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## CARDINAL MAI AND THE PALIMPSESTS

By DR. RUSSELL OF MAYNOOTH

ICANNOT be blamed for feeling, but I may, perhaps, be blamed for asserting, that the three best and noblest and most gifted men that I have had the happiness of knowing in the course of a long life were Dr. Russell of Maynooth, Mr. Justice O'Hagan, and Lord Russell of Killowen. I name them in order of their respective terms of life on earth, which were curiously symmetrical, their births and their deaths following each other at regular intervals of ten years. Dr. Russell was born in 1812, John O'Hagan in 1822, and Charles Russell in 1832 ; and they died in the same order, 1880,1890 , and 1900. Each had sixty-eight years of life-a circumstance which has led me to notice how often the figure 68 occurs in obituaries, contemporary and historical. I have even accounted for it by an appeal to the Bible. As septennial parliaments never complete the seven years, but at the furthest stop a little short of that full legal term, so human life generally comes to an end before the Scriptural limit is reached of three score years and ten (Psalm lxxxix. 10).

Feeling thus towards these three men, and believing them to be worthy of being remembered, I have not shrunk from using the opportunities afforded by this Magazine for naming them in many contexts. As regards the President of Maynooth, a series of chapters ran through our twentieth and three succeeding volumes, which could easily (as Aubrey de Vere urged at the time) have been developed into a substantive biography. The same feeling which prompted those records prompts me
to preserve in these pages two literary lectures which are hidden away from even the most discursive readers of this generation. One of them indeed has, I suspect, never been printed; for I possess the original manuscript of it written out in full, and I have good reason to believe that Dr. Russell never kept manuscripts when they had once been set up in type. A kinsman of his seems to have inherited this instinct, which makes him feel a certain satisfaction in at once tearing up and flinging into a wastepaper basket each page of "copy" as soon as the corresponding proof-sheet has been duly examined.

In the year 1863 a committee was formed in Dublin, with the Lord Chancellor of Ireland, Maziere Brady, as President, including such men as Sir Bernard Burke, Dr. Evory Kennedy, Sir Robert Kane, and John Edward Walsh (afterwards Master of the Rolls), to arrange for the delivery of lectures on various subjects of literature and art. These lectures were afterwards published in a small volume. This was continued for five years. Amongst the lecturers were Professor J. K. Ingram, Archbishop Trench, Samuel Ferguson, Percy Fitzgerald, Isaac Butt, Lord O'Hagan, Judge O'Hagan, and Dr. Alexander (now Protestant Archbishop of Armagh). The co-operation of Dr. Charles William Russell was invited twice, and the following lecture was delivered by him in 1866 :-

Probably there are not many among those whom I have the honour to address who have not, at some time or other, had to exercise their ingenuity in deciphering a corrected or obliterated manuscript. The necessity constantly arises, even in familiar correspondence. Few writers are so faultless or so watchful, as not to commit an occasional slip; and, although some are honest enough frankly to repair the mistake by drawing the pen through the faulty word and replacing it by its true representative, a by no means uncommon course is to rub out, more or less perfectly, the first writing and write the afterthought in its place, or even simply to write the new word upon the top ot the old ones, just as they first stood, and without any preparatory process of erasure. Some of the offenders of the latter class may probably have had to bear the remonstrance of their correspondent, or, if engaged in literature, of their printers; and it is by no means impossible that they may even have paid penalty in their own persons by finding it beyond. their power, after some time had elapsed, to decipher their own untidy manuscript.

In such cases as these, however, it is the second writing which is to be deciphered. It is not often that one is required to reverse the process,-to call back the vanished lines of the original writing, to disembarrass the first letters from the new characters with which they have been overlaid, and to restore the word or sentence such as it first came from the writer's pen. It is only those whom curiosity may have prompted to make the trial, or those whom upon such a task may have devolved in the routine of business or of professional duty, that can fully appreciate its difficulty.

Most of us, I dare say, have met in works of fiction, or even in our own experience, amusing or painful instances of secrets discovered and unwitting revelations surprised under a too curious scrutiny of an imperfect erasure in some unlucky letter or memorandum. Comedies and romances without number have found the turning point of their plot in some such disclosure ; and the criminal records of all countries supply many instances of the equally unforeseen betrayal of daring and ingenious forgeries, alterations of dates or amounts, and other fraudulent tampering with the true import of wills, conveyances, and similar legal instruments.

Less has been popularly known regarding another field, in which the same skill of the decipherer has been employed for a more permanent object and with larger and more important results. I allude to its application, especially by the celebrated Cardinal Angelo Mai, to the decipherment of the ancient re-written manuscripts known to the learned as Palimpsests. The labours of Cardinal Mai in this department of ancient letters, form, perhaps, the least among the real foundations of his fame; but they are so curious, and, in this country, so little known, that I have ventured to select them as the subject of this Afternoon Lecture. In the attempt to make popular a learned and somewhat obscure subject, I feel that I shall need all the kind indulgence of my audience.

It is hardly necessary to explain that the name " Palimpsest "
 $\psi: \omega$, I scrape), and literally signifies "re-scraped," or "repolished "; being used in this sense to designate parchment or other writing-material from which writing had been effaced, and which was rubbed smooth with a view to its being written upon a second time. The practice of thus re-preparing parchment or papyrus, existed not only among the ancient Greeks and Romans, but also among the Egyptians. There was in use in

Rome, under the name of Palimpsest, a kind of parchment or other writing-material, so prepared as to admit of writings being easily effaced from it, and thus available either as a receptacle for rough notes, or as a scribbling-book for first drafts of more elaborate compositions. Cicero, in one of his letters to Trebatius, rallies his friend upon the over economical habit of writing to him upon palimpsest. It would even appear, from the language of this letter, that it was not unusual among friends to sponge out a correspondent's letter when read, and to return the answer upon the same parchment ; and Martial, in one of his epigrams,* speaks of parchment tablets specially prepared so as to admit of being cleaned over and over again at pleasure. On the other hand, Catullus $\dagger$ amuses himself over the self-complacent vanity of Suffenus, a dabbler in verse, who-

> Tam gaudet in se, tamque se ipse miratur-
was so satisfied with his own skill that he would not write his odes, as others did, on palimpsest, for the revision of his friends, but had them at once sumptuously engrossed on royal paper, with new bindings, new bosses, crimson bands, and all the other appliances of fashionable authorship.

> Nec sic ut fit in palimpsesto
> Relata: chartae regiae, novi libri, Novi umbilici, lora rubra, membrana Directa plumbo et pumice omnia aequata.

The practice continued, in a greater or less degree, under the later emperors; and there is a beautiful allusion to it in one of St. John Chrysostom's Homilies, $\ddagger$ in which he compares the mind upon which evil impressions had once been made to a palimpsest parchment in which, however carefully re-prepared, the old characters and lines are sure to appear peeping through the new writing. Nevertheless, during the classical period, its history possesses little practical interest ; not a single manuscript, actually re-written in that period, has been discovered; nor, indeed, is there reason to suppose that, at least for books, the practice of re-writing on parchment was at that time much resorted to.

The ordinary writing-material of the Roman book trade was papyrus, which, in the first centuries, notwithstanding an import duty, was so abundant and so low-priced as to render the use of palimpsest comparatively uncommon. But when, by

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* xiv. 7. † xxii. 5. # Matth. xxvi. 4.
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the division of the empire, intercourse with the east became unfrequent and difficult, the scholars and scribes of the west, although the import duty was abolished, were thrown back upon the old expedient. And from the seventh century, when, by the Mohammedan conquest of Egypt, the papyrus-market was almost completely closed, we begin to meet with western MSS. the parchment of which had been previously written upon, wholly or in part. In the east, where the want of papyrus was not felt so soon, the practice of writing a second time on parchment did not become general till a later date ; and in Greek palimpsests the second writing is hardly ever earlier than the eleventh or twelfth, and is often of the fourteenth or following century.

At the time at which the practice of re-writing was revived, the old literature still maintained its ground, and it may be presumed that a large proportion of existing MSS. must have been copies of the works of the popular authors of ancient Greece and Rome. Accordingly, when an author or transcriber of the new generation was compelled, in the dearth of fresh writingmaterial, to make use of the old and already used parchment, washing and scraping it as best he could to remove the first writing, it must commonly have happened that the works which he subjected to the transformation belonged to the prevailing class ; and thus that the defaced authors were for the most part Greek or Latin classics. If, therefore, we suppose that the practice became general in the period referred to, we should be led to expect that the original writing of the defaced and re-written parchments of this date would be found, if it were possible to decipher them, to consist in the main of remains of Greek and Latin literature, including probably not a few works which are now irrecoverably lost.

And such undoubtedly would have been the case, had, as unfriendly historians have represented, the medieval scribes, in their indifference or hostility to classical literature, recklessly sacrificed the MSS. of the Greek and Latin classics, in order to provide parchment for the pious labours of the Scriptorium. The discussion of such a topic would be out of place in the neutral field which these Lectures are designed to occupy. Indeed this imputation against the monks, in the sweeping form in which it appears in several popular compilations, might well have been restrained by a candid recollection of the many splendid and unquestioned services of the monastic scribes to classic literature. I shall only say that it is one which no person at all
acquainted with the subject of palimpsests would have made, and which the very condition of all the known palimpsest MSS. is sufficient to confute. Unfortunately for the chance of any wholesale recovery, through the medium of the palimpsest, of the lost literature of the ancients, there is not a single extant palimpsest from the present condition of which it could be inferred that, when the MS. was taken in hand by the medieval scribe to be written upon a second time, it was, I do not say perfect, but in a state approaching even in the remotest degreee to completeness. By far the greater number of extant palimpsests bear intrinsic evidence of having been already in a hopelessly mutilated state when selected for rescription. Some of the MSS. contain but a few re-written leaves in a whole volume of previously unused parchment : some, which are re-written throughout. contain portions of more than one ancient author. The palimpsest of Cassian's Conferences, deciphered by Mai, contained scraps of three Roman Jurists; the Barrett palimpsest a still greater number. A palimpsest MS. of one of St. Jerome's Commentaries mentioned by Mone consisted of seven different authors; and the MS. of the Acts of the Council of Chalcedon, from which Mai deciphered his Fragments of Cicero's Orations, included no fewer than eight. Even those deciphered palimpsests which approach in some appreciable degree to completeness, as the Cicero "De Republicà," or the "Historical Palimpsest " of Cardinal Mai, contained but a very small portion of the original work. In a word, from the miserably fragmentary condition of every known ancient work deciphered from a palimpsest original, not only is it plain that the MSS. of these works must have been incomplete before their defacement, but it is even highly probable that, in most cases, the original parchments must have been refuse, made up of scraps of imperfect copies of ancient writers already thrown aside by reason of their incompleteness. Nay, there is good reason for believing that, like the papyrus-merchants at Alexandria, the medieval parch-ment-venders had a special trade in re-prepared parchment, which came to them in the form of refuse, like the waste paper of the modern book-trade. Scraps of palimpsest not unfrequently form part of the lining in the early specimens of bookbinding ; and some of the first printed books, as, for instance, Jenson's Constitutiones Clementinae ( 1476 ), were printed entirely upon palimpsest parchment.

It will naturally be asked whether, if such be the conditions of the ancient writing of the palimpsests, the results to be
expected from their decipherment can be such as to justify the expenditure of time and energy which it involves. And undoubtedly, in the early days of the printing-press, when choice MSS. abounded in all the libraries of Europe, inviting by their very perfection the friendly hand of an editor, it was only to such MSS. that the attention of scholars was directed. It was confidently believed that, before many generations should have passed, the world would again possess, through the agency of the press, the whole body of ancient literature ; and it is difficult nowadays to repress a feeling of melancholy as we read in the prefaces of the various early editions of the classics, and especially as we glance in succession through them all, in the charming collection of them which we owe to the taste and enterprise of the late Mr. Beriah Botfield, the jubilant anticipations of the earlier editors and publishers, the Longmans and Murrays of the fifteenth and sixteenth centuries--Vindelin de Spira, Fröben, Nicholas Jenson, or Sweynheim and Pannartz. But the produce of what may be called the first harvest of MSS. fell far short of these magnificent expectations. At the close of four centuries of the printing-press we find ourselves in possession, it is true, of a precious body of Greek and Latin learning -so precious, indeed, that few have troubled themselves to estimate how far it really represents the intellect of the ancient world. We are apt to limit our notion of ancient literature within the circle of a few great names, or of certain great collections, such as the Bipontine or the Delphin; and, although the fact is vaguely recognized that many works have perished, and that others have been grievously mutilated, yet it is only those scholars who have made the subject a special study that can thoroughly realize the miserably small proportion which the extant remains of Greek and Roman letters bear to the actual literature of the ancient world. There is no branch of either literature-Poetry, History, Philosophy, Oratory-in which deplorable blanks do not appear.

Let me glance at a few in each literature.
The remains of Greek poetry now in our hands do not constitute a tenth part of what the ancients possessed. Of the Greek Epic, Homer and Hesiod are the only representatives, although the so-called "Epic cycle" comprehended no fewer than thirty distinct authors. Nearly all the early Iambic and Elegiac writers have been lost. To pass over the total disappearance of the more ancient Lyric poets, it will be enough to say that out of the nine who are enumerated by the Alex-
andrian grammarians of the second century before Christ, Pindar is the only one who can be said to be tolerably represented. Even Anacreon, whom we might have expected to have been the most popular, and of whom, so late as the time of Suidas, five books were still extant. is known to us only by what the best critics now regard as unquestionably modern imitations. Of the once celebrated poetesses, Erinna, Sappho, Myrtis, and Corinna, all that remains are a few fragments of Sappho. The Greek Drama itself, long to moderns an object of almost superstitious worship, is most imperfectly preserved. Chcerilus, who wrote a hundred and fifty tragedies, is utterly lost. So it is for Aristarchus, Xenocles, Agatho, and Euphorion. Sophocles and Aeschylus, the former of whom produced one hundred and thirteen, and the latter seventy, or, according to Suidas, ninety tragedies, are known to us each by but seven. Of Euripides, who wrote seventy-five, or, perhaps, ninety-two plays, we have only eighteen. Of Greek Comedy, Aristophanes, of whose plays (originally fifty-four in number) we now possess eleven, may be said to be the sole representative. Menander is only known from his Latin imitators or translators; and of Eupolis, Cratinus, Epicharmus, hardly a fragment has been preserved.

In the class of historians, although Herodotus and the early Attic writers have been tolerably preserved, the later Greek writers of history, as I shall presently have occasion to state, have been sadly mutilated.

The orators have been almost equally unfortunate. Demosthenes, alone of them all, approaches nearly to completeness. For all the rest, as Lysias, Isaeus, Isocrates, Aeschines, the extant orations bear but a small proportion to those which have been lost ; while of Dinarchus, copious as he was, we possess but three, and of the great Hyperides, not a single complete oration.

In philosophy, strange as it may appear, hardly a single original master of any of the early schools has escaped the general ruin. Even in the later only a remnant, although it be a precious one, has been saved. Stoics and Epicureans alike have perished. Notwithstanding the all-but adoring reverence in which Epicurus was held by his disciples, out of two hundred volumes which Diogenes Laertius ascribes to him the only remnant, until a few fragments were recovered a few years since from the Herculanean Papyri, consisted of four letters. Chrysippus, who rivalled and even surpassed the fertility of Epicurus, is said by Diogenes Laertius to have written 705
volumes. Not a single one has reached our day! Even of Plato, if we exclude the spurious or doubtiul works, how little has come down to us! And the extant writings of Aristotle, the great text-book of the schools, hardly amount to one-fourth of the 144,000 lines which the same historian of philosophy ascribes to him.

The wreck of Latin letters is hardly less deplorable. Tragedy never obtained a real footing in Rome, although we read of one author obtaining for a single tragedy a sum equivalent to $\AA 8,000$. But, with all the well-known popularity of comedy at Rome, how little do we possess of the Roman comic poets! Terence, the least prolific of its many writers, alone has escaped without serious mutilation. Afranius, Atilius, Turpilius, Tegula, are only known by name. The twenty plays of Plautus may seem no mean monument of his genius, but they form a very small remnant of the 130 which he wrote. Of Statius's forty-five plays, not a single one has come down complete. Pacuvius, whose comedies numbered thirteen, and Attius, who had produced as many as fifty, are equally unfortunate. Of the early satirists Lucilius has totally disappeared. I might cite a long list of writers of the epigram, not one of whom is now known except by some scanty fragments. And, although most of the poets of the Augustan and immediately succeeding age-Virgil, Horace, Ovid, Juvenal, Catullus, Tibullus, Propertius, Martial -have escaped with comparatively little loss, yet others hardly less popular, and among them Varius, who, if we may trust Horace's

## Forte epos acer Ut Varius nemo ducit,

was superior even to Virgil as an epic writer, have perished utterly, and without leaving a trace.

It is still worse in Latin prose. Everyone knows of the miserable mutilation of Livy and Tacitus. But the extent of destruction in other cases is seldom realized. Almost every Roman orator, except Cicero, has perished. Cato is represented only by a few fragments, if we accept the very doubtful treatise " De Re Rustica." ascribed to him ; and of the most voluminous of all Roman authors, Varro, whom Cicero describes as " homo тодvүрафо́татоs," and who himself tells that his works numbered 490 volumes, only one single complete treatise and three books of another have come down to our day.

Such being, after all the best MSS. of the European libraries
had teen given to the world, the deplorably mutilated condition of the literature of ancient Greece and Rome, we need not wonder to find the first band of editors, whose labours had left so much still to be accomplished, succeeded by one and another series of gleaners, too glad to gather up what their more fortunate or more fastidious leaders had passed by or had thrown asideMSS. of minor note, imperfect MSS., ancient commonplace books, " excerpta," " catenx," and other similar repertories; and at last, all these having been in turn exhausted, carrying their researches into a still less accessible region. In the dearth of further resources, men bethought themselves at last that, like those ancient cities of Italy and the East, which, through neglect, or the natural vicissitudes of time, or even the very necessities of modern civilization, had been covered up and forgotten, a forgotten world of letters might lie beneath that which another generation, actuated by new impulses and animated by new forms of thought, had been building up for itseli during a long course of ages. That buried world of thought was found at last in the half-obliterated remains of the medieval palimpsests.

Among the ancient parchments which had been defaced and re-written by the transcribers of the eighth and following centuries, some were copies of authors or works which had since entirely disappeared. In many of these curious literary relics the work of defacement had been imperfectly done. The poet's " Non omnis moriar " had been in part, at least, realized ; and in the faint and attenuated lines which had survived the application of the sponge and the scraping-tool, and still showed dimly out beneath the new characters to which they had given place, it might seem as if, while the grosser external forms in which the intellect of the ancient world was embodied had perished or had been buried beneath the new creation as in a tomb, the more subtle spirit had still lingered, struggling, as it were against annihilation, and, like some parted soul, still fondly clinging to the last mouldering relics of its earthly tenement. To call back those shadows of the past-to give shape and vitality to these dim and unsubstantial essences-and, by the magic power of science or of letters to reproduce them in forms resembling in some degree those which they had once borne, is the task of the Palimpsest editor. And Angelo Mai is recognized by the grateful voice of Europe as the great enchanter of this world of the spirits of a departed literature.

It will be understood from these explanations that in a palimpsest MS. the chief, and perhaps the sole, object of interest
is the first or the more or less completely obliterated writing ; and that the motive which inspires the energy of the explorer is the hope that its dim and half-vanished characters may possibly contain some precious monument of that ancient learning, the loss of which our generation has hitherto deplored. In relation to this inquiry the second writing has no direct interest. It may be, and in point of fact it has happened in more than one instance, that the intrinsic value of the modern MS. is very great; but to this the palimpsest editor steadfastly closes his eyes; and he concentrates all his energy upon the effort to recover, as far as possible in their integrity, those relics of the ancient world of letters which lie beneath. Naturally enough, they are even the dearer because they had been lost; and the literary explorer regards them with the same tender interest which the Poet-pilgrim traces, in some of the seats of modern civilization, the relics of older cities once famous in story, and mourns that-

> Time hath not rebuilt them, but upreared Barbaric dwellings on their shattered site, Which only make more mourned and more endeared The few last rays of their far-scattered light, And the crushed relics of their vanished might.

The existence of this buried world had, of course, long been palpable ; but its significance does not appear to have been even suspected; and the first suggestion as to its probable value for the restoration of the lost literature of the ancients is due to the bold and far-seeing genius of the great Benedictine scholar, Montfaucon. For nearly a century, however, the suggestion bore little fruit. The hope of Montfaucon first became a reality in the hands of Jean Boivin, who, in a palimpsest in the Royal library at Paris, discovered in a MS., the second writing of which consisted of a work of St. Ephraim, those remains of a very old Greek text of the Old and New Testament, which Küster, and afterwards Wetstein, collated, and which Tischendorf has at last given fully to the world.

After an interval of half a century, a Germen scholar, named Knittel, turned to a similar account a palimpsest of the Wolfenbüttel Library, the first writing of which was found to contain large fragments of the Gothic version of the Bible by Ulphilas, bishop of the Goths in the fourth century. Some years later, Paul James Brunns discovered in a palimpsest of the Vatican a portion of one of the lost books of Livy (the 9rst) ; and just at the end of the century, a still more interesting biblical relic,
a large fragment of the Gospel of St. Matthew (chaps. i. I7 to xxvi. 7r) was discovered in the library of our own university, and was edited from a most curious palimpsest by our own fellow-countryman, Dr. Barrett, Vice-Provost of Trinity College, Dublin.

This was the sum of the results of palimpsest exploration up to the time of Angelo Mai. I can but glance at the leading facts of the modest, but, for ancient literature, ever memorable career of this illustrious man. He was born March 7, 1774, at Schilpario, a mountain village of that lovely district of Bergamo, which Manzoni has made interesting to countless readers in every country by the charming description in his Promessi Sposi. From the school of his native village Mai was selected, in 1799, with four companions, to take a part as a novice in the tentative effort for the restoration of the suppressed Order of the Jesuits at Colorno, in the Duchy of Parma, which was undertaken in that year with the approval of Pope Pius VI. ; and, in 1804 , when the Society was more formally restored for the Kingdom of the Two Sicilies, he was transferred, as professor of Greek and Latin literature in the new school of the Order, to Naples ; thence to Rome, and finally to Orvieto, where he received the holy order of priesthood. Returning to Rome, in 1808, he found himself compelled, by an order just issued by Napoleon for the return of all subjects of the Italian kingdom to their native provinces, to relinquish his Roman home; and, as the Society was still under the decree of suppression in the kingdom of Italy, it was considered expedient to release Mai from his engagements, so that he returned to Milan as a simple ecclesiastic, and soon after was admitted as an associate, and eventually a doctor, of the celebrated Ambrosian Library of that city.

From this point the history of Mai forms part of the history of ancient letters. His first independent publication was a Latin translation, in I8r3, of an Oration of Isocrates, the original of which had just been printed for the first time ; and it was in the following year that he entered upon his career as an editor of palimpsests.

It may be convenient, however, for those who have never seen a palimpsest MS. that I should now give some notion of the character and appearance of these curious literary relics, and some idea of the nature of the task which falls to the lot of their editor. With a view to enable you to accompany the explanation with more facility, I have had diagrams executed, which will present
on a large scale the more simple forms of palimpsest, but in which the distinctness of the old writing is much exaggerated, in order that it may be visible at a distance. I have also had photographs prepared, nearer to the actual dimensions, which shall be sent round for inspection, and which may suggest more vividly the real difficulties that in many cases await the decipherer.

But in order to make the subject more intelligible, it is necessary to call attention to certain particulars in which ancient MSS. differ from modern, both as to their material, that is, the substance on which and with which they were written, and as to their execution. Of the writing material it will be enough to say that, although no inconsiderable number of palimpsests on papyrus have been preserved, yet the material of all the great palimpsests of literature has been parchment ; and that, although some examples of ancient parchments of very exceptional fineness have been recorded-as that of the Iliad, which, if we may believe Pliny, Cicero saw compressed in a walnut shell-yet in general the parchment of the ancients was substantially identical in character with our own.

It was not so, however, for the ink. The ink of the ancients was of three kinds, of which, however, only the first was in general use. It was called atramentum scriptorium, and perhaps might better be described as a pigment than as a modern ink. The blackening ingredient of this atramentum was the fine carbon deposited by the smoke of resin, pitch, and other similar combustible matter, including the wood of the resin pine. It was of much thicker consistency than the ink of the moderns; and we can hardly wonder, on first thought, to find the dull writer in Persius throwing the blame of his own slow conceptions on the clamminess of his ink-

> Et queritur crassus calamo quod pendeat humor, Nigra quod infusa vanescat scpia lympha.

It was used, however, with a split reed, from the coarse point of which it flowed as readily as our attenuated ink passes from the finer point of the modern quill or steel pen ; and an inkstand discovered at Herculaneum, still, after so many ag ${ }^{s}$, containedink sufficiently fluid to be written with. A second kind of ink was of vegetable composition, and was made by a process not well explained, from the lees of wine ; sometimes, it would appear, with an admixture of the carbon already described. The third kind of ink, the $\mu \dot{i} \lambda a v$ of the Greeks, was of animal origin, and had
for its chief ingredient the fluid emitted by the cuttle-fish (sepia), and, according to some, the blood of the same fish. For each of these inks a different process is required in deciphering the palimpsest.

Perhaps I ought also to advert to certain specialities of ancient writing for which a modern may not be prepared. I do not mean as to the form of the characters, or as to the peculiarities of individual writers. The former, as varying from age to age, would involve almost endless explanation; and the latter, however curious it would be in itself-however, for instance, it might amuse you to be told that Cicero's friend, Atticus, wrote a beautiful hand, while Cicero's own letters were so illegible that he is obliged to shelter himself under the excuse to which I fear too many of ourselves have at times been driven, of a " wretched pen,"-nevertheless appears of no practical importance for our present purpose, when we remember that. among the ancients, the manuscript of books was by no means the manuscript of the author, but the work of professional writers. As a modern publisher maintains an establishment of pressmen, readers, compositors, and other working printers, the ancient publishers maintained a numerous and practised staff, whose writing. as far as possible, was uniform, and was regulated by the nature and price of the work which they were employed to produce. It is to be borne in mind, too, that, as the ancients did not possess any provision against weak sight or the failing vision of advancing years, which the modern spectacles supply, it was often thought necessary to provide for the wants of all classes of readers by characters of a size which (as may be seen in the diagrams before you, where the faint lines represent the original writing of the MS.) is quite beyond the proportions with which the modern eye has been familiarized. Lastly, it must be remembered that in the ancient writing there was no separation of syllables, words, or even sentences. An ancient MS., although broken by occasional paragraphs, presents in other respects one uninterrupted series of letters-not separated into words, undistinguished by initial capitals, unparted by marks of punctuation, and destitute of every one of the conventional signs by which, in a page of modern print, the eye is enabled at a glance to identify each idea with its representative word. To a reader who has had no experience of ancient MSS. this is a most formidable difficulty. Let even the most accomplished Latinist or Greek scholar make the experiment for the first time, under the most favourable circumstances; let him try to read off at
sight one of the continuously printed Greek or Latin inscriptions in Muratori or Aringhi, or even in the luxurious page of Mommsen or De Rossi, and he will be able to form some idea of the degree to which an embarrassment, which, even with all the advantages of clear and well-formed type, is formidable, must aggravate the inherent obscurity of the half-obliterated characters of a palimpsest.
(To be continued.)

## CARDINAL MAI AND THE PALIMPSESTS

By DR. RUSSELL OF MAYNOOTH

## Part II.

So much of explanation as regards the primitive writing ot the ancient parchment which may have formed the basis of a palimpsest. We have now to see how, as regards the feașibility of decipherment, it is affected, first, by the more or less complete obliteration of the characters; secondly, by the overlaying of the new writing ; and, lastly, by the re-arrangement of the MS. in a new volume, in which the original subject is entirely lost sight of and forgotten, and in which the sole consideration of the scribe, the binder, and the destined reader, is for the new work for which the old one has been displaced.

First, as to the effacement of the original writing, it is to be understood that, under ordinary circumstances, there were two methods, the wet and the dry. In the first the surface of the parchment was moistened and carefully washed with a sponge, after which it was suffered to dry, and gently but firmly rubbed with pumice stone. But in the dry method recourse was had to the scraping tool, sometimes so as to scrape off the entire surface, and, as it were, to renew altogether the face of the parchment ; sometimes confining the operation to the characters, so as merely to follow the course of each letter, and to efface these without interfering with the rest of the surface. The former process, when carried out with care, is commonly fatal to the chance of deciphering the original ; but the latter process, unless the new writing chance to have fallen unfavourably on the page, often presents to the decipherer the most favourable of all the conditions of success. In most cases, whatever may have been the process, the defacement of the letters is found to be so great as to necessitate the use of some chemical treatment in order to revive them. When the ordinary atramentum was used, a simple washing with infusion of galls is generally sufficient ; but for the other inks the use of dilute muriatic acid, followed by prussiate of potash, is required; and in the case of sepia, or other animal ink, it has sometimes been found necessary to boil the parchment in oil in a close vessel heated to $400^{\circ} \mathrm{R}$.

Such were the different methods of defacing MSS. among
the ancients with a view to writing a second time upon the parchment. The next point for the consideration of the intending decipherer of a palimpsest is the position and the character of the new writing with which the old has been overlaid ; and this, I may state, presents almost endless varieties. Perhaps the most favourable form of all for the chances of decipherment is exhibited in the first of the diagrams now submitted to you, which is taken from a facsimile of the celebrated Vatican palimpsest of the "De Republicà" of Cicero. In this instance the original writing was of large size. The parchment was washed, scraped, and rubbed smooth, the new writing follows the same order and direction as the old, and, although heavy, falls for the most part in the spaces between the lines. This, however, is the most simple form of palimpsest ; the decipherer must be prepared for many complications. Sometimes the original paper is turned upside down, as shown in the second diagram, which is from the palimpsest of Cicero's "Oration on Milo's Debt," published by Cardinal Mai ; sometimes the new MS. is written at right angles across the original, as in the Barrett palimpsest, a singularly fine specimen of its class, which may be seen in one of the show cases of our University Library. Sometimes, while the original page was in columns, the new writing is carried continuously across the page ; and, most perplexing of all forms, not unfrequently the new writing follows precisely in the course of the old, line for line, and almost letter for letter, as may be seen in the photograph marked No. 2.

In all this, however, we have been considering cases in which the MS, has been once overwritten; but the palimpsest editor has sometimes to deal with the far more perplexing contingency in which there are not two but three, and even four tiers of writing. One of the Syriac MSS. in the British Museum, examined by Dr. Tischendorf, is a palimpsest of some portions of the Gospel of St. John in Greek, which has been twice in succession written over in Syriac. In the Codex Ephremi, already referred to, although the general body of the MS. has been but twice written, there are, besides, occasional corrections of the first writing in three successive hands.

The palimpsest of Granus Licinianus, of which a facsimile is shown in the photograph No. I, has been twice written over, the first time in Latin, the second time in Syriac. In these cases the diversity between the languages of the old and the new MS. serve in some degree to diminish the confusion; but in the thrice written palimpsest of the " Institutes of Gaius," deciphered by

Niebuhr at Verona, all three writings are in Latin, and the characters of the first and second writings are strikingly similar to each other.

I must dismiss very briefly the third class of difficulties, those created by the disturbance of the order of the palimpsest, consequent on the taking asunder of the original for re-writing and the re-arrangement of the leaves when forming the new work. The confusion of the original which must ensue will be at once apparent ; and if any one will, on the one hand, consider how difficult it would be for the most accomplished scholar, even with all the advantages of print, to re-arrange in the sequence of matter and to asuign to their respective authors a number of unnamed and fragmentary pages of various periods and subjects in his own language; and will remember, on the other, that, in the process of providing material for a palimpsest MS., not only were the re-prepared sheets thrown into a completely new order, but different MSS. were joined confusedly togetherthe original sheets being altered in size and in form, the old marks of connexion and sequence being removed, and the larger breaks and gaps being created by the destruction or disappearance of many portions of the original - he will be able to appreciate in some degree the merits of such a success as that whose fruits we still enjoy in the clear and masterly order of the recovered fragments of the "De Republicâ," as edited by Cardinal Mai.

These hurried and imperfect explanations will prepare you to understand the nature of the pursuit upon which young Mai was entering, when his attention was first attracted by a number of MSS., wholly or in part re-written. These MSS. had originally come from the Library of Bobbio, an ancient Benedictine monastery, founded by our sainted countryman, Columbanus, and the home, during a long series of centuries, of many an Irish monk and pilgrim to the tomb of the Apostles. Mai was not long in ascertaining the importance of the contents of the first writing of these MSS., and he applied himself at once to the task of deciphering them. To enumerate his successive publications, beginning in 18r4 with Fragments of unpublished Orations of Cicero, would be to place before you little more than a mere catalogue of names:-Fronto, M. Aurelius, a lost comedy of Plantus, Porphyrius, Philo the Jew, Eusebius, Ulphilas's Gothic version of the Bible, the Sibylline verses, and other works which appeared in quick succession during the five remaining years of his residence in Milan. I prefer to devote the little time which remains to a brief account of the two publications
which are most remarkable, the "De Republicå" of Cicero, and the so-named " Historical Palimpsest."

Both of these, however, belong to a later period of Mai's life. In the year 1819, he was invited to Rome to fill the congenial office of First Keeper of the Vatican Library. Thenceforward the Eternal City was the scene of his labours; and, although he passed successively through a series of onerous and responsible offices to the crowning dignity of Cardinal, he never ceased till his lamented death, in 1854 , to devote every moment of leisure to his beloved studies.

It is a curious illustration of the strange vicissitudes through which the learning of the ancients has reached our time, that one of Mai's earliest discoveries at Rome was of a missing portion of the very palimpsest from which he had already edited the letters of Fronto at Milan. But the first real fruit of his Vatican researches was the celebrated "De Republicâ" of Cicero, his well known treatise on the best form of government. Perhaps there is not in the whole range of classic letters a single book the loss of which had been to scholars of every age and class a subject of so lively regret. It was looked to as the oracle of the political wisdom of the ancient world, uniting in the highest perfection all that is best in theory with all that is most judicious in practice-tempering the refinements of a too speculative philosophy with the sage results of the long and varied experience of the storms of such a life as that of Cicero. There is not one Cicero's whole works regarding which he has himself left us more interesting particulars. His letters to his brother Quinctius and to his friend Atticus, are filled with his speculations and his plans as to the composition of his book. In one of these we find him doubting whether he shall make it a didactic essay written in his own person, or shall cast it in that form of dialogue which Plato had made popular, and which he himself had already used with such effect in his book "De Finibus," the previous year. In another he is undecided whether, in case he should follow the form of dialogue, he shall make himself and his own contemporaries and friends the speakers, or shall adopt-which he really did choose-the form of an "imaginary conversation," in which the speakers should be the great men of an earlier generation. He changed his plans more than once as to the number of interlocutors and other details of the conversations. At one time he is so filled with a sense of the delicacy and difficulty of his task, that he talks of throwing it up altogether, and in the end he expresses
his determination, should he not, on its completion, be satisfied with the result, to fling it into the sea. What had been the judgment of antiquity as to the result is known from innumerable testimonies, from Seneca, Pliny, Fronto, Gellius, Macrobius, from the Christian writers, SS. Ambrose, Jerome, Pope Liberius, and, above all, Lactantius and Augustine; to the latter of whom the " De Republicá" is thought to have suggested the idea, although not the form, of his own "De Civitate Dei." But from that period, or at least from the age of St. Isidore of Seville, the work unaccountably disappears; and the only certain trace of its existence for several centuries is a letter of the learned Pope Sylvester II., written, while he was still a monk, to his scholar Constantine, directing him to bring with him on his journey the "De Republicâ" of Cicero. As Gerbert soon after this was actually a resident of Bobbio, it is not absolutely impossible that the fateful volume now in the Vatican may be the identical copy which formed the subject of his request. However this may be, Gerbert's appears to be the latest certain notice of the existence of the work. It was sought for in vain by numberless scholars and collectors in later centuries. Petrarcn at the instance of the accomplished and munificent Pope, Clement VII., in vain explored all the libraries within his reach. Poggio was equally earnest and equally unsuccessifu. The learned Greek Cardinal, Bessarion, expended a thousand gold crowns in the effort to recover it. Rumours of its existence were constantly circulated, and had just enough of plausibility to keep inquiry alive. Late in the sixteenth century scholars were still tantalized by stories of copies to be found, at one time in England, again in Germany, and even in Poland. On a search in the last-named country our own Cardinal Pole expended no less than 2,000 crowns ; and so late as the Thirty Years' War, there was a story of a copy having perished in the destruction of one of the monastic libraries. But even these faint and flickering gleams of hope had died out before the day when Mai discovered the now famous Bobbio palimpsest.

The book itself, as published by Caridnal Mai, i, so well known that I need not enter into any account of its character or contents. Our only present concern is with the manner of its decipherment. The second writing of the palimpsest, of which a specimen is exhibited in the dark letters of the diagram, was St. Augustine's commentary on the Psalms ; and from the size, and (when revived by the preparatory treatment) comparative distinctness, of the original characters, the mere task of de-
ciphering it presented far less difficulty than most of Mai's earlier experiments. But the facility thus afforded was more than outbalanced by the disorder, and, in some parts, the mutilation, of the sheets of the original. Having been taken asunder for re-writing, they had of course been re-arranged solely by the order of the new manuscript, without the slightest reference to that of the original " De Republicâ;" and thus the only guide in restoring the original order was the sequence of matter, as determined by the learning and the critical sagacity of the editor. It is under this aspect that the "De Republicá" exhibited most strikingly the marvellous gifts of Mai. The first and second books proved tolerably complete, and in these the sequence could be satisfactorily traced but for the rest, the palimpsest only presented a series of disjointed and unidentified fragments. In order to eke out these, Mai collected from all available sources every known passage of the work which had been preserved, whether by Christian or by pagan authors ; and the skill and ingenuity with which he marshalled them all, assigning all to their several places and dovetailing each into its fitting connection, and the erudition with which he illustrated the whole, raised him at once to the first rank as a commentatcr and a scholar.

This reputation was well supported by the coliection of " Fragments of Anti-Justinian Roman Law," which he published soon afterwards. I prefer, however, to notice, as better illustrating the specialities of his peculiar province, his celebrated "Historical Palimpsest." Unlike that of the "De Republica " palimpsest, the original writing of the "Historical Palimpsest" is more than ordinarily minute. In it, too, the second writing lies directly upon the lines of the original, and to an unskilled eye seems inextricably mixed up with it as may be seen in the photograph of a passage from Diodorus Siculus, one of the authors most largely restored by this curious discovery. The whole MS. consists of 354 pages, each containing 32 lines, similar to those of the photograph. The ink of the ancient writing, moreover, has faded, even beyond the ordinary shadowiness of the palimpsest. Even Mai confesses that, although no tyro in such labour, he at first despaired of success; and it was only by taking advantage of the brightest hours of the brightest days, by resorting to the use of the most active chemical agents, and by employing the aid of the most powerful lenses, that it was possible to proceed with the decipherment.

It was early apparent to Mai that the original of this VOL, XXXVIII,-No. 445.
perplexing palimpsest contained extracts from Polybius, Dion Cassius. Diodorus, and other Greek writers of Roman history ; but it was not till after long examination that, by one of those happy conjectures which seem natural to the true critical mind, he identified it as a portion of a vast collection-a sort of encyclopedia, or rather a literary commonplace book, which had been compiled at the instance, and in part under the direction, of the learned Emperor of Constantinople in the tenth century, Constantine Porphyrogenitus, "the Purple-born," in whose personal scholarship, as well as munificent patronage of letters, we see almost the last gleam of expiring enlightenment in the Eastern empire. The work originally consisted of extracts from writers in every department of literature, arranged, according to subjects, under fifty-three heads or titles. Of these "titles," however, all except two had been lost, and the Vatican MS. was found to contain a third, entitled De Sententiis, "On Sentences," and consisting of extracts from Polybius, Diodorus Siculus, Dionysius of Halicarnassus, Dion Cassius, Appian, Dexippus, and Eunapius, as well as from Xenophon, Arrian, Procopius, and Theophylact." The last four authors were already well known ; but the recovery of any portion of the works of Polybius and the rest was a signal favour of fortune. There is not one of them whose works, as they have reached our age, are not miserably incomplete. Out of the forty books of Polybius, and the same number of Diodorus, we possess but five of the first and fifteen of the second. Nearly one half of the History of Dionysius is lost ; more than half of Appian. Out of the eighty books of Dion Cassius hardly twenty-five remain; and the histories of Dexippus and his continuator, Eunapius, have almost completely perished. Now of these long-lost authors Cardinal Mai's palimpsest has restored to us, it is true in a fragmentary form, but yet in a pure and satisfactory text, upwards of five hundred quarto pages.

And difficult and toilsome as the work of decipherment must, from what is before your eyes, have been, this was but the least of the difficulties of the editor. Even after, with infinite toil and exemplary patience, the three hundred and fifty-four pages of the MS. had been deciphered and copied, line by line, and letter by letter, " it remained," says the distinguished scholar himself, " to separate the several authors who were jumbled together in inextricable confusion and disorder; to distinguish each from the others, as well as to marshal the extracts of each in the order of his own history ; to dispose the leaves of the MS.
in their proper places ; and, finally, to put together once more the sheets which the modern copyist had formed into new combinations." "And lo!" he writes in another place, " a new and most embarrassing difficulty! The extracts of the several authors were scattered here and there in the palimpsest; the name of the writer or the title of the book seldom appeared; there were no marks of the sheets, and innumerable gaps occurred in the text, partly from the very plan of the compilation, partly from the difficulty of deciphering the original writing. And fortunate indeed would it have been if the sheets had even been distinguished by numeral marks ; but, these having been originally omitted through accident or by the fault of the transcriber, there was no means of re-arranging the extracts but by the exercise of my own judgment. On this alone, as Ariadne on her clue, had I to rely, in disentangling myself from the doubtful and tortuous mazes of the labyrinth."

And, in estimating the difficulty of thus determining the authorship of the several extracts by the sense alone, it must further be remembered that three, or perhaps more, of these authors had written upon the same history and even the same period of that history. Take a parallel case from English literature. Fox, Mackintosh, and Macaulay have each written in part upon the same period-the Revolution of $\mathbf{x} 688$. Suppose that a number of pages or fragments of pages were put before us, described as containing extracts of these three histories of the Revolution, and that any one of us were called on to reassign each page to its own author, and to reconstruct all three histories, so far as the fragments of each would permit,-which of us, although the peculiarities of each of these authors are marked enough, would be so bold as to undertake the task? And yet how infinitely does it fall short of the difficulty which was before Mai in reconstructing, for example, the narrative of the Punic War, as it is related by Diodorus, by Appian, and by Polybius in the fragments comprised in the "Historical Palimpsest "!

This was the last important success of Mai as editor of palimpsests. I would gladly advert to the labours of those who have followed in his path; among whose works the most remarkable are the " Homeric Palimpsest" of Dr. Curcton, the " Institutes of Gaius " by Niebuhr, and the "Annals of Gaius Granus Licinianus," deciphered from a thrice-written palimpsest by the younger Pertz. Of the last of these a facsimile is presented in one of the photographs submitted for inspection. But time will
not permit that I should enter into any details regarding these publications, or, what I should still more desire, regarding the palimpsests of the many ancient Greek texts of the Old and New Testaments, for which Biblical Literature is indebted to the industry and learning of Dr. Tischendorf.

The publications of Cardinal Mai in other departments of ancient literature, sacred as well as profane-Greek and Latin fathers, commentators, historians, poets, grammarians, lexi-cographers-and his celebrated "Codex Vaticanus," might well form the subject of a separate address. The several series of the publications-the "Vaticana Collectio," the "Classici Auctores," the "Spicilegium Romanum," the "Nova Patrum Bibliotheca," and the posthumous "Codex Vaticanus," form in the whole a collection of twenty volumes in quarto and twenty in octavo. And when we rememeber that, in producing this enormous collection, Cardinal Mai worked literally alonehimself deciphering every MS., transcribing every copy with his own hand. arranging every sheet, examining and collating every doubtful reading, executing every translation, preparing every commentary and illustration, even delineating with his own pencil the facsimiles which accompany the several volumes -that all this gigantic labour was but the extra-official occupation, almost the recreation, of a busy life, otherwise engaged by grave and important official duties, which he discharged with scrupulous exactness and fidelity-that during several years of the most prolific period of his literary life he held the laborious and engrossing office of Secretary of the great Congregation de Propagandâ Fide, the centre of the vast missionary system of the Catholic Church, with its countless ramifications in every part of the habitable globe;-and that during this tenure of office no correspondent, however humble, had to complain of a communication unacknowledged; no applicant, however importunate, was able to allege that his audience was deferred or unduly brought to a close :-we shall be enabled to appreciate in some degree the untiring energy of this great man as a literary worker, and his devotedness as a Christian prelate and priest.

In concluding this imperfect sketch. I cannot refrain from mentioning, as an illustration of his truly noble character, which united in rare combination enlightened love of learning, meek and unostentatious piety, and genuine Christian benevolence, one of the provisions of his last will, which he himself wrote with his own hand a few months before his death. After securing to all the various members of his household a provision during life,
proportionate to their respective times of service, he bequeathed to the poor of his native village the whole residue of his property. which consisted chiefly of his magnificent collection of books. He directed that these loved and valued friends of so many years should be sold at a valuation ; but he made it a condition that they should be kept together as a permanent collection; and, desiring to secure them for the Vatican Library, he gave the orders that, straitened as were at that period the resources of the Holy Father, the books should be offered for the acceptance of his Holiness at half the amount of the actual valuation. So that while his first thought was for the material wants of God's poor, he also remembered that " not in bread alone doth man live, but in every word that proceedeth from the mouth of God ;" and he tried to combine with his intended provision for the requirements of the body that inner intellectual nutriment by which the life of the mind is maintained from age to age, and which, elevated and purified by religion, is the food of true civilization, and the animating and directing principle of the highest instincts of our race.

The monument of Cardinal Mai, in the church of his title, St. Anastasia, is one of the most interesting works of modern art in Rome. The lover of letters will probably regard the hall of the Vatican, in which the Mai Library is enshrined, as a still more interesting memorial of his genius. But I cannot help believing that, although his other services have conferred more substantial benefits upon letters, his most lasting claim on the remembrance of posterity will be under that title by which the Royal Society of Literature, in presenting him with its gold medal, in 1824, commemorated his great achievement-Angelo Mai, Palimpsestorum Inventori et Restauratori,-

Angelo Mai, Discoverer and Restorer of Palimpsests.

