

HUMAN/ARTIFACT INTERFACE RESEARCH: A POWERFUL NEW MUSEUM TOOL

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Abstract - A new museum discipline researching upon the effects of human intervention on artifacts is described. The initial terms of reference of the discipline are enumerated and a number of preliminary experimental techniques are described; in some cases with definitive results. The author makes a case for including this discipline among the conventional conservation sciences.

1 Introduction

It has long been known by personnel working in the real world of artifact care that by far the most pernicious aspect of the environment, in its broadest sense, is abuse to artifacts due to physical manipulation. This manipulation takes a number of forms, including the following:

- handling by staff and visitors
- handling during inspection and cleaning
- shipping for loans
- conservation treatment.

A great deal of preliminary data exist which indicate beyond question that the effects upon collections of such factors as relative humidity and light are far outweighed by the factors of human physical intervention. In spite of this gross imbalance there exist virtually no scientific studies on the latter, compared to the plethora of overlapping and incestuous studies upon every other aspect of the museum environment. (For example, the definitive work on the museum environment appears regularly every few years.)

The reason for the above mentioned imbalance is not hard to find; simply stated, an environmentally related phenomenon will be studied by scientists if the *causative agent* can be quantified. Light, specifically, lends itself well to scientific studies and numerous authors have shown that it is capable of yielding technical studies of the highest sophistication and the greatest longevity. In fact, major museums are now providing their galleries with entire walls of sun-facing windows up to 12m high solely to study this phenomenon *in vitro*. Such is the influence of light on museum thinking that some museums have even published posters bearing such captions as "Put It Where The Light Doesn't Shine"; *i.e.* not in their glass-fronted galleries.

Received 14 August 1986

This author has undertaken extensive surveys of museum collections from which the data presented here have been drawn. In making assessments of artifact condition, and relating these to the damaging agent, an interesting factor presents itself - damage on objects related to human intervention (*i.e.* mishandling, conservation treatment, etc.) can be easily and directly related to the causative agent, whereas damage on objects due to the more commonly studied environmental factors (*i.e.* light, RH, etc.) is less easily ascribed. The numbers of artifacts suffering from various kinds of quantifiable damage can be represented as a histogram (Fig.1).

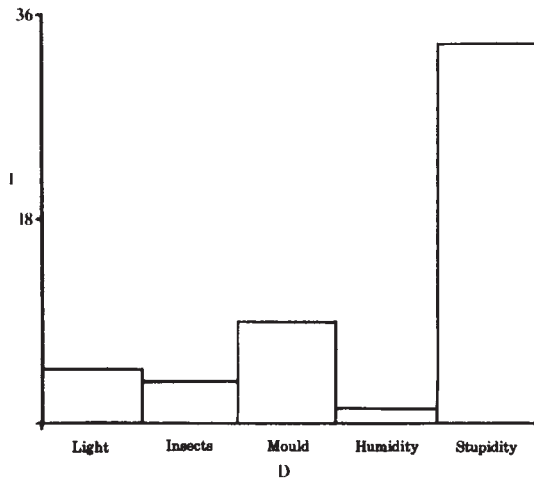


Figure 1 Types of damage (D) plotted against incidence (I).

Thus, on the one hand it is difficult to prove that cracking of wood in a particular case is directly related to fluctuating RH, or that fading on a certain object is definitely due to excessive illumination, but on the other hand, damage due to improper handling or treatment is obvious. Apparently then, the less quantifiable the phenomenon the greater the scientific study, and *vice versa*. An extensive survey of the conservation literature shows an impressive inverse correlation (Fig.2) where the numbers of

published papers on the same topics as Fig.1. are expressed as a histogram.

The conclusion to which this train of reasoning (buttressed by fact) inevitably leads is that conservation scientists have been barking up the wrong tree for years. The interaction of the human being with the artifact is where the most sophisticated and meaningful studies lie. It is also where the most damage to collections occurs.

Clearly, the emphasis placed upon the less damaging factors of the museum environment, and the neglect of the major causes of damage are unwarranted. The intention of this paper is to describe preliminary studies which have been undertaken in an effort to redress this imbalance.

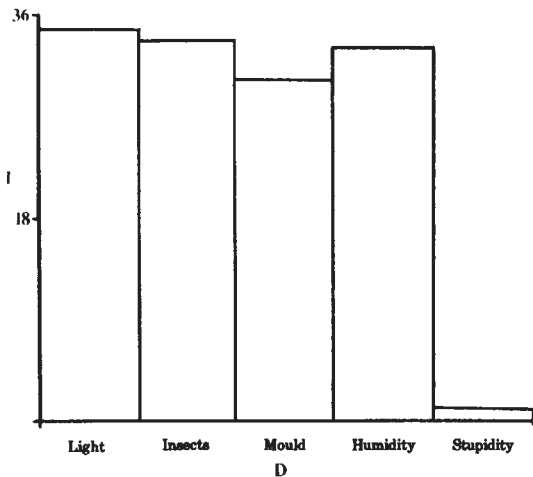


Figure 2 Types of scientific study (S) plotted against incidence (I).

2 The New Discipline

The study of the factors pertaining to the intervention of the human being at the artifact level is known as Human/Artifact Interface Research and is just as valid as other fields of conservation science. There is no truth in the assertion that the study of human factors in artifact care is "non-scientific". Such humanities disciplines as sociology and education theory have been raised to very high levels by the use of a wide range of statistical analysis techniques of deep sophistication. Indeed, countless positions have been created in educational and government institutions solely for the manipulation of such statistical material.

At the Giddy Institute the new scientific discipline has been established to study these phenomena. At its inception the immediate goals of this new discipline were:

- The adaption of standard statistical techniques to the field under study.
- Literature searches through the AATILLA conservation database (Art & Archaeology Through Inter-Library Loan Abstracts).
- The assembly of statistical data on artifact damage due to all quantifiable environmental influences (See Fig.1).
- The creation from the above of the SQUALID database (Statistically Quantified Uniform Analysis and Labelling of Interpreted Damage).
- The production from all of the above of a justification for the existence of the discipline; a *raison d'etre* derived from the maxim *computare ergo sum*.

3 Experimental

As the discipline gained momentum, and a firm database became established, the following long-term projects were undertaken:

3.1 Study of Damage Due to Conservation.

This is an in-depth study of reversibility using statistical analysis in order to ascertain the percentage of objects not permanently affected by conservation treatment. Although very large numbers of objects need to be surveyed in order to accrue meaningful data, and few conservators actually have the luxury to treat large numbers of objects, it is clear from preliminary studies that true reversibility is, indeed, a myth. Less than 2% of artifacts pass through laboratories in an un-nonreversible state. In view of this, action is being taken at the management level to ensure that conservators are kept occupied with piddling pieces of meaningless paper and long, boring meetings as a means of passively protecting the artifacts ostensibly under their care. The exhaustive surveys described in this section are a direct result of this technique (as is the paper itself).

3.2 Consciousness-Raising Techniques.

Staff of the Institute are engaged in consciousness-raising "seminars" with volunteer museum staff in an effort to inculcate a sense of oneness with the artifacts under their care. Gestalt techniques and aversion therapy are used and experiments are being undertaken in genetic imprinting. Results so far show that if the most effective techniques are applied to receptive subjects, damage to an artifact by a subject can be made to result in actual severe pain. For example, over a period of a week two curators

were conditioned to the extent that they felt a hideous pain similar to an acute kidney stone attack when they attempted to handle polished metals without little white gloves. In another experiment three ceramics conservators were conditioned over two weeks until even the *thought* of dropping a bone china vessel caused nausea and high fever.

Given receptive subjects from the museum community and a slight rewording of certain codes of human conduct, it is clear that the incidence of damage due to inattention and clumsiness could be reduced almost to zero.

3.3 Environmental Factors.

An attempt was made in this study to answer a key question: is there a relationship between the extent to which an individual inflicts damage to artifacts and the environment in which that individual operates? Studies were done between the incidence of damage at the museum, in the home, and in a small Hungarian restaurant (*i.e.* when the handler is custodian, owner and user respectively). Fifteen subjects were exposed to the three environments in turn. In the museum environment they were asked to wash and stack repeatedly 30 cheap wine glasses for a period of three hours. In the home environment they were given, as a gift, another batch of 30 cheap wine glasses to wash and stack as before. In the Hungarian restaurant environment the same factors were applied, the process being performed on the assumption that the subjects had been unable to pay the bill. Percentage breakage was assessed upon completion of each phase. The results of the studies are tabulated in Fig.3.

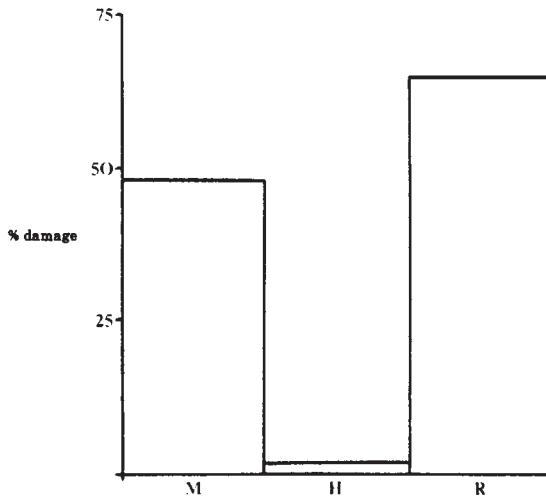


Figure 3 Incidence of damage in the museum (M), in the home (H), and in a small Hungarian restaurant (R). The significantly larger figure in the third column may be a result of the red wine or waiter factors.

These results clearly show a callous disregard for other people's property, although the results from the Hungarian restaurant may be mitigated by two factors: the consumption of a large quantity of wretchedly cheap red table wine by most subjects, and the social stigma of being hauled off by an angry waiter.

3.4 Clumsiness and Job Status.

This project tested the validity of the often-stated maxim that the Preparator is not as clumsy as the Conservator, who is not as clumsy as the Curator, who is not as clumsy as the Director, who is not as clumsy as the Board Member, and so on, up to and including the Queen of England. A clear straight line relationship results (Fig.4) although the data point for the Queen of England was arrived at by extrapolation.

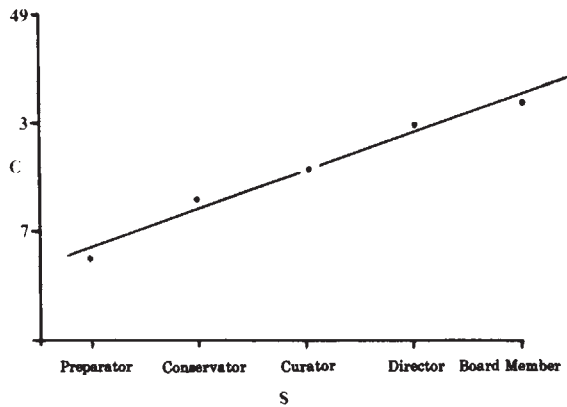


Figure 4 The straight line relationship of clumsiness (C) against job status (S).

3.5 Native People's Awareness Seminars.

An attempt has been made in these seminars to rationalize the production of ethnographic artifacts so that they can withstand shattering impacts. Masks of resin/fibreglass composition have been in production for some years (Figs.5&6) and there is no good reason to exclude the employment of similar materials for other artifacts. For example, sinew, root and hair may easily be replaced by monofilament synthetics of very high breaking strain. Some pioneering work has been done in this area, as evidenced by the small plastic totem poles available at many museum gift shops.



Figure 5 Traditional ceremonial costume made of natural materials subject to degradation and damage.



Figure 6 Modern ceremonial costume made of indestructible space-age materials.

3.6 Damage Responsibility Index Profiles.

Readings from such apparatus as bio-rhythm measurers, Radio Shack lie detectors, and respiration and heart rate monitors are combined with information from I Ching, horoscopes and home/personal relationship factors to generate Damage Responsibility Index Profiles (DRIPS) for artifact-handling employees. Statistics from these DRIPS can be used to predict periods when employees should be given rest days, annual leave, leave without pay or mandatory retirement.

4 Conclusion

The science of Human/Artifact Interface Research has matured significantly since its inception some two weeks ago, and already conservation scientists of the old school are coming to realise that in this discipline there is a virtual gold mine of potential publications. In fact, without wishing to repeat oneself, the science of Human/Artifact Interface Research has significantly since its inception some two weeks ago, and already conservation scientists of the old school are coming to realise that in this discipline there is a virtual gold mine of potential publications.

The great advantage of the discipline in the long term is that, unlike the conventional causative agents of environmental damage, the human cannot easily be quantified. Thus there is no likelihood in the foreseeable future of running out of topics to research because the results from identical projects are likely to be quite different and may be repeated at will. No longer is there a fear in a researcher's mind of duplicating another worker's results - this is quite impossible. Also, literature searches will be rendered unnecessary as the material they turn up will be useless for anything but the reason for which it was written. It is the dawning of a new era.

5 References

1. There aren't any, for reasons which should be obvious. However, as published work always looks nicer with lists of references we are producing a profile for AATILLA which will provide randomized entries from obscure journals matched to the subject matter of individual papers.

REV. AARGH ELLE BARCLAY - Born 1732. Received an "education" in Art History, English Literature and other "disciplines" in the humanities. In spite of this early setback he went on to achieve recognition in a number of identity parades, although a charge of indecent exposure had to be dropped due to his unmemorable face. Nevertheless, he is known to this day by the undeserved epithet of "The Flashing Vicar". He later took up conservation and has been unable to put it down ever since. He has never taken holy orders and has no intention of so doing. Author's Address: The Giddy Institute, Dizzzyland, Florida.

Résumé - On décrit une nouvelle discipline dont le but est d'étudier les effets d'une intervention humaine sur les artefacts. Les termes de référence initiaux sont énumérés et des techniques expérimentales préliminaires sont décrites, dont quelques unes ayant même des résultats définitifs. L'auteur propose qu'on inclue cette discipline parmi les sciences de conservation conventionnelles.

Auszug - In diesem Artikel wird ein neues Museumsgebiet behandelt, das die Auswirkungen menschlichen Eingriffs auf das Kunstwerk beschreibt. Einführende Leitsätze dieses Gebietes werden genannt, und eine Reihe vorläufiger Versuchstechniken sind beschrieben, in einzelnen Fällen sogar mit bestimmten Ergebnissen. Mit voller Absicht reiht der Autor dieses neue Gebiet in den Bereich der herkömmlichen wissenschaftlichen Restaurierung ein.