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TRANSACTIONS  
OF THE  
WISCONSIN ACADEMY  
OF  
SCIENCES, ARTS AND LETTERS

VOL. XVI, PART I, NO. 4

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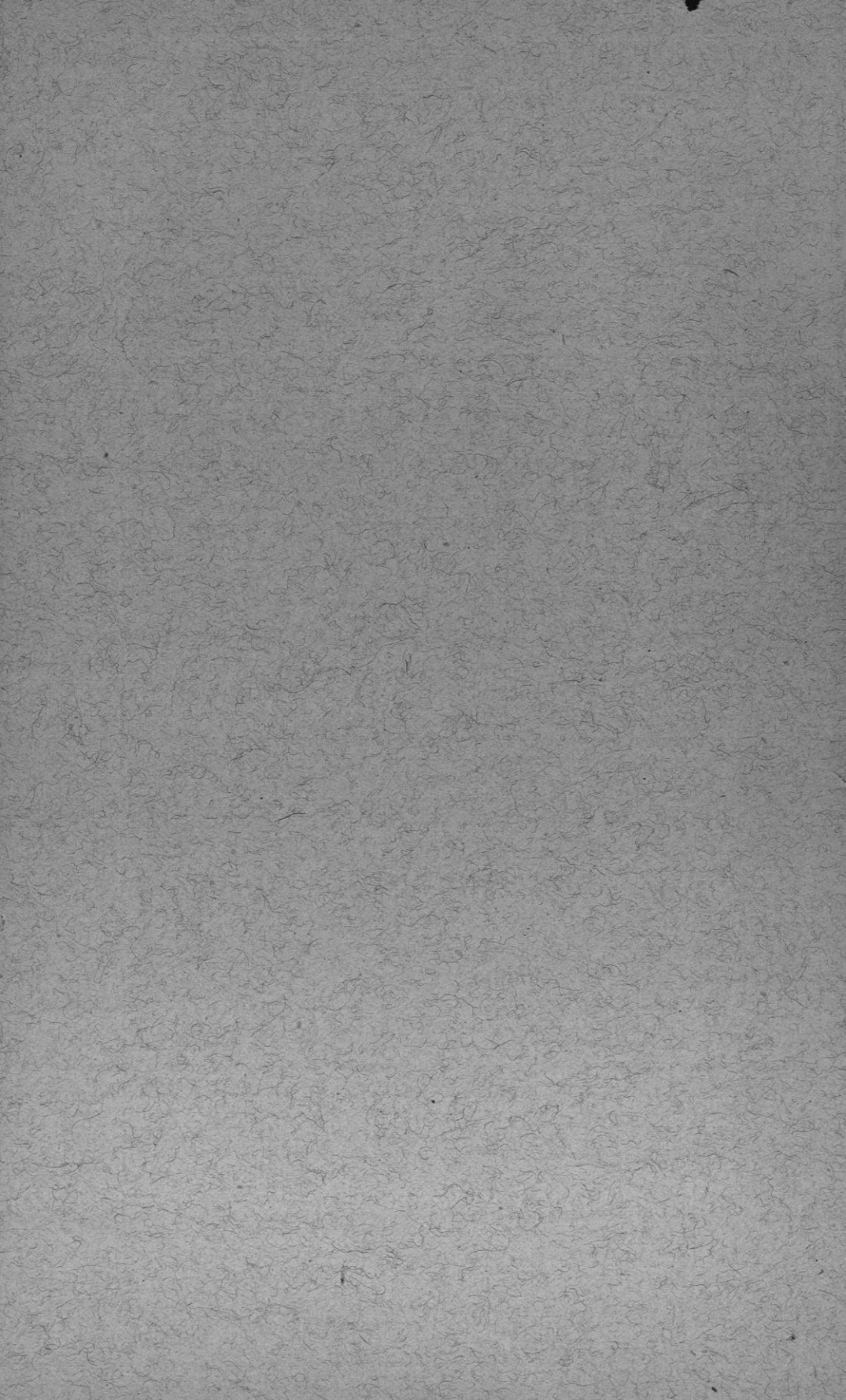
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MADISON  
DEMOCRAT PRINTING Co., STATE PRINTER  
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PRICE 20 CENTS.

## THE NEGLECT OF THE ANCIENT CLASSICS AT THE EARLY MEDIEVAL UNIVERSITIES.

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LOUIS J. PAETOW.

Not a single one of the ancient classics is prescribed in the statutes of the various universities of Europe of the thirteenth and fourteenth centuries.<sup>1</sup> The history of universities, especially the internal history, can not be read solely from the statutes, and hence it would be rash to conclude from such evidence that during this time no university student or master ever opened Virgil or Horace. Nevertheless, the silence of the statutes forcibly emphasizes the well established truth that the ancient authors were seriously neglected at the early medieval universities.

This striking phenomenon has attracted much attention ever since the time of the first Italian humanists. In accounting for it many serious writers have entirely misinterpreted medieval culture and education. Until recently it was customary to dismiss the subject by dwelling upon the utter barrenness of classical, as well as of all other lay learning in the Middle Ages, and thus intimate that nothing better could have been expected from the work at the universities. To-day no competent scholar would pronounce such a verdict. The term "Twelfth Century Renaissance" is becoming a familiar phrase, and is finding its way into hand-books and text-books. An important phase of this earlier Renaissance was a revival of the ancient classics.

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<sup>1</sup> In this paper, ancient classics will be used as synonymous with Latin classics, for throughout the period under discussion, Greek was almost wholly unknown in the schools.

Already in the eleventh century there were distinct indications of a renewed interest in the ancient authors. The real home of the revival was northern France, and our surest and most complete information in regard to it comes in shortly after the first crusade. "I see villages and towns fairly burn with eagerness in the study of grammar," wrote Guibert of Nogent, in the preface to his history of the crusade. Elsewhere he adds that it had been far otherwise in the days of his boyhood. The center for the study of the classics was Chartres. Here grammar was studied in the broad sense in accordance with the definition of Rabanus Maurus, who called it "The art of explaining poets and historians, the art of correct speaking and writing." Hither came the Englishman, John of Salisbury. He has left us glowing accounts of the sympathetic method in which the classic authors were there taught. An ardent admirer of Cicero, he exclaims: "The world never possessed a Latinist greater than Cicero." Involuntarily we associate John of Salisbury with Petrarch.

Towards the close of the twelfth century the schools of Chartres declined rapidly. Orleans now became the center of classical learning. Meanwhile the great universities were taking shape. The intellectual vigor of the twelfth century was finding its expression in these splendid new institutions of learning. We should expect that the study of the Latin authors would have found at them a wider scope. But the renewed interest in the classics was only one of the factors of the revival, and by no means the most pronounced. All the greatest intellects of the age were bending their best efforts towards scholastic philosophy and theology, or the practical studies of medicine and law. Probably a university could never have arisen on a purely humanistic basis. It required an Abelard and an Irnerius to lay the foundations of universities.

Thus from the very start, the classics were overshadowed at these new institutions by more popular studies. For a long time, however, they still held their own. At the beginning of the thirteenth century various writers associated Orleans with the great universities of the day. As Salerno was known for medicine, Bologna for law, Paris for arts, so, they said, Orleans

was famous for its study of the ancient authors.<sup>1</sup> Evidently those men believed that the classics would keep their rank among the prominent intellectual pursuits of that day. The study of the authors was by no means confined to Orleans. Even at Paris they still flourished. The Welshman, Gerald de Barri tells us that he studied them there. Sermons were still being preached before the students at Paris warning them against the dangers of the heathen literature of Rome. An anonymous manuscript at Gonville and Gaius College, Cambridge, contains an interesting list of books prescribed for every grade and subject of instruction.<sup>1</sup> Various works of a considerable number of classical authors are mentioned: Statius, Virgil, Juvenal, Horace, Ovid, Sallust, Cicero, Martial, Petronius, Symmachus, Suetonius, Livy and Seneca. Then follow books recommended for the seven liberal arts, and the higher branches of learning, medicine, law and theology. The list was drawn up towards the close of the twelfth century, probably in England.<sup>2</sup> Very likely it reflects the work done at this time at Oxford and Paris. At all events, it shows that about 1200 the study of the classics was still associated with the branches ordinarily taught at medieval universities.

Within the first half of the thirteenth century, however, interest in the classics waned rapidly. In 1234 John Garland, a professor of grammar at Paris, still warmly espoused the cause of Orleans, but in the same breath he laments that "the Latin language is decaying, the green fields of the authors are withering, and the jealous blast of Boreas has blighted the flowery meadows."<sup>1</sup> His is the last plea for the classics which comes from the walls of the great university of Paris. About 1250 the troubadour Henri d'Andely wrote his famous allegorical poem entitled the "*Battle of the Seven Arts*." Grammar, the champion of Orleans, supported by the classic authors, goes out to battle against Logic of Paris, who is supported by all the

<sup>1</sup> Matthew of Vendôme, Geoffrey de Vinsauf, and Helinand.

<sup>1</sup> Ms. 385 pp. 7-61.

<sup>2</sup> I owe this conclusion as to the date and provenance of the Ms to Professor C. H. Haskins of Harvard.

<sup>1</sup> *Ars lectoria ecclesiae*. Ms. Bruges 546 fol. 76 v°.



studies taught at that university. After a spirited engagement, Orleans is defeated, and the Muse of Poetry goes into hiding. The author of the poem concludes with the optimistic reflection that the next generation would surely see the futility of logic, and return to the study of belles lettres. His hopes were not to be realized. At the beginning of the fourteenth century Orleans had become the seat of a famous university of law. When Petrarch was a boy, the few students of arts who still studied at Orleans apparently had forgotten the ancient poets, and were lost in the "labyrinth of Aristotle."

Thus, as the universities increased in importance, the classics declined, and therefore did not find a place in the curriculum of the new institutions. Here and there, learned men still read them, and even some students at universities may not have given them up entirely. Thus we have a note-book containing comments on the Georgics of Virgil, and a fragment of Seneca, written by a student at Toulouse in the thirteenth century.<sup>1</sup> After all has been said, however, the general disregard of the classics at the early universities marks the last half of the thirteenth century and the beginning of the fourteenth as one of the very dreariest periods for classical learning. Petrarch, "the morning-star of the Renaissance,"<sup>2</sup> stands out so clearly because it was darkest just before the dawn.

We are now ready to consider more specifically the causes for this neglect. All too often the whole blame for it has been laid at the door of scholasticism, that magic term which has been used to explain such a multitude of sins. The explanation is not quite so simple. Many causes combined to bring about the decline. I shall consider them under the following heads: (1) Strict clerical feeling against profane and, in particular, indecent profane literature; (2) Popularity in the schools of good medieval Latin literature; (3) Renewed interest in science; (4) Rise of the lucrative studies of medicine and law (including *ars dictaminis*); (5) Increasing popularity of logic which led to scholastic philosophy and theology.

<sup>1</sup> *Catalogue Général des Mss.* Tome VII Paris, 1885, p. 459. No. 811 (I 324). The University of Toulouse was founded 1229.

<sup>2</sup> Sandys—*A History of Classical Scholarship* (1906) p. 678.

(1) In the twelfth and thirteenth, as well as in all previous centuries of the Middle Ages, there cropped out again and again a strong clerical feeling against the classics, decrying them as useless and dangerous heathen products. Alexander of Ville-dieu, (c. 1200) once a professor at the University of Paris, warned the masters of Orleans that unless they forsook the classics, the gates of Paradise would forever remain closed to them. Jacques de Vitry (d. 1240) in a sermon before the students of Paris, said: "In spite of the utility of the art of eloquence which we derive from the poets, properly called authors, (*auctores*) it is better to choose for our instruction those works which contain moral teaching. . . . Do not books of this kind suffice without turning to the historians and the poets for excitations which lead to debauch and vanity?" Sermons often fall on deaf ears, but, as we shall see, the minds of those Parisian students had already been molded by various other influences so that it was easy for them to do for once as their preacher bade them. Time and time again protests also arose against the positively indecent literature of Rome. Some of the best disciples of the famous schools of Chartres, notably Peter of Blois (d. 1204), seriously injured the cause of the classics by writing light and scurrilous verses which the moralists of the age pointed to as the results of familiarity with the Roman poets.

(2) Especially in the twelfth century a good deal of excellent Latin literature was written which deservedly became popular. Just as the pagan poets were often crowded out of the schools by the early Christian poets such as Prudentius and Sedulius, so now the works of modern authors frequently displaced the classics or at least were read side by side with them. The most renowned of these was the *Alexandreis* of Gautier de Lille (1176–1179), a Latin epic poem recounting the deeds of Alexander the Great. Henri de Gard (d. 1295) wrote that in his day the *Alexandreis* was read to such an extent, that on this account the ancient poets were neglected. A good deal of excellent lit-

<sup>1</sup> *Sermo coram scholaribus*. Ms. Bibl. Nat. Lat. 17509 fos. 31, 32. Translated in Lecoy de la Marche, *La Chaire Française au Moyen Age*, pp. 474–475.

erature in the vernacular was also produced at this time, especially in France, but since none of it was ever admitted into the schools, where Latin alone prevailed, its rivalry with the Latin classics is hard to trace.

(3) The thirteenth century was in many ways an era of science. Contact with the East in general and the Mohammedans in particular, brought about by the Crusades, had quickened scientific interest in the West. Towards the end of the twelfth century the Englishman Daniel de Morlai went to Spain to learn science from the famous Arab teachers at Toledo. About this time the natural philosophy of Aristotle was introduced into Western Europe and became an important stimulus to scientific study and investigation. The branches of the *quadrivium* seem to have been fairly popular at Paris for Jacques de Vitry preached against them as vain learning in the same sermon in which he denounced the classics. In the "*Battle of the Seven Liberal Arts*" Astronomy decided the day by flinging her lightning among the tents of the authors of Orleans. The scientific trend of the age may be seen in the works of Albert the Great, but above all in those of Roger Bacon, in many ways the most remarkable man of the thirteenth century. But there must have been many minor lights in science like that Peter of Maricourt whom Roger Bacon met at Paris and whom he described as a true experimental scientist. This scientific movement did not bear much fruit in the work of medieval universities, but while it was in its vigor, it helped to detract interest from classic literature.

(4) The practical studies of medicine and law rose to such importance that they became the foundation stones of many large universities. Indeed, civil or canon law, or both, were taught at all the medieval universities whereas not even one-half of them had a faculty of theology. These branches exercised great attraction by the prospect of pecuniary gain which they held out to students. Hence in their eagerness to study law or medicine students not only neglected the ancient authors, but often failed to acquire the necessary elements of grammar. "*The Battle of the Seven Liberal Arts*" speaks of the physi-

cians and the surgeons of Paris as enemies of the good old authors. The competition of law with the classics is especially apparent, even at Paris. Gerald de Barri recalled how he once heard a certain professor at Paris proclaim before a multitude of students that the evil days had come which the sibyl had foretold in her prophecy, "The days will come, woe to them, when law will obliterate the study of letters." If such was the effect of law on literary studies at Paris what must it have been at Bologna! The absence of the classics at that great Italian university during the thirteenth century must in the first instance be attributed to the overwhelming importance of law. We have already seen how Orleans, renowned for classics in the first half of the thirteenth century, in the fourteenth was known only for law.

Closely related to law, although not a part of it, was another competitor of the ancient classics, namely the *ars dictaminis* or the art of writing letters and formal documents. This too was a lucrative study since it prepared its votaries for positions in the chanceries of church and state. At Bologna it gradually usurped almost the whole field of the arts. In France also it became very popular. Students at Orleans deserted classical poetry and even theology to devote themselves to it. Ponce de Provence, a famous itinerant professor of the art came to Orleans about 1250 promising his students that he would pass by the fables of the authors and lead them directly to that pearl of knowledge, the *ars dictaminis*.

(5) After all, however, the most important cause of the decline of the classics and of purely literary pursuits generally was the rise of dialectics to undisputed eminence among the arts. This is true especially because the reign of Aristotle became most absolute in northern France where the humanistic tendencies had been strongest.

At first there was no active antagonism between dialectics and the authors. Abelard himself had a due regard for the achievements of classical times and probably first awakened in his famous pupil, John of Salisbury, a sense of the importance of ancient literature. But the interest in speculative thinking

became too absorbing to allow the study of the authors to remain important. By gradual stages it simply monopolized the field of higher learning in the north of Europe and the literary and classical tendencies of Chartres and Orleans died a death of sheer starvation.

The change, however, did not take place without strong protests from many sides. The works of John of Salisbury are full of sane and vigorous denunciations of the foolish warfare of mere words without a previous foundation in real learning. He lamented that students praised only Aristotle and despised Cicero.<sup>1</sup> Nevertheless he was still hopeful and firmly believed that he could convince his contemporaries of the value of literary studies. Many more examples illustrating the same view might be drawn from Peter of Blois, Jean de Hauteville, Alexander Neckam and Gerald de Barri. As the thirteenth century advanced, however, the protests ceased and the dominance of Aristotle was absolute and unassailed.

These are the definable causes which led to neglect of the classics at the medieval universities. There may have been other causes, less tangible but of considerable weight. It should be remembered that the twelfth and thirteenth centuries comprised an era of great material development. In many ways a "backwoods" Europe was being transformed into a Europe with large well-built cities and highways for travel and commerce. It is always well worth while to reflect upon the bearing general conditions of life may have upon such a particular subject as we have in hand.

As we approach the period of Petrarch and Laurentius Valla our curiosity is naturally aroused to see what part the universities took in the revival of learning. In the first quarter of the fourteenth century several doctors were installed at the university of Bologna to lecture on Virgil, Cicero, Statius, Lucan and Ovid. This was a fair promise but it had no fulfillment. Later in the same century and in the next the university took practically no part in the humanistic movement which was stirring all about it. A more pronounced classical revival occur-

<sup>1</sup> *Entheticus*, 112.

red at Paris in the second half of the fourteenth century but that too was sporadic and had no permanent results. In England, Oxford became the center of a group of humanists who had received their inspiration from Italy. But on the whole the courses of study at the universities were scarcely at all modified prior to 1500. Dating from the very end of the fifteenth century we have a program of studies offered by a master of arts at Montpellier, which is entirely humanistic in character. Aristotle is set aside entirely, logic and philosophy are slighted whereas the main stress is laid upon oratory (*ars oratoria*) which comprises the study of a considerable number of classical authors.<sup>1</sup> This however, is an almost isolated exception which proves the rule that the medieval universities had very little to do with the humanistic movement of the fourteenth and fifteenth centuries.

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<sup>1</sup> Fournier—Statutes, No. 1206, p. 278. (1496)

## THE ANIMAL EFFIGIES OF WISCONSIN AND THE TOTEM SYSTEM.

---

STEPHEN D. PEET.

The animal effigies of Wisconsin may be treated in two ways—1st—as specimens of the imitative art which prevailed among the people; 2nd—as illustrations of one of the many and varied forms of Totemism. This word Totemism is not very familiar even to scientific men—and to the people in general is worse than Greek for it is not found in any of the ancient languages nor in many of the modern. It has, however, been discovered, in so many nations and tribes, that ethnologists regard it almost as a fundamental system and one which may be found in nearly all rude and primitive races. This, however, can be said of the animal effigies—that they are peculiar to the state of Wisconsin, and are not known as well as they should be.

One reason for this is that the effigies are scattered over the different parts of the state, generally in the forests and fields, and at the present time are so worn down that an ordinary person would not recognize this shape, and could not trace out the system which was contained in them. In this respect they differ very much from the totem poles on the northwest coast. These poles, so called, have been transported, and placed in the various museums—and have become objects of great curiosity. But the effigies have become worn down—many of them have lost their shape—and no one notices them, unless special attention is called to them. The object of the writer is to give a brief description of the effigies as they were when seen by him, and their shapes, relative positions, and purpose or object were

carefully studied and the system contained in them, as far as possible, made out.

It is maintained by the writer that there is a remarkable resemblance between this symbolism which is embodied in the animal effigies and that which prevailed in the far east, and which can be recognized in the symbols of the constellations which have come down to us from the most ancient times.

More than this, there are geometrical figures embodied in the mounds of Ohio and elsewhere which correspond with those which are found in Europe and which seem to belong to a system which is nearly as old as the animal figures.

There is also a resemblance between the pyramids of Mexico and Central America and those found in Babylonia. This may seem like carrying the subject far afield, but it gives force to another comparison which has already been drawn, and which has been brought to the notice of the members of the Academy of Science. This resemblance between the totems which were embodied in the effigies and the tribal emblems which were so prominent in the dying words of the patriarch Jacob.

This broad view is of especial importance in the mind of the writer.

The details of exploring and plotting of the animal effigies were carried out by the various surveyors such as Dr. I. A. Lapham, W. M. Canfield and the earlier surveyors who were laying out the township lines under the direction of the United States government.

But no one has undertaken to show the resemblance between the system embodied in the effigies and that system which is known to have prevailed in the land of the east.

There are today tribes in Arabia which have the names of animals to designate them, and they have retained to a degree the same tribal organizations which prevailed thousands of years ago.

Now, this parallel development of the totem system which can be recognized by a study of the different systems which have existed in various parts of the world, and different periods of time is certainly worthy of attention, for it is suggestive, and



may furnish the clew by which the effigies themselves may be better understood.

One may examine the valuable books which were published years ago, among the Smithsonian contributions and find that the effigies of Wisconsin were tolerably well described; but the geometrical figures of Ohio were also described and the two systems were shown to be very different.

Is it not probable that there were two systems or possibly more, among the tribes of the east, as there were among the tribes of America?

As works of art they were very attractive, for they seemed to represent attitudes which were not often taken by the animals, and yet the animal life was brought out very clearly.

It has occurred to the writer that it was not more difficult for the patriarch Jacob to take a view of the land, with which he had become so familiar and where his twelve sons had dwelt before they removed to Egypt, than it was for these wild tribes to indicate the animal life which prevailed in this region.

The Ethnological Bureau under Maj. Powel, sent Dr. C. T. Thomas to examine the work of plotting the effigies which had been done by two or three young men.

The writer accompanied Dr. Thomas on a trip to Prairie du Chien and the region where Jefferson Davis at one time had dwelt.

On the high ridges between the Kickapoo River and the Mississippi there were many groups and game drives with effigies of the buffalo and bear mingled with them.

It was an easy matter to trace out the habits of the animals amid those groups, and to the writer it became plain that it was the habitat of a particular clan whose totem or clan emblem was placed near the game drives.

There were, however, no such circles and squares as have been found in Ohio, and which marked the villages of that region.

The grades of society and the stages of progress became very apparent from the comparison which was easily drawn between the results of early explorations in the state of Ohio and those of succeeding explorations in the state of Wisconsin.

There was no appropriation ever received, and no salary secured. No opportunity was given to carry out the comparison on broad lines, but the more the subject has been investigated the more clearly has the resemblance become apparent.

There is a wide difference between the animal effigies of Wisconsin and the peculiar symbolism embodied in the totem poles of the north west coast. The latter belong to a complicated system which resembles that found in the islands of the Pacific, yet the comparison helps one to see the differences in the totem system as it has developed in different parts of the world.

It is not claimed that the totem system of Wisconsin was derived from that of Arabia, nor from the tribes of the Pacific islands, but it is not very absurd to believe that the various systems grew up in parallel lines.

There is perhaps more truth contained in these effigies, and emblems than has been dreamed of; but the key to the system found in Wisconsin is in danger of being lost, from the fact that so many of them have been destroyed.

The microscope and the telescope are in the hands of naturalists and astronomers. The archaeologist has no instrument by which he can bring order out of confusion, or restore the missing links in this problem.

Anatomists may study the intricacies of the human system and undertake to solve the problem of life, but these figures which were once scattered over the length and breadth of this land and contained a system with many variations, cannot be studied with any satisfaction because so many of them have been destroyed.

Life is not in them, and the people who built them have disappeared or have changed their habits and the clue to the problem is in danger of being lost. And yet the totem system is becoming more important and suggestive every day.

Such writers as Andrea Lang of England, R. H. Matthews of Australia, W. S. Bostcoyne formerly of Babylonia, Glaser, formerly of Arabia, have studied the totem system and much information has been furnished. Mr. James Deans, on the

northwest coast, and others in distant regions have studied the crests. Mr. Chas. E. Brown is studying the effigies nearer by.

It is to be hoped that the problem will be understood and the importance of the preservation of the effigies will be appreciated.

The difference between the effigies of Wisconsin and the circles and squares of Ohio reminds us of the difference between animal worship and sun worship for the effigy builders were hunters—but those who constructed the circles and squares were villagers who depended upon agriculture and were sun worshipers.

# MODERN EXHIBITIONAL TENDENCIES OF MUSEUMS OF NATURAL HISTORY AND ETHNOGRAPHY DESIGNED FOR PUBLIC USE.

---

HENRY L. WARD.

The modern museum is a complex institution; the product of many years of evolution in biology and geology taken in their most comprehensive senses and also of a special science, museology, that has but recently gained sufficient prominence to be designated by a distinctive name.

There have been many and profound changes during the last score of years in the relationships between museums and the public and these have had their principle outward expression in altered conditions in the exhibition rooms. Whether these have been most effected by a normal, internal evolution or by the reaction to external stimuli is worth considering in order to determine which has been the more potent factor.

Some museums have been established in a commercial spirit, either in expectation that the admittance fees would yield a profit or that they would prove valuable accessory attractions to some establishment of a different character, but these have naturally been in charge of men of mediocre or low scientific attainments and have had little apparent influence on museum development.

The important scientific museums have been in charge of reputable scientists each with his cabinet of curatorial specialists, and not a little of the speculative advancement of natural history and a large amount of systematic work has emanated therefrom. The successful performance of such work induced if not necessi-

tated a certain withdrawal from the public which not unnaturally engendered an indifference to its wants and needs; a position from which the public was looked upon as being a bore, incapable of understanding scientific concepts and with whose education it was not the province of the museum to concern itself. It is but natural that the investigator, busy with the collection of data or the evolving of the solution of some problem, should look with disfavor upon such demands upon his time as might be made for the benefit of a public with which he has little or no sympathy; and I am convinced that the changes that have recently taken place in the attitude of museums towards the public have primarily and mainly been due not to the voluntary initiative of museum employes but to evolutions of the various environments of museums reacting upon these institutions. Probably the chief influence brought to bear on this adjustment has been the result of an enlarged conception of the rights of the taxpayer and to his growing insistence that he profit by them. This is felt in many more or less intangible ways but very directly in the support to be derived from public taxation and appropriation and from private bequest. If an institution does not satisfy the public their lack of interest in its support will ere long become apparent in a most disquieting and disheartening manner. There have been naturalists in whose investigations the public seemed to manifest sufficient interest to furnish financial support but rather, perhaps, on account of the prestige accruing to the community from fostering such research than because of a real understanding of the work or of a personal interest in it, but such cases have been largely due to the personality of these exceptional men and not unlikely in a considerable extent to the peculiarities of the periods in which they lived. Very likely the same characteristics that won success in past generations would fail of equal support if transposed to the changed conditions of present time.

Aside from the rapidly growing public lecture courses of museums the exhibitional department is that which most intimately touches the public and is that in which the science of museology finds its fullest expression; consequently it is very essential that

those persons having to do with the arrangement of specimens for exhibition should be proficient museologists. This has not always been the case and the eminent specialist has sometimes shown himself a dismal failure in the exhibition department of the institution with which he is connected, a condition leading to a regrettable lack of harmony between himself and the efficient museum director.

Not many years ago little or no attempt was made to attract and hold the interest of the layman and, by arrangement and label, interpret to him some of the knowledge that scientists had learned concerning the specimens shown. Such a catering to the unselect was apparently not considered advisable and it almost seems, as we look back upon that period, as if the museums feared to lose the respect of the multitude if they stooped to be comprehensible.

The conservatism of human nature and the restraining influence of authority not unlikely in a large measure accounts for the reluctance of some, who must long ago have appreciated the inefficiency of their exhibits, to break away from the time honored precedent bearing the stamp of authority as methods employed by prominent naturalists. To one whose interests are confined to investigation and to whom time spent on educating others, unless they in turn are to become investigators, seems wasted, the sacrifice of time and thought on the preparation of exhibits for the general public must be distasteful; and thus we may logically account for the fact that some eminent specialists have proven hopelessly inefficient in this important feature of museum work and are out of sympathy with and even deprecate modern exhibitional tendencies.

Most of the larger museums of today are to a considerable extent supported by public funds and more particularly is this so in their departments of public exhibition in which the people in general are naturally most especially interested. Also there is a growing movement in the establishment of municipal museums which is well marked here in Wisconsin so that a discussion of these matters before this assemblage, representative of the scientific associations of the state and presumably much

interested in the scientific education of the masses, may not be untimely. The museum that receives little or no support from public funds naturally owes little or nothing in that direction and so, in the arrangement of its exhibits, is free to disregard their special needs; but when this support constitutes a material part of or, as in some cases, its entire income then the museum is under moral obligations to discharge its debt in the fullest possible degree by rendering special service to the public.

In order to set before you the change in attitude in the one matter of admission I will quote from a book published in 1778, by John and Andrew Van Rymdsduck, entitled "Museum Britannicum", being a guide to the then 25 year old British Museum, in which the following directions are given for those wishing to view the collections: "Now in respect of knowing the method of applying to see the British Museum, it is by delivering in a list of the Christian and surnames of each Person, with their titles, rank, Profession, and places of abode, to the Porter's Lodge, at the left Entry within the Gate, who will enter them in a Book; the Principal Librarian orders the Day and Hour for the Tickets to be fixed upon, which when sent for are delivered.

"No more than fifteen Persons are permitted at one Time, and two hours allowed for viewing, and as most Company's love to go together, the fewer in Number, the list is, the easier, they will serve to compleat the Number of Fifteen, and the sooner they stand a chance of being admitted.

"Such as have obtained Tickets and cannot come, are earnestly desired to return them to the Porter as early as they can that others may be entered in their Stead.

"After a list has been entered in the Book, if the Tickets are not fetched away, at the latest by Ten in the Morning, the Day before the Time of admission, they will be otherwise disposed of; and no Regard will be paid to such Lists as require the Tickets to be sent to any of the Parties.

"If any one comes with another Person's Ticket, it is expected that they acquaint the Officers with it, in order to have

the Name changed; and the Officers may turn away any one that shall presume to get Admittance under a fictitious Name or Character.”

These regulations, you will recollect, were enforced in restriction of the use of the nation's museum by the citizens thereof. There has been since then a progressive liberalizing of these matters, but I believe that it remained to very recent times to give the fullest practicable use of museum exhibits free to the public. In fact, to the best of my knowledge, the Public Museum of the City of Milwaukee was the first institution of this nature to throw open its doors for the free admission of the public on every day of the year, a regulation to that effect having been adopted and put into force in December 1905.

Only nineteen years ago an eminent naturalist, a curator in one of the largest museums in the world, replied to my question whether certain restrictions of exhibition were not rather hard on the public, with: “The public be damned.” Such an attitude has long since been abandoned by those who have at heart the welfare of their institutions and great pains and expense is lavished on those parts of museums designed for the especial use of the dear public and they are admitted at all reasonable times with the least possible restrictions. In that former period of museum evolution it was but natural that the ordinary visitor should be looked upon as a necessary evil, a person who unfortunately had to be admitted because he helped to pay the museum's running expense; but it would have been too much to expect that he should be particularly considered in the selection and labeling of the specimens placed on exhibition; and as such a short time has elapsed since these days it is hardly to be expected that a very general concordance of opinion would be reached as to just what it is best to do for the public.

During the past year some of these questions have been discussed in “*Science*”<sup>1</sup> and at the meeting of the American Association of Museums held in Pittsburg, June 4-6, 1907, a symposium on “The Evolution and Aims of Museums of Art and Science” was held<sup>2</sup> which made apparent a fact that I had previously called attention to in “*Science*,” i. e., that there



was a lack of homogeneity of ideas among museum workers as to the proper aim of the exhibition series. The parting line has on one side of it practically all of the directors of museums who have expressed an opinion and a fair number of curators; while on the other hand are a respectable number of curators whose scientific attainments are such as to bespeak careful consideration for their views. By some of these latter it is maintained for anthropology, that all specimens (including in many instances scores of duplicates) should be placed on exhibition both to insure their preservation and so that anyone wishing to make a detailed study can see them without the necessity of applying for admission to study rooms. Another feature is perhaps best epitomised by a leading authority in anthropology in a private letter in which he writes: "Do not make the mistake of arranging an exhibit to illustrate a theory as to man's cultural development but show the facts as you find them."

There is very little to be urged in favor of the first of these propositions but much that might be said in favor of the latter and yet it is not convincing because it seems applicable to a different phase of museum development than that under consideration. It appears to be more appropriate for research museums, or perhaps we had better say University museums, than for those that are to be mainly used by the unspecialized, and to a great extent uninstructed public.

In considering this matter it is desirable to arrive at some knowledge of the abilities of museum visitors to understand technical exhibits or to get information out of mere storehouses of objects. I know of no statistics that will aid much in this investigation and it is probable that statistics compiled at one museum would but poorly represent conditions pertaining at another.

The age of visitors would have an important bearing on the question, for it is to be presumed that where an institution is largely patronized by school children it would be found that their ability to abstract was inferior to that of adults. Presumably the younger the visitors the less the average knowledge of natural history or anthropology, and the less they can, un-

assisted by descriptive labels, appreciate the collections. Passing by this factor and considering only the adults, let us try to reach some idea of the proportion of those visiting an American museum who by training have some particular aptitude for deriving information therefrom. "American Men of Science" enumerates about 4,000 scientists in North America while "The Naturalists' Universal Directory," S. E. Cassino, 1905, enumerates for the United States and Canada 5,408, a list that includes astronomers, chemists, physicists, and others not specially interested in natural history. The population of this area taken five years previous to the appearance of this directory was 79,366,582 or one naturalist to each 14,675 of population. However, as there are many scientists not included in this list we must make allowance; so that if we multiply the proportion already obtained by ten, thus obtaining in round numbers one to every 1,400 or seven one hundredths of one per cent of population, we shall, I think, be making an exceedingly liberal estimate of the proportion of those instructed in the natural sciences and anthropology to the entire population and perhaps thereby also arrive at something near a fair estimate of the proportion of the people visiting an ordinary museum who are especially equipped to grasp its import,—to get much out of it unassisted.

This percentage is so small,—any way that we estimate it we must find it small—that it is almost a negligible quantity and we are warranted in saying that natural history museums for the public are for non-scientific and largely unscientific people. If this is true then the exhibitions should be so restricted as not to unduly weary by reduplication nor attempt to show so many kinds of things of any class that the untrained mind will be incapable of grasping or assimilating them; consequently the storage style of exhibit must be dismissed at once as unsuited and we may even go farther and carefully select for display a limited number of specimens from the unduplicated series, reserving the remainder for study. That this is not, in idea, a recent innovation may be seen from the following account of the work of Louis Agassiz in the early days of his development of the Museum of Comparative Zoology, in the fif-

ties and sixties: "For purposes of instruction and for the popular exhibition of animal life, Professor Agassiz departed from the usual custom of one great systematic series with very many specimens crowded together, and established the principle of the selection of a small number of characteristic forms, associating recent species and their skeleton in juxtaposition with fossil forms."<sup>3</sup>

In objection it may be urged that such a selection necessitates the imposition upon the public of the ideas of the curator rather than that the exhibits reflect as closely as possible conditions as they are found in nature; and as no curator is omniscient even in his special department he is liable to err by painting in his exhibit a false picture of natural conditions. That conditions in nature as they are found to-day may very imperfectly or even falsely depict conditions as they existed in the past must be evident to all who reflect on the perishability of many objects. "The imperfections of the geological record" has become a stereotyped phrase and not infrequently has it been known long before a single fragment has been wrested from the rocks that a certain type of animal must have existed, and in large numbers. Were we to judge the Indians of the past only by their collected remains we would suppose that their use of wood and bone was very slight because, particularly for the older cultures, such remains are exceedingly rarely found.

In cases like these were it possible to make an exhibition literally showing the facts as they are found, it would very wrongly represent conditions as they formerly existed; and in an ultimate analysis this restoration of a biota or of a civilization is the object of such exhibits in museums of the character under consideration. In museums whose contents are to be used by scholars for study, any interpretations of this sort are uncalled for and had better be omitted, for in them the student is expected to elaborate his own theory. A research museum is to be used for educational purposes but is not, like a public museum educational; it is passive, not active. However, it is well to recollect that inasmuch as a museum can contain but a selected few of the specimens obtainable in the field it must after

all reflect the ideas of the collectors and curators as to which objects are worthy of preservation, which are pertinent to some investigation; in other words the specimens are almost without exception collected and selected with some theories as to their desirability over many others which are rejected, and therefore no arrangement of them could very well reflect conditions as they occur in nature. A collection made by an uneducated, indiscriminate gatherer of everything movable would probably most nearly meet this impracticable ideal. We can perhaps show an Indian grave, the immediate setting of a birds' nest or the layout of a fossil skeleton as it occurred in nature, but we can not hope to show the archeology of even one county of a state in all its possible relationships or the true avian ecology of a single township in the largest museum building ever constructed. Such studies, to be of value, must be made in the field. The museum can not supplant nature as a primal source of information, and while it probably should attempt to illustrate the manner of occurrence of many things, yet after all such exhibits must be for pedagogical convenience or popular education, and not for research, and consequently are probably oft' times improved by being made schematic in character.

The elder Agassiz was wont to give his students a few scales of a fish which they studied for days in solitude and without books until they were able to report understandingly to the master. This method is not generally pursued today, albeit that Agassiz's students were the scientific leaders and teachers of the last generation. His methods developed naturalists, but his students were those having special predilections for the subject and voluntarily placing themselves in his hands as students.

While museums for the public may be and undoubtedly are aids in the development of budding naturalists, yet the small number of these is a negligible quantity and as a general statement, it may be said that the making of naturalists is not the aim of such museums, but that it is rather to ameliorate the ignorance of the general public in a manner that will afford it thoughtful pleasure both in the museum and in its subsequent contact with nature. We doubt that this can be done by the ex-

hibition of specimens bearing only name and place labels. The public is not educated to the point where it can get many orderly ideas beyond those that the curator has arranged for its assimilation; to them collections not so treated are largely conglomerations of curios.

Probably we are too much given to philosophising on insufficient data, to developing hypotheses and then twisting facts to conform to them. We have seen one factor after another brought forward as the dominating one in evolution, to have its day and sink back to a lower and probably more appropriate level. We have seen protective coloration in everything until we can find that one animal is colored in a certain manner for a certain environment notwithstanding that another occupying precisely the same environment may be quite differently colored and yet have equal necessity for protection; we have seen wonderful physical and instinctive adaptations whose foundations were in misinterpretations and imagination, so that we are inclined to believe that we have not infrequently run wild on these subjects and that probably a museum arranged to expound our theories of to-day would have to be rearranged to-morrow to keep abreast of the varying phases of nature interpretation.

"The reason why" is of great interest to the enquiring mind. It is taught in our schools and text books and then retaught in a different manner to conform to later investigation; and perhaps, and especially if we consider its cliental, it is no worse for a museum to temporarily teach a false though plausible doctrine than it is for a university to do so.

The tendency of museums has set strongly in the direction of popular education and there is less of the exhibition of things whose interpretation is left to the visitor and more of the exposition of ideas illustrated by specimens. This method is not without its dangers because the opportunities for an injudicious curator to do violence to nature in his interpretation of her are great and our supposed principles and laws of nature of to-day may be but the controverted fancies of to-morrow; so that there is need of the best talent and greatest care in so treating a collection.

There is no gainsaying that a museum should present the facts as they are found if by this is meant that it should not present as fact what is unsubstantiated in nature; but if the public, unassisted by a guide or lecturer, is to get at an understanding of many of the processes of nature as we think that we know them, then it is essential that there be a marshaling of the objects that seem to prove these generally accepted interpretations of the processes. There should, however, be no straining or distortion of the indubitable data connected with the specimens, and theories should be enunciated as such. A popular treatise on any subject must make a careful selection of the information that it is to convey, must take up what seem to be the more important features and ignore those of less importance.

To be encyclopedic in treatment is to cease to be popular and results in repelling rather than in attracting the average man; and so with museums it is conceived that the way to be assured of conveying a fair knowledge of a subject is to limit the ideas to a reasonable number that it is deemed worth while emphasizing and then by display and labels impressing these on the public so that the museum management may be confident that something more than a hazy idea of a conglomeration of curios is taken away by the visitor. Though the principle of selection was put into practice in this country about fifty years ago it apparently has until lately been ignored or lost sight of in many quarters while in a few others the idea has obtained that it was wrong in principle. Recently the question has come up for discussion in connection with the fundamental one as to the aim and object of such museums as we are discussing. The question involved may perhaps be stated succinctly as: Whether it is well for a museum designed for the public to be an undigested reflection of nature or whether it is not better to make it educational? If it is the one it can hardly be the other.

Some time since it was impressed upon my attention that here in Wisconsin it was generally believed by librarians that it was quite the proper thing for libraries to establish museums as departments of themselves and that anyone was capable of administering them, so that when an invitation was given

me to address the Wisconsin Library Association at La Crosse in February, 1907, I gladly embraced the opportunity to discuss before that important gathering some of the things that a museum should be, the wide and basic differences between libraries and museums and the special qualifications requisite in the museum man.<sup>4</sup> The cause of this misappreciation of the museum idea by librarians apparently is that they have not followed the evolution of these institutions, conceiving them still to be what they were a few years ago—mere collections of objects rather than educational institutions.

Having adopted a scheme of public education many methods have suggested themselves as how best to carry it out and catch and hold the public's attention and interest. In some instances it has been conceived that the conversion of a museum into a gigantic text book illustrated by specimens was the proper course to pursue; a system too literally in accordance with Goode's celebrated dictum: "An efficient educational museum may be described as a collection of instructive labels, each illustrated by a well-selected specimen."<sup>5</sup> Paraphrasing this we might say that an efficient educational museum is a collection of important ideas illustrated by judiciously selected specimens whose import is indicated by carefully worded labels.

Some years ago it was common museum practice to exhibit series after series of natural history objects each accompanied by a label giving only name and provenience, and as if to accentuate the monotony, but in reality to facilitate comparison, the animals were all mounted in essentially the same pose, with the left side towards the beholder. A case of these was a tiring procession, all apparently marching to the left but going nowhere, and I might also add, leading nowhere. The idea seemed to be that taxonomy was the chief end of zoology and unfortunately the public failed to take a very lively interest in such displays. Ultimately the ambitious taxidermist conceived the idea that he was practicing an art rather than merely following a trade and he developed groups of animals which depicted something of their habits and habitats; but conservatism frowned on these early ambitions. As late as

1883 it was written: "We know that museum authorities persist in crying out against groups, but eventually they must give way and admit pieces that are at once interesting and instructive."<sup>6</sup>

The idea almost seems to have been that nothing could be instructive that was interesting, much as we have heard the parallel idea expressed that nothing that was palatable could be healthy; which undoubtedly has been evolved from the undeniable fact that most medicines are distasteful. Can it be that the old museums conceived that the public would stand for a dose of science as unpalatable as one of medicine? At all events, it seems to have been a rather recent inspiration for museums to attempt to interest and captivate the public and instruct it unawares. We do this with the miscellaneous reading of our children when we select for them books in which history or geography or some other school subject is interwoven and disguised in a fascinating story; and while many of the visitors of a free museum are still children the rest are after all only children grown up and the same kind of allurements will cause them to swallow the dose of instruction.

Having once grasped the advantages of taxidermic groups in bringing out zoological facts their use has rapidly become general, almost universal, and the idea has spread to other departments, until we even have petrological groups. Science has not suffered by this; the taxidermy of our museums has vastly improved in all details and as the making of a good group frequently involves more detailed knowledge of habits and habitats than can be found ready at hand, the studies necessitated have added to zoological and ecological science. Next to mammals and birds, anthropology has most availed itself of this style of installation. The result of group exhibition is that the visitor sees a certain object not as an isolated, unrelated thing but in relation to other objects, in a reproduction of its natural environment and in connection with others of its kind. Only those who have the planning and making of such groups are apt to appreciate the many details in which not hazy generalizations but exact specific knowledge is necessary, and can therefore



fully appreciate how much more such groups tell and suggest than does the individual specimen; but it must be apparent to any one that a good group makes a much stronger and more lasting impression on the popular visitor than does the single specimen, and that while very likely he fails at first view to carry away a consciousness of all that it depicts yet he certainly has gotten more than he would have received from the wearisome procession of older days. The striving after realism of environment has called into co-operation the artist and the mechanic. The scenic backgrounds of some groups are worthy of exhibition as works of pictorial art.

As it is apparent that people are interested in motion and that live animals hold the attention more than do mounted ones, a few attempts have been made by commercial museums to introduce motion into such groups; but as these motions must be monotonous repetitions of mechanical movements, having little real similiarity to those of live animals, these ventures have not met with success. However, it is probable that as applied to certain phases of animal dynamics we may yet see its successful though restricted application to popular museum exhibition.

The use of the phonograph to record sounds of animate and inanimate nature may not unlikely be a museum development of the not far distant future. Our popular works on ornithology find it necessary to indicate by musical scale and words, in a most unnatural and unsatisfactory manner, the song notes of birds which could be much better imitated by phonograph. Half the impressiveness of some mammalian colonies lies in the vocal sounds that they produce and everyone is interested in the speech of various races of men.

Live exhibits of plants, insects, marine and fresh-water invertebrates and of reptiles, batrachians and other small animals have for some years found acceptance with museum men as valuable accessories to the permanent preparations.

Attention is being given to atmosphere, and we find, executed or planned, rooms in which the whole decoration is in harmony with the exhibits shown so that we are aided in overcoming the incongruities due to the transposition of the counterfeit of na-

ture or the artifacts of some primitive people to a setting reeking of the ambitions of the modern architect. A pleasing example of this is seen in the hall in the Museum of the Brooklyn Institute where is shown the civilization of the Pueblo Indians amidst surroundings suggestive of their habitat. Pictures and mural paintings are valued aids in this harmonizing.

In extension of this seeking to harmonize surroundings has been a special development of case installation by which it is attempted to segregate a particular group from all other objects so that when viewing it no other objects can be seen at the same time. This I have treated of more extensively elsewhere<sup>7</sup> and will merely call attention to the distracting effect of looking through a four-sided glass case and seeing beyond it other objects incongruous to those contained within and also to the obscuring glass reflections frequently disfiguring such exhibits.

There is also a noticeable striving after the abolition of the time honored shelf exhibit. It needs no argument to demonstrate the inartisticness of the apothecary-shop-like arrangement of specimens on wooden shelves. They must still be retained for some things but, many times, other methods of installation are greatly preferable and have been used in most modern museums, though the abolition of the shelf has not yet reached its maximum development. In line with this are a multitude of museum details as lighting, placement, style and construction of cases, color and texture of background, etc., etc., that, while requiring most careful attention from the museum man and going a long way towards making or marring the exhibits, are hardly proper subjects for discussion in this place.

The labeling of specimens is, however, such an important feature in modern museum development that I must say a few words upon it although I have elsewhere separately treated it in some detail.<sup>8</sup> The color and quality of paper, style and size of type, color of ink and make up of the label including proportions, length of lines and spaces between them have much to do with its effectiveness irrespective of what it may say. The artists object to what they are pleased to term the spotted effect of an adequately labeled collection; and the criticism is

not without weight; but the objects of museums of art and of natural history differ and this variance has been well expressed by an art museum man in a definition that ran about as follows: "The object of a museum of art is to afford thoughtful pleasure; that of a museum of natural history to afford pleasurable thought." Under the terms of this concept we presume no one, not even an artist, will presume to interdict the use of labels in natural history museums.

Various attempts have been made to harmonize labels with their surroundings, such as printing in gold and in aluminum on black; printing on thin tissue paper which when specially applied to the background is itself invisible, leaving only the letters as if directly printed on the back of the case; hand printing on glass, etc. These various devices have their applicability under varying circumstances and may tend toward a more artistic ensemble without detracting from the legibility of the labels, but I have known of instances where the curator frankly avowed that he did not expect his labels to be read!

A label must of course tell what the object is, preferably giving precedence to the common over the technical name. It must give the convenience of the object and if it be one having sex, state which; if subject to seasonal variation, the date when taken should be given. These are essentials that must be on all labels. Other features such as geographical distribution, food, (if an animal), migration periods, if a migratory bird, use, if a human artifact or useful object, etc., may be given or omitted as determined by the size allowed. For large specimens, classificatory divisions, and set groups, where larger labels are permissible, they should answer the questions that would likely occur to an intelligent, non-scientific person and should contain such other matter as the curator thinks should be known. By anticipating the natural queries as to how large a mastodon is, how long ago the Mesohippus lived, etc., the visitor may be beguiled into reading something more technical than he otherwise would; but by all means the label should avoid the use of technical terms where possible. The writer should remember that his readers are mostly untechnical, and he can tell

in a clear way all that the ordinary student wishes to know. The growing attention being paid by museums to their labeling is indicative of their clearer grasp of their proper mission as educational institutions.

The effect on the exhibitions of the halls in which they are contained brings up the question of museum architecture, but this is such a special subject replete with technical details that it can not be taken up here except to repeat the warning of a former director of the Natural History department of the British Museum: "Beware of the great architect!" an expression that finds a responsive echo in the brain of nearly every museum director in the world, for most museums occupy architects' buildings which differ mainly in their degrees of inappropriateness.

Museums have entered on a period of accelerated evolution, and are rapidly forging ahead to their proper position on the crest of the wave of popular education and culture that is sweeping over all civilized nations. The subject is one that should interest us all, and although I have purposely limited this essay to but one of the various phases of museum activities,—exhibition, and have necessarily treated that very superficially, I trust that I have succeeded in indicating the general trend of such institutions as belong to the restricted class under consideration.

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## THE SCIENTIFIC DEVELOPMENT OF TAXIDERMY AND ITS EFFECT UPON MUSEUMS.

BY GEO. SHROSBREE.

My recollections and observations of the Art of Taxidermy, date back to about the year 1870. Born of a family of Taxidermists of the "old school," nearly half a century ago, at London, England, I have had the opportunity ever since I was a young boy, with the exception of six years spent in the British army, of working at Taxidermy, commencing with the crudest methods, and passing through the various stages, up to the present time. During my youngest days, the following method was employed:

Taking the skin of a mammal, which had been roughly prepared with salt and alum, iron rods were placed in the legs. The legs were then stuffed with shavings, straw, or almost anything that was at hand. A thick board was then placed in the body to which the leg irons were stapled or bolted; also a rod to support the head. The mammal was suspended feet upwards to a beam, and stuffed full of straw and shavings, the skin being sewn up when no more could possibly be crowded into it. The specimen was then stood on its feet, and pounded into shape with a club.

Next came the straw model, which was made by bolting the leg and neck irons to a beam, and using either the natural or artificial leg bones; straw was then bound to the beam and to the leg bones, and sewn through and through, using a long sail needle and twine. Modeling clay was spread over the straw form. This was a decided improvement, and it had a good ef-

fect while the skin was still wet; but in drying, the skin would shrink, and pull away from the clay form, there being no means of fastening the skin to it, but still this was a step in the right direction, and it served to stimulate taxidermists to further efforts. Later, the hollow wooden form was used, a center board being cut to conform to the outline of the body of the animal to be mounted; side pieces were then placed edgewise to the centre board, and ordinary lathing being nailed to them; excelsior or tow, mixed with clay, was modeled over the wooden form. Some very good taxidermy work was turned out by this method, the taxidermist having the advantage of being able to nail the skin to the wooden manikin, and by that means to overcome to a great extent, the inevitable shrinkage.

Next came the hollow plaster of paris model, reinforced with wire work, which was thoroughly dried and primed. The skin, after being properly tanned, was glued or pasted to it. This method, which makes a perfect specimen in every respect, is employed by many taxidermists at the present day, the only objection to it being, the great weight of the specimens when finished.

The latest method employed, is the making of a clay model of the specimen to be mounted, from which a mould is made, and a light and durable form of wire work and papier machie is made in it. This is the most perfect and the most scientific method up to date, and I doubt very much if it can be improved upon. The scientific development of photography has been one of the greatest aids to the scientific development of taxidermy.

Where the old-time taxidermists, as I remember them, were very secretive and jealous of their work, and relied mainly upon poorly drawn pictures for the attitudes of their specimens, the modern taxidermists have the advantage of the camera, and in many places of zoological parks, where they can study the live animals and photograph them. As a rule, they are more liberal towards each other, exchanging their ideas as to the different methods. This has had the effect of developing taxidermy of the present day to its high standard of excellence. Less than forty years ago, taxidermy was unknown in the United States,

excepting through amateur work to which many of the poorly mounted and distorted old specimens which still remain in most museums, attest. These are fast disappearing, however, by the remounting of those that are fit, converting others into skins, and discarding the worthless.

The commencement of scientific taxidermy in the United States, dates back to the year 1873, when the late Prof. H. A. Ward, of Rochester, N. Y., imported several trained men from Germany, France, and other parts of Europe, and added the Department of Taxidermy to his natural science establishment. At that time, it was found impossible to engage in this country a single trained taxidermist. It, therefore, became necessary to import trained men from Europe, and very keen rivalry existed between these men, as also between the amateurs and the apprentices who were later employed there. Each individual taxidermist was consequently surrounded with critics. This had the effect of stimulating him to his best efforts, and if a taxidermist did perchance make a mistake in the mounting of a specimen, those "critics" usually found some very fantastic means of directing the unfortunate operators attention to it.

The Society of American Taxidermists, having its inception among the employes of Ward's Natural Science Establishment, was organized early in 1880, and devoted to the development and improvement of their art, the first exhibition being held in December of that year, at Rochester, N. Y. This friendly rivalry developed the best that was in each one, and full fledged taxidermists began to receive appointments at the several museums. The Establishment had developed into a sort of a scientific training school for museum taxidermists. The taxidermists at most of the museums in the United States at the present time, graduated from that Establishment, or were developed by those who had received their training there.

My time spent as a taxidermist there, extending from 1887 to 1899, I consider one of the most profitable and most interesting experiences of my life. To become a successful taxidermist, a person must have an eye for form that he can make good models of the objects to be mounted; must be a close observer of all liv-



ing things; and have a knowledge of osteology and myology. He need not particularly know all the anatomy, but must be a close observer of the outer forms of all animals. Even with all these qualifications, I do not believe that a taxidermist can be "made." He must be born with an "indefinable something" in his nature, which will soon develop under proper conditions.

The scientific development of taxidermy has been one of the principal agencies of popularizing museums. With it developed group work and the modeling of foliage from the natural plants.

Museums, as I remember them in my younger days, were dry, dreary and of little interest to anybody but scientists. The idea of the old fashioned museum director seemed to be, that a museum was only for scientists. They did not cater to the general public. Specimens were simply labeled with scientific names. In contrast to this, the museums of the present day have become places of popular, as well as scientific education and entertainment.

DECREE OF THE HONORABLE AND WISE COUNCIL OF  
NUREMBERG CONCERNING THE PROHIBITION OF  
THE GREAT VICES OF BLASPHEMY, SWEARING,  
CAROUSING AND TREATING. M. D. XXVI.<sup>1</sup>

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E. K. J. H. VOSS.

The term "Dutch treat" is familiar to every American. As a rule the word Dutch as an attribute is not anything commendable to brother Jonathan, thanks to those Hessian soldiers or rather hirelings bought by the English to fight the Americans. Even in the connection "Dutch treat" I am inclined to think that it is used more in an apologetic than in a complimentary manner, except possibly when suggested as a remedy for the evils of the American saloon which grew out of the treating system. The Germans, however did not always enjoy the reputation of paying only for their own drinks. The ordinance of the city of Nuremberg of the year 1526 which is reprinted on the following pages, will prove sufficiently that centuries ago the custom of treating was not only too well known in Germany, but that it had become a perfect nuisance, a menace for the whole nation, so much so that laws had to be enacted to put a stop to it.

The word used in German for this abominable custom is "*zutrinken*" and it means literally: to drink to somebody's health, however with the silent understanding that he return the compliment. The English word "*to treat*" seemed to convey the underlying idea better than any other word I could find.

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<sup>1</sup> Cf. also baader, Nürnbergger Polizei ordnungen aus dem 13, bi 14. Jahrhundert. Stuttgart 1861. pp. 114-115. (Bibliothek des Literarischen Vereins in Stuttgart, Vol. 63.)

The German custom of "*zutrinken*" as well as the English-American custom of *treating*, if abused, are liable to become a serious danger and detriment to the life of a nation. It is against this nuisance that the Nuremberg city ordinance of 1526 is directed.

The English expression "*Dutch treat*" or ante-treat explains very well that the laws enacted against this harmful custom centuries ago have indeed been effective in Germany as far as the general public is concerned. The practice is unknown in Germany nowadays except in the German Universities where this old custom of drinking to another's health in utter disregard of his health, is still alive and is at times carried "*ad absurdum.*"

Next to the custom of tattooing the face of a student who is too much impressed by his own importance, in the most friendly, although not always in the most artistic manner with a rapier or sword, it is considered the most effective means of correcting the neglected education of an unruly member of a fraternity who finds it hard at times to submit to rules and regulations, that to his mind interfere with his rights as an individual.

The Nuremberg ordinance refers to a law passed in 1512 by the German Diet at its session in Cologne.

This diet is known as the Trier-cologne diet, since it had its first session in Trier and its concluding session in Cologne. This imperial law, issued for the whole realm, reads as follows: (I quote from *Willy Scheel, Johann von Schwarzenberg's Das Buchlein von Zutrinken.* Halle 1900.)

"Although at former diets the custom of treating has been forbidden more than once in the most emphatic way, the law has not been obeyed, nor duly enforced and carried out. Therefore and especially, since treating is conducive to drunkenness, and drunkenness leads to blasphemy, manslaughter and a great many other vices, because those that indulge in this habit endanger their honor, their souls, their mind, their body and their property—the authorities, high and low, lay and ecclesiastical in all the territories of the realm, shall do away amongst them-

selves and amongst their subjects with this nuisance and prohibit it by very severe penalties. And if those of the nobility will not obey the law, His Majesty, the electoral princes and other princes, lay and ecclesiastical, and all other authorities, shall ostracise the evil doers and not allow them at their courts or in their service.

And if someone should be discharged on that account, no other prince or authority shall harbor him or appoint him to an office. Upon those however of less noble position the authorities shall inflict severe bodily punishment. (This of course dates back to the time when the real man began with the nobleman and the others were looked upon as mishaps of the Lord of Creation.)

And if any authority should be found lax in the enforcement and execution of this law, the Imperial Attorney General shall inflict severe punishment upon those persons that have been convicted of this lawlessness, and in places where the custom of treating has been in vogue for generations and become a public nuisance, the authorities shall do all in their power to put a stop to it."

The city ordinance, founded upon the foregoing law, reads as follows:

*Translated from the Original*

Although the Honorable Council of the city of Nuremberg has, from good and Christian motives, already given diligent warning to all clients, subjects and inhabitants in this city of Nuremberg, and in all her towns, castles, villages and territories, to desist from the wicked crimes of blasphemy, and carousing, and although the council has furthermore made public and called attention within its jurisdiction to the prohibitive order concerning the same matter issued by the late most noble and most powerful prince, our most gracious lord, the Emperor Maximilian, of most praiseworthy memory, and although the Council has likewise been of the firm opinion that every person ought to heed and obey the word of God which in these days has been made dearer and become more precious to us than ever

before, and desist from such vices—yet it has come to our notice in an official way that all this is utterly disregarded by many of our subjects, young and old, including the inhabitants of the city of Nuremberg, as well as of hamlets and territories under its jurisdiction, and that our fatherly and earnest warnings remain unheeded.

Therefore the Council has determined by virtue of its authority, as far as God has conferred it, to inflict punishment for the aforesaid misdemeanors on all persons who do not wish to heed the word of God, and who lead a scandalous and godless life before their neighbors with such severity that they shall feel above all how God's honor is upheld, and how such misdemeanor is dealt with by the authorities.

To wit: Any citizen, inhabitant, guest, subject and client, under the jurisdiction of the Council of the city of Nuremberg, or in the country in any hamlet and territory, who blasphemeth God Almighty and speaks of Him in terms which are not befitting His Divine Majesty and power, or who tries to detract from that which is due Him as our Saviour and Redeemer, as if God could not do everything or were not just, or who curses God's holy humanity or His throne, or speaks similar wanton defamatory and blasphemous words incessantly in the name of God or against His holy humanity or the holy divine Sacrament of the Altar, the body and blood of Christ, shall be arrested by the public authorities and after cause has been ascertained, shall be punished by the loss of life or according to the blasphemy committed and the rules of the law, if the blasphemer has confessed his guilt or has been lawfully and sufficiently convicted.

These orders shall be carried out in the city of Nuremberg by the command of the then acting burgomaster, and in the country in any hamlet or territory under the jurisdiction of the Council, by its administrators, magistrates and officers whenever the above mentioned or similar blasphemy has occurred, which God in His mercy may forbid.

In the same way if any person blasphemeth the Virgin Mary, the Mother of Christ our Saviour, as if she had not given birth to Christ, the Son of the Most High, that is of God, as a pure

Virgin, or whoever speaks other similar words which directly tend to detract or take away from the Virgin Mary the honor with which she has been endowed according to the Holy Scriptures, shall as said above, be punished in body, life, limb or property, according to the blasphemy and the extent of the law. And as unfortunately a common wicked habit has taken root with young and old, with men and women, to swear frivolously, blasphemously, and wickedly by the strength and power of God, and likewise by the body, limbs, wounds, sufferings, death and sacraments of our beloved Master, Redeemer and Saviour Jesus Christ, and to take in vain the name of God, in whom all our salvation rests, to curse and wish each other all kinds of misfortune and other evil things, in an unchristian manner and contrary to the love of God and our neighbors, through all of which the wrath of God is provoked against us, the honorable Council, in order that every person may know the better how to guard against such things, has ordered the following degrees of punishment.

To wit: If any person, be it a citizen or a client, or inhabitant of the city of Nuremberg or of any other city, castle, markettown, village or territory under the jurisdiction of the Council, man or woman, swears maliciously by the power and strength of God, or by the body, limbs, wounds, sufferings and sacraments of our beloved Master, Redeemer, and Saviour, Jesus Christ in a frivolous, sacrilegious, intentional and wicked manner, the said person or persons, as before mentioned, shall in accordance with their malicious, sacrilegious, frivolous and persistent swearing, be punished severely and irremissibly on their body, life, or property.

But if any person, *not* intentionally, sacrilegiously, and frivolously as said above, but in the heat of anger, or from similar causes or from bad habit, pronounces such an oath as that described above, or otherwise takes the name of God in vain and utters evil curses, be he a citizen of Nuremberg or an inhabitant, or whatsoever of a town or castle under the jurisdiction of the Council, he shall inevitably be fined for every oath uttered in the territory of the Council one "Batzen," and this shall be de-

manded and collected of the offending person in the city of Nuremberg by the members of the body established by the Council and known as the "Five," and in the county by the administrators and magistrates. And such fines shall be put into a common box, which has been provided for in the city of Nuremberg, and which in the country has been placed in the churches of all the hamlets under the jurisdiction of the council, and the poor and needy shall be given from it.

And since by night and day, in the streets and elsewhere, disgraceful and scandalous songs are sung by old and young, and no doubt by dissolute persons, the Honorable Council warns every one of its citizens and clients to prevent such misdemeanors on the part of their children and servants, since it (the Council) will by day and night have a care on this account, and whoever is guilty of scandalous and disgraceful songs or speech, and is discovered in the act or convicted on reliable testimony, shall be punished in accordance with his age and the deed.

Where such things are committed by young boys and girls, they shall be put in prison for half a day and be handed over to their parents to be chastized with rods, or they shall be chastized in the prison. But if they be older persons and past the years of childhood, they shall be put into prison and punished in proportion to the extent of their misdemeanor. In the same manner shall all administrators and magistrates of the Council administer punishment in the country.

Furthermore, as many vices grow and develop out of the disgraceful abuse of inducing people to drink by *treating*, and it is moreover displeasing to God Almighty who will inflict certainly his terrible punishment still more severely, if it does not cease that his earthly gifts, which should be used thankfully for the benefit of mankind, are thus wasted and abused in a manner more than beastly, therefore, the Honorable Council is determined, as said above, for the Glory of God, and as a duty to its position as sovereign, to ward off such abuse in its city and territories.

Hence whatever citizen, inhabitant, guest, subject or client under the jurisdiction of the Council shall drink for the sake of

pleasing some one else, much or little, more than he needs or some stated measure, be it a whole measure, a half, a third, a quarter or whatever it may happen to be, as often as he does that, he shall inevitably be imprisoned for two days in the tower or in a closed prison on a fare of bread and water, or shall be fined for each day one-fourth of a gulden, which fine shall in no case be remitted.

Whoever drinks himself full to imbecility shall be punished with five days imprisonment in the tower or a closed prison on a fare of bread and water, or fined the above mentioned sum, that is for each day a fourth of a gulden, and this fine shall be put, as said above, by our officers and magistrates, into the box or alms plate and given to the poor and needy.

Should it also happen that one or several persons should be guilty more than once of the misdemeanors of blasphemy, carousing, and treating, and this be brought to notice, then the punishment shall for the first offense be inflicted once as said before, for the second it shall be doubled, and for the third, trebled, and should anyone persist, the Council will raise the penalty still further as it may see fit.

Likewise every citizen and client under the jurisdiction of the Council, whether within or without the city, shall be held on his oath, by which he is bound to the Council,— as it is likewise urged upon every person severally—to announce this ordinance of the Council to his children, dependents, man-servants, maid-servants, and domestics, whom he has now or may have in the future, and to urge upon them to behave accordingly.

And whatever citizen and client under the jurisdiction of the Council does not comply with this, the Council will have punished, through its agents and magistrates if they hear of it.

And the Honorable Council most urgently asks, begs and orders citizens, subjects, clients and inhabitants of its city of Nuremberg, and territory, for the Glory of God, to report to the burgomaster in the city of Nuremberg or in the country to the administrators and magistrates subject to the Council, such vices as blasphemy, carousing and debauchery, which they have witnessed or become aware of in the city of Nuremberg or other



territory under the jurisdiction of the Council. The Council besides, will see to it that punishment be inflicted as is fit. Every informer, moreover, shall if he so desires, be given honorable recognition for his information, and his name not be made public. And in our city of Nuremberg our delegates, the Five, and in the country, our magistrates shall then act as is fit and according to the information, but without naming the informer. *Let everyone act accordingly.*

The Honorable Council, moreover, reserves for itself the right to change, reduce, and add to his prohibition, rule and ordinance concerning penalties and other matters, whenever and as often as it considers it profitable and necessary.

Decretum in Concilio, March 3, 1526.

