphics are, some ideographic, some phonetic. I am anxious to lay stress upon the strong reasons for holding that some are phonetic, as the agreement of ancient writers in calling hieroglyphics symbols has seemed to furnish a triumphant argument against any of them being phonetic. If, however, some are phonetic, the error of these writers might be accounted for by the circumstance that characters wholly pictures of known objects, if sometimes used as ideographs, would strike a nation like the Greeks as essentially ideographic.

It must be frankly admitted that the next step is a conjecture though not a mere arbitrary guess.

Dr. Young observed that certain signs were inclosed in rings or ovals in the hieroglyphic inscription, and that, in corresponding places in the enchorial, there were signs inclosed in marks like those we use to inclose parentheses. The name Ptolemy occurs eleven times in the Greek inscription, and inclosures are found in corresponding places in the enchorial. The enchorial inclosures contain five sets of characters. These were conjectured to mean Ptolemy, King, Arsinoë, Berenice, and Alexander. In the hieroglyphic inscription there is only this difference, that but one set of characters occurs corresponding in position to the supposed Ptolemy and King. It seems therefore probable that the characters thus distinguished from the rest are royal names, and on examining the sculptures and paintings of the temples it will be seen that rings are always found in the inscriptions accompanying the most important figures of warriors, or sacrificers, and in the greatest and most sumptuous tombs, and that these rings contain a great variety of different groups.

As the Egyptian hieroglyphics are partly phonetic, it is most probable that foreign names would be written in phonetic characters. The number of characters in some of the rings is so great that it exceeds that of the Greek name supposed to correspond, and it is therefore evident that a title or titles must be added. Some of the rings omit the latter portion of the group, and the remaining hieroglyphic characters are seven in place of the ten Greek letters. They were therefore supposed to correspond to the most essential letters ΠΤΛΜΑΙΣ. The fifth and sixth hieroglyphic signs are identical; elsewhere one of the two occurs alone; so that we have a double sign that would well represent a long vowel. The short vowels in this case would be omitted, as in the old Semitic mode of writing.

This conjecture was tested by an examination of the numerous rings found in the Egyptian inscriptions, and was not only confirmed, but the alphabet was gradually enlarged from the names of the Greek and Roman rulers. Dr. Young's theory had been published, a list of kings corresponding to the chief names in ancient Egyptian history was drawn out. Among these was one identified with that of Cheops, the traditional builder of the Great Pyramid, which was selected from about eight rings found in the inscriptions of tombs near that Some years after General, then Colonel, Howard Vyse undertook to explore the Pyramids. In the Great Pyramid he discovered some chambers never previously opened, and not carefully finished, as they were merely intended to lighten the weight of the masonry above the King's Chamber. On the walls of these chambers were scrawls in red ochre, written by the quarrymen or masons. In these scrawls two royal rings only occurred, and one of them was that previously assigned to Cheops, the other that of a king previously supposed to be his immediate successor.

It must also be remarked that the names occurring in the same parts of edifices have been easily recognized as belonging to one and the same period. Thus the Cæsars are found together and the Ptolemies together. A Greek dedicatory inscription always is accompanied by names of the Greek or Roman rule. At the great temple of Dendarah the portico bears a Greek dedication under Tiberius. In the sculptures of the portico are the rings of Tiberius and later Cæsars to Nero. In the further part of the temple, which is obviously of older date, are older names, from that of Cleopatra downwards. In like manner the sculptures of the kings identified with those as to whom we have an agreement in the statements of ancient writers, that is from Psammetichus the First downwards, show distinct styles. The accurate delicate style of the Psammetichi is not accompanied by any but names of that line; the heavy style of the Ptolemies is not found with Egyptian or Roman names; the still heavier style of the early emperors does not contain the names of the later ones, under whom Egyptian art reached its lowest point.

If it be granted, and I cannot see how assent can be withheld, that royal names occur in the Egyptian inscriptions and are correctly read, it must also be granted that the phonetic value of many signs has been determined. The second point is thus fixed: hieroglyphics can be read.

Reading and interpretation are not the same. You may read a phonetic language without interpreting it; you may interpret a symbolic language without reading it. We cannot advance in the present case from reading to interpretation

without a knowledge of the language in which the hieroglyphic inscriptions are written.

It was held by Young and Champollion that the Coptic language was so near to the ancient Egyptian as to be a safe means for the interpretation of its writings when the sounds of the characters were once known. They considered Coptic to be a debased form of ancient Egyptian, essentially differing very little from it. The connection of the two languages is now called in question. Strange as is this denial, in the face of the results of advanced philological inquiry, it has been so confidently made, that the reasons for holding the general opinion must be carefully stated. The date of the Rosetta Stone, which we may here consider the only hieroglyphic inscription of certain age, is B.C. 196; the oldest Coptic papyri are not much earlier than the close of the sixth century after the Christian era. There is therefore an interval of almost eight hundred years. Is it possible that the Egyptian language should have materially changed during this interval? The condition of the nation, the nature of the language, and the composition of the vocabulary, prove that it can have undergone no essential change in this period. History shows us that the Greek and Roman rule tended rather to confirm than to alter the national peculiarities of the Egyptians. The longer the foreign rule lasted, the more distinct the Copts became; and at the time of the Arab conquest they were not only separate from their rulers, but so hostile to them that they almost welcomed the invaders. The monuments confirm history, for excepting at Antinoë there is scarcely an important monument of Greek or Roman style out of Alexandria. The nature of the language leads us to the same opinion. related to a group of African languages, which have the same characteristics, though they are evidently in a later condition. In examining it, the difficulty is to discover such indications of change as a general analogy would lead us to expect. If, however, we perceive its essential character, we perceive the cause of this difficulty. It is a monosyllabic language, and therefore inflexible. changes that we do discover are mere variations of sound, the results of expressing several dialects. The laws of permutation are traceable, and they show us that the language is essentially unchanged, and incapable of change. position of the vocabulary affords remarkable confirmatory evidence. We find almost all the religious terms to be pure Greek, and in reading the New Testament we find these terms as mere transcriptions, with the addition of Coptic prefixes or suffixes. Had the Greek rule or the conversion of the Egyptians to Christianity greatly changed the language, we should not find Greek thus mixed in an unfused state with Coptic. Turkish and Persian both contain, in like manner,

a multitude of Arabic words; but Turkish is still Turanian, and Persian Iranian, notwithstanding this Semitic element in the vocabulary.

Happily it is not merely on high probability that we have to depend. Ancient writers have preserved transcriptions of a certain number of Egyptian words with their meanings, and these are frequently to be recognized in Coptic. It is true that these writers speak of a sacred and a vulgar dialect, and many of these words must belong to the former; but the nature of the language does not admit of these dialects differing essentially.

Parthey in his Vocabulary gives two valuable appendixes containing respectively these Egyptian words occurring in Greek and Latin writers. The Greek writers furnish the more important list. If we omit etymologies as dangerous, names of plants as likely to be wanting in Coptic, demonstrably late words, and words marked doubtful, there remains a large proportion, of which half are easily recognizable in Coptic, as may be seen by the following specimen of the first twenty-five words:—

- 1. Αβλαβυνιον, a kind of papyrus rope.
- 2. $A\theta\eta\rho a$, a kind of food.
- 3. $A\mu\beta\rho\eta s$, name of a book.
- 4 (1). Aμοῦν, (a) the hidden, concealment; **Auoni** to hold, &c.
- 5 (2). , (b) word for calling; aroun come!
- 6 (3). Απαππους, the greatest; Αφωφ; Αφωπ, a giant.
- 7. Αρσαφης, manhood.
- 8. As $\mu \alpha \chi$, those standing on left hand of king.
- 9 (4). Bain θ , a hawk; Baic, Bhx, Bh6, a hawk (accipiter).
- 10. Bai, the soul.
- 11 (5). H θ , the heart; 2HT, the heart.
- 12 (6). Báis, a palm-branch; Ra, Rai, a palm-branch, palm.
- 13 (1?). Bal, myrrh; Bal, myrrh?
- 14 (7). Bapis, a boat; Rapi, a little boat.
- 15 (2?). Βουτοι, tombs? Rote an abomination; to pollute.
- 16. Βυνητος, a kind of garment.
- 17 (8). Buvi, Bovi, Bovvi, an instrument of music; Roinn, nablium, cithara.
- 18 (9). Έρπις, wine; **μρπ**, wine.
- 19 (3?). Ερτωσι, every kind of animal; ερτω, to germinate.
- 20. $I_{\rho \iota}$, the eye.
- 21 (10). Ισις, ancient; AC, EC, antiquus.
- 22. Kaiµiv, beheld.

- 23 (11). Kakeis, a kind of bread; AIK, AEIK, bread.
- 24. Καλαϊνον, colour.
- 25 (4?). Καλασιρις, a broad tunic, a tunic covering the legs. καλ, a tunic, the shanks, thighs (crura, femora).

Admitting, therefore, that the Coptic is nearly the same as the vulgar dialect of the ancient Egyptian, and that both are essentially the same as the sacred dialect of the same language, the next step is to test this conclusion by an attempt to interpret the inscriptions which our alphabet enables us in part to read. This test may best be applied to short inscriptions accompanying sculptures and paintings, and possibly of an explanatory character.

Thus the figure of a woman clapping her hands is accompanied by signs reading

HST followed by a sign not found used as a phonetic. In Coptic a song is Ewc and τ is the feminine article. We can thus read "a female singer," the fourth sign, the arm, being apparently a corresponding ideograph. Over the

figure of a man working at boat-making are the characters MNKH, followed

otic monk is "to form"

as before by a sign not found used as a phonetic. In Coptic monk is "to form" or "construct." The last sign as before is not found in Coptic, and, on examining it, we perceive that it is a representation of an implement resembling but not identical with that the craftsman is driving into the boat at which he is working. This gives us a clue to the use of certain non-phonetic signs, which are evidently ideographs employed to determine the sense of phonetic groups. The hand in the preceding case would indicate an action done by the hands, clapping the hands, as the implement here indicates carpentering. The third instance I adduce is the

occurrence of the signs us T above the figure of a man sawing. In Coptic I find orww a "cut," "division:" the T here may indicate the substantive form.

Over a yoke of oxen ploughing are the signs \searrow \square s k, followed by a harrow and three grains. In Coptic ckal is "to plough:" here there would seem to be a double determinative: over the labourer who guides the plough are signs which cannot be all read without a further knowledge than the alphabet supplied by the Greek and Roman names furnishes. In addition, I will only cite three figures of animals accompanied by hieroglyphics which appear to designate them. Over an

animal like a jackal is written with unsh: in Coptic we find orwnw

"a wolf;" over a cynocephalus, AÄNA, in Coptic en an "ape;" over a rat

PNNU, in Coptic nem, nm, a "rat" or "mouse." In all these instances the words are radically the same. It will be perceived that the discovery of the names of objects being sometimes written above them, and, still more, the separation of determinative from phonetic signs are of great value in the interpretation of ancient Egyptian. We thus gain a means of ascertaining the signification of many of the numerous words which occur in the inscriptions written phonetically and followed by determinatives, by looking in the Coptic dictionary for the words corresponding to the latter, for if they agree with the hieroglyphic phonetic signs, the identification is complete. Thus AH, a bull, is the Coptic EZE; RAR or RERA, a pig, the Coptic pip; SHAAW, a sow, the Coptic EWAY; UHER, a dog, the Coptic orzop; RA, the sun, the Coptic pH; SEEW, a star, the Coptic cloy. After this step had been made the grammatical forms were by degrees discovered, and ultimately the theory of the language ascertained, and most of the words common to it and Coptic discovered. Unfortunately this does not complete the vocabulary of ancient Egyptian. Coptic is a language with a small literature and now no longer spoken. The religious terms are borrowed from Greek, and the ancient religious terms are therefore mainly wanting. meaning of these, and the rest of the doubtful part of the vocabulary, is mainly to be ascertained by a laborious inductive process, which has now made great progress.

We are now able to discover the general sense and most of the details of any historical inscription, and of not a few of the religious inscriptions. A larger knowledge of the language will probably not add greatly to the important results.

It is impossible, with the limited time at my disposal, to show how every step to the position now gained has been made. If as much as I have explained be sound, the subsequent steps cannot be considered uncertain. The rules for the reading and interpretation of hieroglyphics are definite and unvarying. At the same time, many of the sounds and words are yet uncertain, and the grammar is not complete. Those who assert that the method of the Egyptologists is wholly arbitrary, that letters are read according to the meaning sought to be discovered,

not by any fixed rules, confound the labours of conscientious scholars with the ill-regulated attempts of impostors.

Thus far I have spoken of the philological side of the question. That question may be further illustrated by some notice of the character of what are now termed the alleged results of the interpretation of hieroglyphics, as to most minds the results are the best test of the truth of any system supposed to be on its trial. This argument has indeed been rather hastily dismissed by the assertion that the results are of no value. The exact value of a literary discovery is very difficult to determine. Every one will estimate it according to his individual partiality. this case the discovery depends for its interest wholly upon its importance as illustrating history. Those who feel no interest in history cannot be expected to feel an interest in the discovery. Let us suppose an opposite case. All English literature having been lost, one work is recovered. In Shakspere's writings the world would at once recognize an addition of extraordinary value to literature; but if they could be compared with the Greek and Latin classics it would be very soon decided that history had gained very little by this discovery. A regret would be felt that a double service was not done to knowledge, and this regret must be felt in the case of hieroglyphic discovery. Yet the uninteresting form of absolutely new historical knowledge cannot injure its importance, and surely it is a narrow mind that insists upon new truths being agreeably told. It would be as reasonable to expect mathematics to be taught in poetry.

Those who look reasonably at what has been done for ancient history by Egyptology may well hesitate to believe that so many pages can be blotted out of the annals of mankind. They are unable to see how so congruous a series of facts can be untrue, and prefer to rest their conviction rather upon the results of the science than upon its method. There may be great disagreements in dates and details, but the general scheme of Egyptian history is in its clearer periods the same with all the authorities, and upon certain main facts they are all agreed. Their differences are rather in the attempt to synchronize Egyptian with other history, than in the arrangement of Egyptian history itself.

In considering the results of Egyptology, the main point that strikes the student, and which has aroused suspicion where it should have almost forced conviction, is their unexpectedness. The hieroglyphic records were searched at the first discovery, in the hope that Joseph, the oppressed Israelites, Moses, and the great events of the Exodus, would be found in their places in Egyptian history. Not one expected notice has been certainly discovered. No doubt this is because the sojourn in Egypt fell during a period which is a blank in the monuments of

the country; but had we been impostors we should not have failed to find exactly what the world required. Yet not in this matter alone, but throughout every province illustrated by Egyptology the results have been always unexpected, and generally contrary to expectation. If the method be a deception, conscious or unconscious, it is difficult to understand how its results can be so unlike what the learned almost demanded from the discoverers.

I cannot even mention the chief additions to knowledge which Egyptology claims to have won. I will only notice the provinces that are most largely indebted to it. In history we have recovered the annals of Egypt for two thousand years. The manners, the religion, the arts of the Egyptians are as well known as those of the Greeks and Romans. The ancient geography of neighbouring countries and much of their history have been illustrated. Comparative philology has gained a most valuable addition in the recovery of a language the first records of which are four thousand years old, and of which we know the history for at least two thousand five hundred years. Biblical archæology has received new and important illustrations corroborating minute particulars in a manner that signally proves the accuracy of the Sacred Records.

Take away all this, and look at the result. Erase from our commentaries, our cyclopædias, and our dictionaries all that is due to Egyptology, and see in all that relates to Egypt what a vague, dry, miserable caput mortuum remains. Or compare what was written before Champollion with what is written now, and you will perceive that the positive gain due to Egyptology cannot be the fruit of an erroneous system, and that in this case credulity is on the side of scepticism, not on that of belief. The history of literature does not exhibit a parallel to so gigantic an imposture or a delusion as must be supposed if Egyptology be untrue; and, if this could be proved, something more could also be proved, that results afford no test of the truth of a system, and that we must add to our new criticism a new logic.

It may seem surprising, if there be so much to show that Egyptology is true, that Sir G. Cornewall Lewis has entirely refused to see any of these arguments, and I should be guilty of disrespect to him were I not to show that this may be explained without any slur being cast upon his scholarship.

No one can read the portion of his work which relates to Egyptology without perceiving a strong bias against the scholars whose opinions he combats. It is needless to prove this, as it must be evident to any reader of the work. The result is evident in the positive contradiction of all ancient authority which runs counter to his views. The priest who explained the inscription of Rameses to Ger-

manicus is characterized as an impostor, but no reason is given for this conclusion. This feeling is still further proved by Sir G. Cornewall Lewis's neglect of the Egyptian authorities, which may be exemplified by one remarkable instance. criticizing Manetho, the Egyptian historian, who is the great authority with the Egyptologists, Sir G. Cornewall Lewis is anxious to expose his untrustworthiness. He accordingly cites the notices which are attached to several reigns in his lists as all the remains of his history, and not alone remarks that they are in part unhistorical, but that they show that Manetho did not write what can be called history. It is, however, well known that there are good reasons for doubting these notices to be by Manetho, or preserved in his very words: one Sir G. Cornewall Lewis acknowledges to be partly at least an interpolation. There are besides these notices three long fragments which enable us to judge Manetho's character as an historian. The first and second are grave historical narratives, worthy of a place by the side of the most sober of the classical writings. The third is an untrustworthy legend; but Manetho expressly says that it was not preserved in the sacred records, but on some uncertain popular authority. It is inconceivable that Sir G. Cornewall Lewis could have missed these well-known and most interesting fragments had he not unconsciously prejudged the whole question, and searched for anything but evidence to support his particular theory. evidently looks upon the Egyptian records with the contempt that was felt by the Greeks and Romans, a contempt shown in their general neglect, and embodied in the sarcasms of Pliny, who calls the Lake Mœris, of which the fisheries produced a large revenue, a great ditch, as Sir G. Cornewall Lewis says that the people that invented paper contributed nothing to the progress of mankind.

ADDENDUM.—The alphabet may be obtained without the guess that led Dr. Young to its discovery. There is in the Leyden Museum a well-known enchorial papyrus in which certain words are transcribed in Greek characters. From these transcriptions an enchorial alphabet may be framed, by which the words in the enchorial inscription of the Rosetta Stone, inclosed in signs like those we use for parentheses, will be found to furnish the same names as the corresponding words inclosed in rings in the hieroglyphic inscription according to Dr. Young's reading.