

Reversibility: A Fragile Concept

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Reversibility has been described as one of the key defining concepts of the conservation profession, guiding the approach to physical intervention on objects of cultural value (fig. 1). The term first appeared in the field in the 1960s in response to years of unwarranted intervention that left many valuable objects permanently damaged, both structurally and aesthetically:

The conservator is guided by and endeavours to apply the “principle of reversibility” in his treatments. He should avoid the use of materials which may become so intractable that their future removal could endanger the physical safety of the object. He also should avoid the use of techniques the results of which cannot be undone if that should become desirable.¹

The use of quotation marks in the above definition may indicate, even at this early stage, a degree of discomfort with the concept of reversibility. And with reason; nothing done on the workshop bench is reversible, as experience with attempts to reverse earlier treatments clearly shows.² There is no such thing as a reversible adhesive or a reversible consolidant. No matter how resoluble an adhesive or a consolidant may be, removing it does not return an object to

its previous state. Any chemical and physical processes applied to artifacts, from mere handling to massive treatments, are irreversible from the point of view of thermodynamics alone.³ Gears are reversible, as are certain articles of clothing, but complex reactions between materials are not.

Conservators sometimes add nuances to their statements on the subject by referring to “degrees of reversibility,” or by identifying materials or techniques as “very reversible” or “somewhat reversible.” In doing so, however, they are bending the word to fit the concept, rather than employing more accurate vocabulary to begin with.⁴

In an attempt to better evaluate the types of interventions performed on objects of cultural value, conservators are increasingly adopting the terms “removable” and “retreatable.” “Removable” is used to describe original or added material that can, if necessary, be removed with the least damage to the object: for example, parts held in place by mechanical means alone (without adhesive). “Retreatable” is used to describe treatment that can be repeated if the problem for which the object has undergone treatment recurs; for example, the application of fungicides or a finish. Moreover, unlike “reversibility,” these terms can be used to identify degrees of intervention.

Reversibility, as understood within the conservation field, differs fundamentally from its basic defi-



Fig. 1
Irreversible French polish on a violin.

dition and appears to run contrary to the second law of thermodynamics. But as conservator and educator Friedemann Hellwig has argued, the *concept* of reversibility still provides an ideal to which conservators may aspire.⁵ Although complete reversibility is unattainable, and the word is therefore inaccurate, the concept is still useful in delimiting and guiding the degree and extent of permissible intervention.

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NOTES

- 1 International Institute for Conservation of Historic and Artistic Works – American Group, *The Murray Pease Report: Code of Ethics for Art Conservators* (New York: New York University, 1968), 63.
- 2 According to the *Oxford English Dictionary*, 2nd ed. (s.v. “reversibility”), when something is reversible, it is “capable of being reversed or of reversing” or “capable of going through a series of actions in either backward or forward.” Physical or chemical reversibility is described as follows: “Of a change or process: that is capable of removal, completely and in detail; strictly applicable to an ideal change in which the system is in equilibrium at all times.”
- 3 Astronomer Arthur Eddington noted, “If your theory is shown to be against the Second Law of Thermodynamics, I can give you no hope; there is nothing for it but to collapse in deepest humiliation.” *The Nature of the Physical World* (Cambridge: Cambridge University Press, 1928), 74.
- 4 In *The Graves of Academe* (Boston: Little, Brown, 1981) Richard Mitchell, one of the most thought-provoking modern commentators on the use of the English language, points out the danger in misusing words: “Many

of our supposed ‘ideas’ are in fact recitations, recitations not of what we think or understand but of what we simply believe that we believe. Thinking is done in language, and understanding, a result of thinking, is expressed in language, but, when we simply adopt and recite what has been expressed, we have committed neither thinking nor understanding” (28).

- 5 Friedemann Hellwig, “Reversibilität: Ein restauratorisches Ideal,” in *Der Restaurator heute: Beiträge zur Definition eines Berufes* (Bamberg: Arbeitsgemeinschaft des Technischen Museumspersonals, 1983), 25–7.