Preventive Conservation in Historic Houses and Palace Museums: Assessment Methodologies and Applications

SilvanaEditoriale

Preventive Conservation in Historic Houses and Palace Museums: Assessment Methodologies and Applications

Conference of the National Museum
of the Palace of Versailles (EPV),
the Association of European
Royal Residences (ARRE),
and the Research Centre
of the Palace of Versailles (CRCV)

In collaboration with the International Committee
for Historic House Museums (DEMHIST),
held at the National Museum
of the Palace of Versailles and Trianon

From 29th November to 1st December 2017

Conference Proceedings

Under the scientific direction of
Danilo Forleo
in charge of preventive conservation
and head of EPICO programme,
National Museum of the Palace
of Versailles and Trianon

Editorial coordination
Nadia Francaviglia
research assistant for EPICO programme,
Research Centre of the Palace of Versailles

Translations
Clarisse Le Mercier, Camila Mora

This book brings together the presentations of the speakers at the international symposium organised as part of the EPICO (European Protocol in Preventive Conservation) research programme, by the National Museum of the Palace of Versailles:
Catherine Pegard, *president*
Laurent Salomé, *director of the National Museum of the Palace of Versailles*
Tierry Gausseron, *deputy head*
Association of European Royal Residences (ARRE)
Research Centre of the Palace of Versailles (CRCV)

With the participation of
Ministère de la Culture,
ICOM – DEMHIST (International Committee for Historic House Museums)

Scientific committee
Lorenzo Appolonia, *president, Italian Group of the International Institute for Conservation – IGIIC*

Florence Bertin, *head of Collection Department at MAD – Musée des Arts décoratifs*

Michel Dubus, *ICOM-CC group coordinator for preventive conservation, Centre de recherche et de restauration des musées de France – C2RMF*

Danilo Forleo, *in charge of preventive conservation and head of EPICO programme, National Museum of the Palace of Versailles and Trianon*

Nadia Francaviglia, *research assistant for EPICO programme, Research Centre of the Palace of Versailles*

Agnieszka Laudy, *deputy head of Architecture Department, Museum of King Jan III's Palace at Wilanów (Warsaw)*

Bertrand Lavedrine, *director, Centre de recherche sur la conservation des collections – CNRS*

Sarah Staniforth, *former president, International Institute for Conservation – IIC*

Organizing committee
Elena Alliaudi, *coordinator, Association of European Royal Residences*

Hélène Legrand, *assistant coordinator, Association of European Royal Residences*

Matilde-Maria Cassandro-Malphettes, *secretary general, Research Centre of the Palace of Versailles Bernard Ancer, in charge of general affairs, Research Centre of the Palace of Versailles*

Olivia Lombardi, *executive assistant, Research Centre of the Palace of Versailles*

Serena Gavazzi, *head of the Patronage Department, National Museum of the Palace of Versailles and Trianon*

Noémie Wansart, *research assistant at Curatorial Department, National Museum of the Palace of Versailles and Trianon*

Thanks to

Lorenzo Appolonia, Lionel Arsac, Jean-Vincent Bacquart, Wojciech Bagiński, Jérémie Benoît, Marie-Alice Beziaud, Céline Boissiere, Anne Carasso, Élisabeth Caude, Gabrielle Chadie, Thibault Creste, Stefania De Blasi, Elisabetta Brignoli, Hélène Dalifard, Gaël de Guichen, Ariane de Lestrange, Festese Devarayar, Françoise Feige, Christophe Fouin, Éric Gall, Thomas Garnier, Roberta Genta, Denis Guillemard, Michelle-Agnoko Gunn, l'équipe du Grand Café d'Orléans, Pierre-Xavier Hans, Nicole Jamieson, Thierry Lamouroux, Marie Leimbacher, Nadège Marzanato, Béatrice Messaoudi, Stefan Michalski, Christian Milet, Marya Nawrocka-Teodorczyk, Marco Nervo, Lucie Nicolas-Vullierme, Clotilde Nouailhat, Agnieszka Pawlak, Amaury Percheron, Arnaud Prêtre, Gérard Robaut, Bertrand Rondot, Valériane Rozé, Béatrice Sarrazin, Béatrix Saule, Didier Saulnier, Emma Scheinmaenn, Violaine Solari, Emilie Sonck, Pauline Tronca, Rémi Watiez, Thierry Webley, Sébastien Zimmerman

With the patronage of

Reasonable Doubt: the Diagnostic Potential of Connecting Risk and Condition Data

Abstract

Decision-making in preventive conservation requires dealing with a range of uncertainties. Objects do not necessarily deteriorate in environments considered damaging, and can change in environments considered acceptable. Assessment methods can be better suited to some problems more than others. The believability of a conclusion may rest on standards or information that does not reflect the specific situation.

Collection condition assessments do not indicate unrealised damage and risk assessments are based on predictions of things that may not occur. If both are carried out, there can be disagreement because they assess different things. This paper, however, argues that discrepancy can be meaningful rather than problematic. Recognising and responding to disagreements in different data can lead to more nuanced conservation decision-making in practice. This helps identify where uncertainty lies, and prompts deeper analysis of the situation. Seeing discrepancy means that uncertainty can become a diagnostic tool.

The paper describes practical situations where discrepancy between risk and condition data can be meaningful, including the English Heritage collection audit which was able to diagnose problems and develop robust analysis by utilizing both risk and condition data.

Keywords

Condition, risk, preventive conservation, discrepancy, historic palaces.

Joel Taylor
Senior Project Specialist,
The Getty Conservation Institute, USA
jtaylor@getty.edu

Maps have provided a source of fascination since their first creation, often possessing aesthetic as well as utilitarian value. Even when the information they contain has long since been updated, they can become collectors' items and historic artefacts in their own right. Part of this enduring fascination is that maps tell us not just where we are, but they tell us who we are. The things that appear on a map indicate what was important to its creators and users. They tell us what features were worth documenting, the relationship between those features, of where there is danger or good fortune, and even where there is uncertainty (fig. 1). Although historic maps can reveal the limits of accuracy that people worked with, they must be acknowledged as essential tools that helped people look beyond the territory where they stood to places they might have never been.

This process of creating and using maps has many parallels to the

Fig. 1
An excerpt of the Carta Marina map depicting the west of Norway, geographical features and warnings of trolls, sea monsters, and whirlpools. https://no.wikipedia.org/wiki/Fil:Maelstrom,_Carta_Marina.png

ways in which we document collections. The expanse that we wish to chart is partly geographical but also temporal, as we try and better understand how collections have changed, and might change over time. How we make decisions about preservation depends on how we document these matters. Preventive conservation assessments examine a network of interactions and reactions, but in slightly different ways. Covello and Merkhofer [1993] introduced the notion of the risk chain (fig. 2), which moved from the existence of a hazard (Release), through its contact with an object (Exposure), through the interaction of object and hazard (Interaction), to the consequences of that interaction (Consequence, or "damage" in the case of preventive conservation in historic houses).

In terms of preventive conservation assessments, risk assessment focuses on the earlier steps, highlighting the progress of hazards. Condition assessment focuses on the later steps, highlighting the consequences. Moving this concept to application, causes have causes, and consequences have further consequences. Some interactions require more than one hazard, and in all cases the chain is really a close-up look at the network of the museum environment. These approaches ask questions about this network of interactions. We must make assumptions about the environment with high levels of uncertainty.

Uncertainties

The presence of a hazard doesn't necessarily mean there will be damage, and the presence of symptoms doesn't necessarily single out a cause. The museum environment is complex and damage can be the result of several factors acting together, synergistically, or compounding over time,

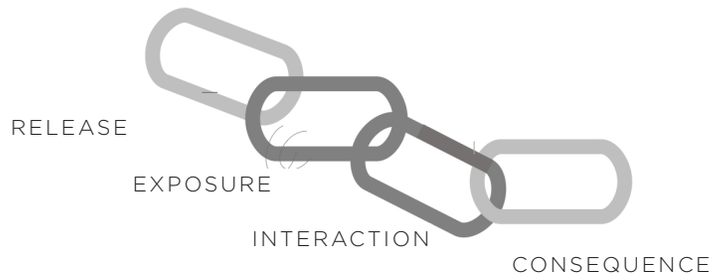

Fig. 2
Risk chain based on Covello and Merkhofer, 1993.

such as surface flaking increasing susceptibility to handling damage.

Taylor [2005] pointed out that objects don't always do what they are expected to do, identifying four broad categories that related to the kinds of uncertainties where expectations differed from reality:

– objects remaining stable in conditions considered "unacceptable;"
– objects deteriorating in conditions considered "acceptable;"
– objects of the same material responding differently to the same environment;
– object deterioration not always being visible or having evident symptoms.

These uncertainties affect different kinds of assessments in different ways. Object behavior that does not correspond to predictions of that behavior poses problems for risk assessment. Object deterioration not presenting identifiable symptoms poses problems for assessing condition. Both approaches have several areas of uncertainty.

The field has a representation of how materials responds to their environment, which does not (and cannot) provide a complete representation of every situation. The author Borges [1946] warned of the impractical aspiration of absolute accuracy in a short story about cartographers who became so fixated with reducing uncertainty that they created a 1:1 scale map. Realistically, conservators must deal with uncertainty in a variety of ways.

Different representations deal with uncertainty in different ways. Although this could be perceived as an opportunity to choose the approach with the least uncertainty, there is another opportunity. Instead of seeing different approaches as rivalrous, and conflicting results as problematic, the different assessments could be considered as mutually helpful supports against the inherent uncertainties of the other.

"Experts may be uncertain but feel forced into declaring certainty... [So] two people that agree, and share the same uncertainty, may appear to hold different opinions" [Ashley-Smith, 1999, p. 336]. By the same token, discrepancy between the outcomes of assessment methods might not mean that one of the assessments is wrong. It might mean that a difference in data is meaningful.

Discrepancy

When assessments measure different things, discrepancy can be expected. Approaches that focus on causes (risk) or effects (condition), hold assumptions that stem from their use (table 1).

Recorded causes are intended to tell us something about effects. Recorded effects are intended to tell us something about causes. Individual differences may be the result of one method being more accurate than another, but these methods are designed for broader perspectives. There can be a number of reasons for discrepancy that can be observed in practice, which can reflect the practicalities of preventive conservation assessment.

Risk Type

Waller (1994) classifies different kinds of risk: rare, rapid-onset hazards that can be catastrophic, like earthquakes, low-level hazards that are deterministic in nature like pollution or light, and those sporadic events like dropping an object or pest infestation that are neither rare nor constant. Condition assessment provides some certainty about deterministic risks – actual signs of impact rather than speculation. Risk assessment provides estimates on the probability of a fire or flood that cannot be gained from looking at the object.

Temporal Relationships

Different assessments look at different points in time, different parts of the risk chain. Latent damage, not yet observable to the assessor, will be expressed in a risk assessment. Visible symptoms may not be observed, but that does not indicate "no change." This could also be the case for catastrophic risks. The difference between recording what has definitely happened in the past and what is expected to happen in the future can provide a nuanced approach to planning.

Cause-Effect Relationship	Problems Associated with Inference
Cause implies Effect	A hazard that objects are exposed to may not affect them. All causes treated the same, regardless of their effect on the collection.
No cause implies No effect	Unusual phenomena would not be found, such as mold at moderate RH. Inherently unstable objects may deteriorate in environments considered suitable.
Effect implies Cause	Condition data do not differentiate between (multiple) causes. Past deterioration may also be visible but not causing problems.
No effect implies No cause	The effects may be latent, or simply hard to detect. Catastrophic risks are rapid onset phenomena.

Table 1
Kinds of inference and their potential problems in preventive conservation assessment [Taylor, 2005].

Objects not Behaving as Expected

All environments that house collections can be unpredictable. As mentioned, the theory of how an object should deteriorate does not always correspond to the reality. Predictions, by their nature, choose theory over the reality of what has happened. Although it can be compelling to state that objects will deteriorate at a certain rate, or last for a certain amount of time, only observation will reveal symptoms of deterministic risks on one material or another. If a collection is stable outside levels recommended as "safe," condition and predicted damage may differ. This could be the result of objects' previous exposure to high levels of a hazard, or simply being more robust than current theory suggests. Objects could be more sensitive than we know or their vulnerability could increase over time. Discrepancy highlights these issues.

Deterioration from inherent vice in the material, which can happen at moderate, stable environmental conditions that would not score highly on a risk assessment.

Past Damage

Past damage is not an indicator of what might happen in the future. A conserved object may behave differently after intervention [Waller, 2003]. Even the same object might differ under the lenses of observation and prediction. Symptoms may be present from previous risk exposure, such as accumulated fading from a number of different environments, or gradual deposition of a now-regulated pollutant. Considering expected change allows the implications of different symptoms to be parsed out and better understood in context.

Locations and Moving

Objects in historic buildings can move a lot, even the most embedded materials. The wall panels in Kew Palace, for example, were bought from France. Even staircases have moved in historic houses, and historic photographs have been known to involve moving ornaments into or out of frame. Objects that may appear to have been in one location for some time may have a varied history – damage cannot be connected to the location. Like museums, objects in historic buildings often have a history before they arrived at their location. Interpreting too much from damage can be misleading.

Predictions can often ignore past activity, sidestepping this problem. Concepts like "proofing" [Michalski, 2009], which use knowledge of a collection's history, though, can become limited by uncertainties related to objects' past locations, and objects that are about to be moved may mean that the identified risks belong to a location in which they are not located.

Synergistic Effects

Dividing risk into different agents can lead to unnatural separation of problems affecting collections. Much damage is the result of more than one hazard. Even if the damage is from a specific hazard, there may be influencing factors, such as temperature and relative humidity affecting the deposition rate of pollutants on objects. Taylor [2012] outlines a schematic example of relationships between hazards, based on the ten agents of deterioration (fig. 3).

Risk assessments present detailed overviews of these separate risks, spanning different collections. Condition assessments look at accumulated damage holistically from collection to collection. These approaches are complementary.

Data not Representative and/or Subjective Assessments

There are times when information may be recorded or interpreted differently in different contexts. This could be a problem with technical data gathered, or assessments being unreliable. Condition assessment cannot be assumed to be internally consistent and can be a large source of uncertainty [Taylor, 2013]. This has never been explored with risk assessments, but subjective judgements are required such as loss in value. Both assessments look at the impact of material change, which is not simply a percentage of material lost or altered. The ultimate aim of both assessments is related to the identified values of the collection, which are subjective, changeable, and inter-related.

There are occasions when certain kinds of data are not accessible – phenomena that are not monitored, or have not been monitored for sufficient time to make a sound prediction. English Heritage faced a problem when assessing some properties that had been newly accessioned. The collections were the main source of information because monitoring campaigns in begun shortly before the survey period. There are occasions where data is not available or accessible.

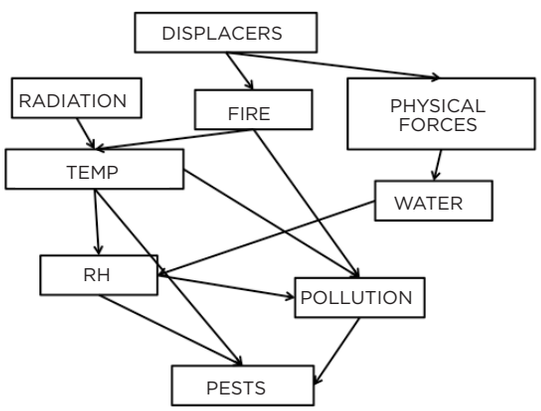

Fig. 3
A schematic of how some hazards, categorized into agents of deterioration, can affect one another – relationships that will be represented differently with different assessments [Taylor, 2012].

There are many things that can cause damage to an object, and not all of them are monitored in all locations. Consequently, presence of damage may be detected but risk related to the cause may be low.

There are also times when data may simply be erroneous. An uncalibrated or misplaced data sensor may provide data in the format desired and appear plausible. It is difficult to know without other kinds of data to compare.

Risk Mitigated

A discrepancy between condition and risk noted by English Heritage was that problems addressed in a first survey would not show damage in later surveys, due to successful mitigation. Although successful mitigation may imply that the risk should be reduced, risks such as pest infestations cannot be dismissed. High risk was a way of denoting training and resource needs, which were still required to maintain the level of successful mitigation.

Situations that have changed mean that temporal perspectives may relate to different matters. There may not be a risk in the present, but knowledge of pest levels in the past and the need for active management meant that past and future risks would not only differ from the present (and so, too, condition and risk assessments), but draw light on the situation.

Discovery Through Discrepancy

All of these examples show that discrepancy can reveal things about a collection that can help understand its needs. It is not limited to those examples, which are indications of broader themes. At the very least, analyzing discrepancies can help raise questions that can enlighten conservators and help them see more deeply into the situation and clarify data (be that risk or condition) which has inherent uncertainties, by using a different perspective.

Work in the field of cognitive psychology demonstrated that examining discrepancy can lead to high performance in reasoning tasks. Dunbar (1993) created a reasoning task based on a real world situation – experiments by the French biologists François Jacob, André Lwoff and Jacques Monod that contributed to their Nobel Prize in Medicine in 1965. Subjects examined those scientists' data – data that contained discrepancies and apparent contradictions. Attempting to explain them allowed subjects to uncover the insights that led to the discovery. The use of a complex, real-world problem meant that the approach was one that was able to acknowledge the nuances of the kinds of data and the kinds of reasoning involved. Up to that point, experimental work on reasoning tasks had shown a tendency to confirm hypotheses and biases towards initial beliefs (and a tendency to stick to those beliefs in the light of falsifying evidence).

In one study, subjects were presented with a task based upon a set of experiments that Jacob and Monod used to discover how genes are controlled. Using a simulated molecular genetics laboratory on a computer, they were taught some basic facts about molecular biology and experimental techniques. Following this brief training, they were asked to discover how genes were controlled by other genes. Some attempted to confirm their initial hypothesis, none of whom discovered the rule. Those that noticed evidence inconsistent with their current hypothesis set a new goal of attempting to explain the cause of the discrepant findings, and were successful in finding the rule. When asking subjects to test two mechanisms for control, one consistent and one inconsistent with their initial hypothesis, the success rate for rule discovery doubled. Dunbar's [1993] experiment revealed that deeper questioning and further, insightful analysis came from subjects trying to explain the *discrepancies* in data, rather than trying to test hypotheses or rules.

This real life simulation holds parallels for preventive conservation. When data are not certain, it is easy to confirm a compelling hypothesis. When viewing data, one can seek out patterns. Uncertain or ambiguous data, however, can support more than one explanation or pattern. Seeking to learn about causes by only studying effects, or about effects by only studying causes can lead to various practical limitations [Taylor, 2005, table 1]. The way a question is asked can have large consequences on the outcome.

Integrating risk assessments and condition surveys can highlight any disparity in preventive conservation data provides diagnostic opportunities. High RH, but no damage and physical damage where none was expected are real-life findings from integrated risk-condition assessments [Xavier-Rowe, 2017]. Having different kinds of data allows real-world inferences to be made, and deep questioning of the situation to be brought to the foreground.

Triangulation

Returning to the theme of maps, this integration echoes a long-established and effective way in which people have overcome uncertainty in their surrounding territory; by literally taking different perspectives of the same territory. An example is the use of watch towers for forest fires, where one tower might spot smoke but remain uncertain of the distance and of the extent of the problem [Taylor, 2018]. Calling a tower that sees the same territory from a different perspective allows the fire to be confirmed (or questioned) and its location pinpointed (fig. 4). This method has been used since Antiquity, and remains a practical approach to such problems.

In preventive conservation terms, it comes down to the inherent uncertainties in the representations we use. Using data to corroborate an explanation can lead to incorrect assumptions being validated by

ambiguous data. Eliminating possible explanations requires certainty if one is to avoid dismissing real causes. Examining causes to draw conclusions about effects places a burden on our theoretical understanding of deterioration that cannot be supported. Returning to table 1, the problems of using only one perspective, regardless of which one, come to the fore. Like the fire towers, these problems can be avoided by triangulating risk and condition to clarify. Identifying similar causes of damage amongst different materials can also help refine condition data and connect to risk assessment [Taylor, 2002]. Complex environments can benefit from embracing nuance and identifying uncertainty. Recognising the value of discrepancy in preventive conservation data is a step in this direction.

In Practice

An embodiment of this can be seen in the national collections audit of English Heritage which was actually designed to integrate risk assessment and collection condition assessment [Taylor, 2002, 2005]. During the audit, data from some storage areas in the same region showed similar discrepancies: a low risk score and a high damage score for relative humidity [Xavier-Rowe *et al.*, 2008]. This could be because objects were more sensitive than recommended levels, that the recorded damage was old, that there was a general error in the visual assessment of the collection or a number of other reasons, all of which would have different implications. By seeking to explain the discrepancy, it transpired that the RH data loggers were systematically recording RH as lower than it actually was. This could be examined efficiently because materials were documented as well as possible causes of damage [see Taylor, 2005]. As well as the monitors, different materials, with different damage processes, could be reviewed to check this. The finding led to improving the monitoring and calibration protocol as well as altering the risk assessment [Xavier-Rowe and Thickett, 2017]. Other risks had a degree of certainty, as both perspectives saw the same situation, be that the presence or absence of a risk.

Application of this approach has led to other benefits in practice. An advantage noted in a historic property where non-specialist trustees were involved in the assessment: that relating matters of risk and condition together made it easier to convey preventive conservation issues to non-specialists [Boersma, 2017]. Their knowledge was essential for the understanding of the values of the collections and the practices of the institution, and the final decision for priorities was theirs, but they needed to understand preventive conservation issues better before they could really engage with the process and use the information.

A problem in a storage area at the National Museum of Wales housing a mineral collection was addressed with a risk-condition survey [Baars, 2016]. By triangulating the data, it was possible to determine the kinds

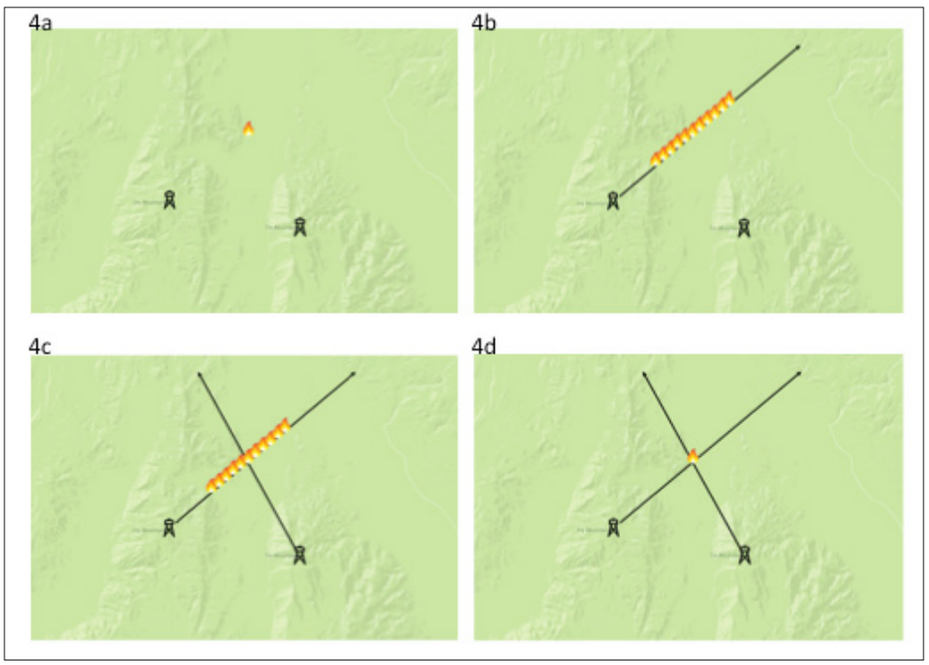

Fig. 4
A schematic overview of a simple-but-effective approach to managing forest fires using coordination between different towers with different perspectives [Taylor, 2018].

of causes that could have created the corrosion products observed during collection assessment, and through risk assessment it was possible to identify the kinds of collection items that were most vulnerable. Without triangulating the data, the survey would have required much more time and resources to identify the problem. Differences between collection types and knowledge of their deterioration provided a conclusion that could have eluded assessments with a single perspective.

Conclusion

What may appear to be an inconvenience or problem for preventive conservation can actually be a strategic advantage that increases depth of understanding at all levels.

This paper has used a map-based analogy to demonstrate the benefits of widening perspectives, but another way to look at this analogy is to consider the future prediction (risk) as the map – a representation of the things we should know going forward, and observed damage (condition) as the territory – a specific view of the actual land at a specific point in time. Navigating with only one can lead to misinterpretation or missed opportunities. Risk assessment can determine the theory of what objects are supposed to do, not what will happen. Condition assessment reveals the state, but not all the potential for change. If these assessments are independent of one another, used to clarify explanations of the other, there is an opportunity to find things that could not be found before.

Bibliography

Ashley-Smith J., *Risk Assessment for Object Conservation*, Oxford, UK, Butterworth-Heinemann, 1999.

Bars C., *Investigation into Damage to Multiple Mineral Species in a Museum Store*, Unpublished dissertation, Cardiff University, 2016.

Boersma F., Personal communication, Los Angeles, January 2017.

Borges J. L., 'Del rigor en la ciencia,' in *Historia universal de la infamia* (1954), 1946, pp. 131-132.

Covello V. T., Merkhofer, M.W., *Risk Assessment Methods: Approaches for Assessing Health and Environmental Risks*, Boston, Springer, 1993.

Dunbar K., 'Concept Discovery in a Scientific Domain,' in *Cognitive Science* 17(3), 1993, pp. 397-434.

Michalski S., 'The Ideal Climate, Risk Management, the ASHRAE Chapter, Proofed Fluctuations, and Towards a Full Risk Analysis Model,' in *Alternative Climate Controls for Historic Buildings*, 2009. http://www.getty.edu/conservation/our_projects/science/climate/paper_michalski.pdf.

Taylor J., 'Cause-Effect System,' in *Internal Memorandum as Employee at English Heritage*, 2002.

Taylor J., 'An Integrated Approach to Risk Assessments and Condition Surveys,' in *Journal of the American Institute for Conservation,* 44(2), 2005, pp. 127-141.

Taylor J., 'Distinguishing Between the Map and the Territory: Synergy in Agent-Based Approaches to Risk Assessment,' in *Collections: A Journal for Museums and Archives Professionals,* 8(4), 2012, pp. 297-306.

Taylor J., 2013, 'Causes and Extent of Variation in Collection Condition Survey Data,' in *Studies in Conservation,* 58(2), 2013, pp. 95-106.

Taylor J., 'In the Quest for Certainty: Tensions from Cause-and-Effect Deductions in Preventive Conservation,' in *Journal of the Institute of Conservation,* 41(1), 2018, pp. 16-31.

Waller R. R., 'Conservation Risk Assessment: a Strategy for Managing Resources for Preventive Conservation,' in *Studies in Conservation,* 39(sup2), 1994, pp. 12-16.

Waller R. R., *Cultural Property Risk Analysis Model: Development and Application to Preventive Conservation at the Canadian Museum of Nature*, Goteborg, Sweden, Acta Universitatis Gothoburgensis, 2003.

Xavier-Rowe A., Fry C., Stanley B., 'Power to Prioritize: Applying Risk and Condition Information to the Management of Dispersed Collections,' in *Studies in Conservation,* 53(sup1), 2008, pp. 186-191.

Xavier-Rowe A., Thickett D., *Personal Communication and English Heritage Risk-Condition Audit*, Teleconference, August 2017.

International symposium: "Preventive Conservation in Historic Houses and Palace Museums: Assessment Methodologies and Applications," auditorium of the Palace of Versailles. (© EPV/ Colombe Durel)

EPICO programme publications: *Assessment Methods and Preventive Conservation of the Collections of Historic Houses.* (© EPV/ Danilo Forleo)

Silvana Editoriale

Direction
Dario Cimorelli

Art Director
Giacomo Merli

Editorial Coordinator
Sergio Di Stefano

Copy Editor
Clia Menici

Layout
Letizia Abbate

Production Coordinator
Antonio Micelli

Editorial Assistant
Ondina Granato

Photo Editors
Alessandra Olivari, Silvia Sala

Press Office
Lidia Masolini, press@silvanaeditoriale.it

Cover
© EPV Thomas Garnier

Silvana Editoriale S.p.A.
via dei Lavoratori, 78
20092 Cinisello Balsamo, Milan
tel. 02 453 951 01
fax 02 453 951 51
www.silvanaeditoriale.it