Article

Binding and aging

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Abstract
In many respects, we take the age of things for granted. Age is assumed to be an inherent quality, dictated by the time a thing has been in existence and put to use. Many of us have even developed an appreciation for the wear associated with age. The worn leather covers of old books, their mottled pages and the creases along their spines are all considered, in some circles at least, to be signs of age and thus value. This article examines such ideas of age through the practices of restoration bookbinding. First and foremost, it illustrates how age can be something produced through the interleaving of both social and material practices. Age is seen here not as an intangible, definite attribute. Rather, it is something actively worked on; it is co-produced through an ongoing relationship between materials, craftsmen and the world they work in. The article focuses, specifically, on the craft of restoration binding. From 200-year-old antique books to the most mundane paperbacks, restoration binding requires that manual skills and aesthetic sensitivity be distributed between the binders, the materials and tools of the trade. However, notions of age have changed over the years and these, we hope to show, are tightly interwoven with the social and material practices that make up restoration bookbinding.

Keywords
age, agency, bookbinding, craft, entanglements, material practice, restoration

Introduction

Set against the intellectual backdrop of Cambridge University, what was once an industrial district has recently become an 'Enterprise Centre'—a set of buildings split into smaller workshops and offices. The residing entrepreneurs include a bike mechanic, a graphic design studio, a letterpress workshop and the city's largest remaining restoration

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bookbindery. The bookbindery has a close relationship with many of the city's biblio-philes. Rare book collectors with sophisticated knowledge of a book's condition may call on the specialization of restorative skills, such as the reproduction of worn 're-backing' cloth or the gold tooling applied to leather-bound books. Less discriminating clients may simply hope to receive a solid bind: a cased doctoral dissertation, a repaired family Bible or a re-covered cookbook. Thus, as part of the range of services provided, restoration has been a core component of the bookbindery for some time (see Figure 1). Their routine work involves mending torn pages, replacing chords along a decayed spine or strength-ening the joint between the cover boards and text block, each essential constituents of the book. Also deeply ingrained in these practices is a sensitivity to the book's capacity for longevity and wear.

Sean is the founder, owner and operator of the bindery, and employs his long-time business partner, Peter. While Sean is a loquacious character, eager to chat with new customers or visitors, Peter is more reserved and disciplined in his interactions, attending to the task at hand and leaving most of the client relations to Sean (see Figure 2).

Figure 1. (left) Sewing around the chords on an 18th-century book; (right) the book after restoration. © Photographs Daniela K Rosner and Alex S Taylor.

Figure 2. (left to right) Sean hand-tools a title on a book spine; Peter and a student examine the mottled pages of old books sent to the binder for cleaning; the binders at work. © Photographs Daniela K Rosner and Alex S Taylor.

On the face of it, the different rhythms and routines in the workshop reveal a flexibility that is central to the binders' work. There is a notable pragmatism to how they approach each job, where they weigh up the kind of books to be restored, the specific requests from the customer, and the skills and materials they have at their disposal. Despite this flexibility, their restoration work equally entails certain social and material commitments. For instance, their work routinely involves tracing and at the same time redefining the age of the books they work with. The qualities of age, and its reproduction, persist as a feature of their work, so much so that it would be fair to say that the aging of books is one of their primary concerns.

With this as a backdrop, in this article we want to give specific attention to ideas of age and how such ideas are a key facet of restoration bookbinding. We examine this topic using fieldwork materials collected by one of the authors during three months as an apprentice bookbinder at Sean and Peter's workshop. It was early in this fieldwork that the preservation of age emerged as a central concern. In the preliminary assessment of a book, age was often treated as an unambiguous property. As something definite, it was used to estimate particular qualities of the book, such as value and authenticity. So a book's age would be determined by its publication year (if printed) and also the type of binding, and these in turn would have a bearing on its value and authenticity. As the binding work progressed, however, age was found to be far more fluid. Age was interwoven with material trajectories—both the physical traces of a book's past and the book's material transformations in the workshop. The consequences of aging had to be skillfully identified, manually separated and carefully repaired. A good deal of work involved restoring the visible and tactile qualities of age to maintain a book's value, but at the same time an effort was required to undo and then repair the results of aging.

The article's broad contribution is thus a critical engagement with this making of age in restoration bookbinding. It seeks to demonstrate that age is a complicated facet of the antiquarian book. In many respects, it is an integral part of the material practices of bookbinding—not so much static, but something actively crafted. This raises several themes and questions pertinent to those investigating material cultures. In terms of bookbinding, it details how particular materials and material practices are assembled to craft age. It also invites questions about the relationship between age and authenticity, and how such relations produce specific forms of value. As we shall see next, these topics have regularly been considered together, and yet there have been few, if any, thorough analyses of the material work involved with aging in this context. In more general terms, the article raises questions about how situated material practices such as the crafting of age might be examined with a consistent analytical frame. In closing, we suggest a notion of social and material, or sociomaterial, entanglements (Orlikowski, 2007), offering a position from which to begin investigating and describing these practices.

To add some context to our ideas on age, we will first review two broad themes: authenticity, and restoration and skill. We will show how both themes have been closely associated with aging. Briefly, however, we should say something about the analytical auspices of our work. By organizing this ethnographic inquiry through an apprenticeship, we use embodied subjectivity as a research instrument, 'theorizing not only what work means to people, but also what it does to them' (Prentice, 2008: 55). We recognize that an apprenticeship affords some very particular, even partial, ways of seeing and

knowing; such an engagement is unavoidably situated in a system of demonstration, tutorship, trial and error, skill acquisition, and more generally involves someone trying to get to grips with unfamiliar doings and organizational practices (Lave, 2011). It is these very qualities, though, that enable a 'nearsighted' (Ehn, 2011: 60) material engagement. They provide a means of seeing and feeling the ways that the 'properties of the medium shape practice and influence how the broader social world is organized' (O'Connor, 2009: 2). Indeed, the aims of apprenticeship are not only technical and aesthetic, but also social in nature (Herzfeld, 2007: 96). Moreover, studying practice and craftwork, in particular, is often not feasible without taking forms of apprenticeship into account (Grasseni, 2007: 206). Thus our aim in this article is not to fully characterize bookbinding nor to present generalizations of the trade; rather, in Sean and Peter's workshop we found a means to explore particular material skills and how they are connected to broader practices of aging.

Age and authenticity

According to conventional wisdom, age is a persistent feature of material. Attributes of material can be chemically or physically measured in order to assess a range of qualities, such as time and place of origin, authorship and techniques of production. Identifying age based on material conditions enables art historians to categorize chronologies and archeologists to describe points of origin. Age and authenticity, in this sense, are permanently bound to one another, conflated as essential qualities of a thing.

This position resonates with early Western ideas of antiquated artifacts. At the turn of the 19th century, ideas of originality and authenticity were entwined with age in the regulation of antiquities. Antique dealers began enforcing distinctions between old and new craftsmanship, refusing to acknowledge recently produced artifacts as 'original' (Attfield, 2000: 114). The prevailing romanticism reinforced this association and, with a heightened nostalgia for the past, deepened the implicative undertones of age's virtue and value. As the writer and art critic John Ruskin wrote of Holman Hunt's furniture, 'fatal newness; nothing there has old thoughts of home upon it' (quoted in Muthesius, 2003: 233). Thus, the material conditions of age, such as the 'patina' on a wooden cabinet, were at once seen as holding value and evoking emotional appeal, and understood as signs of authenticity of age either through the materials themselves or the markings inscribed on them—for instance, markings that cast one's mind back to bygone ways of using objects (p. 235).

These perceptions of age also arose alongside new craft practices, such as 'antique shading' and 'antique finish', craft treatments that provided the look rather than a 'genuine' connection to the past (Cescinsky in Attfield, 2000: 114). This purposeful aging served to complicate how authenticity was judged, but also reinforced the importance of genuine markings of age and signs of the authentic. Within the modern African tourist industry, for example, the anthropologist Christopher Steiner (1995) found that artificial aging enhanced desirability. This is no less true in the book trade, where binders have been trained to produce a look of age to increase value. However, these more open interpretations of age have played into the way lay versus expert judgments of authenticity are distinguished (Holtorf and Schadla-Hall, 1999). Even though it is recognized that

authenticity is to some extent a product of social and cultural influences, debates have turned on the legitimacy of claims to what is considered authentic. Naturally, it is the experts who are seen as the arbiters and their authority has to a large extent been due to their skills in accurately determining age.

Where attempts have been made to unravel the relationship between age and authenticity, the emphasis on the material has unsurprisingly been diminished. Examining the 'genuine' and 'authentic', theorizing in cultural heritage has found explanation in an essentialist paradigm. Walter Benjamin (1974[1968]: 221), for example, uses the term *aura* to characterize 'the essence of all that is transmissible from its beginning'.[1] The arts and music, in particular, have been the subject of similar treatment. Time, as Dee (2011) writes, has been stripped away from the material in art theory and criticism. Terms like 'pure' and 'timeless' are used to prioritize the transcendent quality of works of art—their 'anti-materialism'—and, at the same time, devalue contemporary objects and their quotidian passage through time. Here, then, authenticity is linked to qualia, rooted not in the material (or its persistence in and through time), but somehow separate from it and bound instead to some notion of pure or true art, music, etc.

These various rubrics of age and authenticity, and their (non-)relations to the material have, more recently, undergone renewed criticism. Although reappraisals have emerged from a range of scholarly traditions, they have broadly coalesced around a contemporary concern for practice (Schatzki et al., 2001; Shove et al., 2007). The implication, in this context, has been a refusal to take sides in the binary distinctions of old–new, material–immaterial, authentic–fake, etc. and to examine, instead, how these categories are practically produced or enacted. The anthropologist Christina Kreps (2003), for example, has argued that notions of authenticity are produced differently, based on the social norms and folk traditions within each culture. In her study of museum-like phenomena outside the West, she found that museum objects were not always precious or made to last through physical preservation. Rather, the objects were attributed cultural value through practice. Looking more specifically at age, the archeologist Rosemary Joyce (forthcoming) has examined the emergent character of aged material. She considers scholarly usage of *provenience* and *provenance*, related terms that specify an object's source of origin. In archeology, provenience designates the specific location in which an object is found whereas, in museology and art history, provenance is best understood as the chain of ownership or itinerary of an object, 'ideally beginning with the creation of the object' (p. 3). Joyce (2012) proposes the notion of 'object itineraries' for tracing the progress of things. A particular point of origin or intervention is not seen as occupying higher moral ground. Rather, age is seen as continually conditioned through time and use.

Much, though, remains underdeveloped in these discussions of age, and authenticity more generally. Questions persist, for instance, around what Brian Spooner (1986: 226) refers to as 'the evolving relationship between the search for personal authenticity inside and the search for authenticity in carefully selected things outside'. Or how, exactly, a book comes to be known as an 'honest book' (Sherman, 2008: 164). In a recent analysis, the archeologist Siân Jones (2010) invites an approach to such questions about the authentic or genuine by articulating a contrast between what she calls the 'materialistic' position (in which authenticity is inherent in an object) and the 'constructivist' perspective (in which authenticity is generated by culture). She suggests that

neither view provides an accurate understanding of authenticity; rather, authenticity is a network of people, places and objects through which relationships are mediated. It is this general turn towards practice and the invitation to understand age as something that materializes through restoration practices that this article takes as its starting point. Specifically, it turns its attention to the local and situated work of 'age-in-the-making'; it aims to 'follow the actors' (Latour, 1987) in Jones's networks and provide insights into how age and it relations to things such as authenticity are enacted, in practice.

Restoration and skill

Within the book trade, restoration and its history have been difficult to unravel, in no small part due to the intricate nature of their documentation and the ways in which restorative practices are often neglected as subjects of study (Benton, 2000: 163). Book restoration has involved everything from replacing a deteriorated sewing thread to 'cleaning' a mottled margin by washing, bleaching or trimming the page. Although it has been met with some ambivalence by modern authors (Sherman, 2008: 158), human intervention has been largely denigrated by book historians (e.g. characterizing the annotation of books as 'dubious methods'). Among book collectors, notes written in a book's margins (*marginalia*) were only viewed as an 'asset' in the book trade up until 1820 (Jackson quoted in Sherman, 2008: 164–165), but then became popular a century later as they were 'dignified by descriptions' (Slive, 2003 quoted in Sherman, 2008: 165). The ink, typography, page formats and all other 'textual phenomena' were seen as effecting the interpretation and value of the text—whether or not one was aware of this (McGann, 1991: 13–14). As the historian Bill Sherman (2008: 164–165) notes:

> What makes the decision of what to preserve, what to repair and what to discard so difficult is that the value of particular types of physical evidence is not always clear and is subject to change through time.

In order to interpret the traces of binding work and locate them in past practice, an understanding of particular craft skills is required.

Beyond the curatorial work of restoration, concerns for craft skill have resurfaced as part of a broader refiguring of leisure as a critical facet of everyday practice (Pantzar and Shove, 2005). Alongside the modern 'visionary' (Harper, 1987: 172) and 'imaginative' (Dant, 2010: 7) talents of car mechanics, scholars have observed the 'obsessive' diligence of motorcycle repairmen (Crawford, 2010) and the varied competences of DIY activities (Watson and Shove, 2005). These practices underscore a pride in workmanship and bricolage (drawn from Lévi-Strauss) that Sennett (2008), Crawford (2010) and others ultimately use to build a case for working with one's hands. They suggest such work offers a retreat from an increasingly 'rationalized' and management-driven workplace that inhibits pride in workmanship and accountability. Conventional office work is seen as contributing to fading skill acquisition and failed fantasies of mastery. Consumer electronics are viewed as black-boxing what was once instrumental to repair. In sum, there is a sense that craft skills are intricately connected with cultural change (Harper, 1987: 201).

More broadly, questions of cultural change situate skill as an emergent and fluctuating dimension of material culture. As Tim Ingold (2001: 21) suggests, embodied skill 'demands an ecological approach' through which we observe its *processional* character. According to Ingold (2006), this quality describes the ways in which relations develop as rhythmic, itinerant improvisations rather than prefigured, isolated events. Theorizing from an archeological perspective, Michael Schiffer (2001) emphasizes the traces of skilled production, such as the relations of compromise between the creators and users of objects. Shiffer's notion of *performance characteristics* (Schiffer, 2001: 172) captures the interactional qualities of an artifact that emerge through use and enable the archeologist, like the repairman, to understand the life history of things. Such marks of action work more to express 'a series of stories, than an attribute' (Ingold, 2006: 72) as they are brought into use through sensory corrections. In turn, these corrections cannot be described as a technique of the body and cannot be reduced to formula (Rubin, 1988, discussed in Ingold, 2001).

Taken together, there is still some ambiguity in how these formulations of skill figure in the relationship between authenticity and age in restoration. Deciding how something ought to be restored involves not only readjusting one's relationship to the tools and materials of production but also renegotiating the craft techniques themselves (see e.g. Figure 3). How valued qualities of the book are woven into the processional—the processes of improvisation and rhythmic responsiveness—is where our work begins.

Practices of restoration in hand bookbinding

To begin thinking about the work involved in dealing with age, we want to turn to an excerpt from the field notes where Peter demonstrates how to fray the cords that hold the spine of older books together.

> Three pieces of stiff, rough cord lie exposed on the spine. Each piece consists of tightly wound thinner cords plied together, themselves made of even finer threads. Peter grabs his paring knife and holds one end of the first chord between his thumb and forefinger. The knife—a thin steel bar—is sharpened on one side and wrapped with leather on the other. Peter nestles the end of the cord between the blade and the ball of his thumb, grasping the handle with his left fingers. The paring knife moves in short, even strokes across the cord. As it is worked, the crisp end of

Figure 3. Paring chords on an 18th-century dictionary. © Photographs Daniela K Rosner and Alex S Taylor.

the chord gradually loses its shape, turning flat, malleable, and increasingly thin. 'Feel the ends', he instructs, taking a moment to let me rub the material. The cord has a silky texture. Peter continues, then stops again to fold the end of the cord over the book's spine, pressing it flat against the bare cover board. The once tight, brittle form is now a delicate lock of thread. Peter hands me the knife: 'Your turn'.

It is through this process, as well as others like it, that we begin to see particular choices being made around age. It is clear that Peter is replicating the form of the 18th-century book by binding it with the thick cord. Eventually, this will result in three visible ridges or bands on the leather spine, a common feature of bound books from this time. There is also a tactile quality to Peter's work. The fraying of the edges is done so that the ends of the cords will provide a smooth seam at the 'joint' (where the spine meets the cover board) and not leave any visible impression on the book's front and back covers.

Of particular interest here is the extent to which restoration involves an attention to both visual and tactile details. The gradual work of the knife to create the silky texture and the repeated rubbing to test their thinness ensure that the ends of the cords are indiscernible to both the eye and touch once the binding is complete. Age is worked into the materials through the skilled application of the tools and the trained eye (and touch) of the craftsman, in this case Peter. Other matters are also at play, however. Under the surface, so to speak, Peter is also trying to build a sturdiness into the binding to increase its longevity. First, the chords are placed across the folds of each section of pages. As the sections are sewn together, the thread is woven around the chord. Much like the warp threads in a woven textile, the orthogonal placement of the chord secures the connections between the sections, constituting the core of the book's spine. In short, Peter has to balance a fine, almost fragile feel to the cords' ends against their resilience and sturdy attachment to the spine. Age is thus worked into the binding of the book as a way of preserving a certain historical form, but embedded in this is also the less visible work of preserving the book's utility.

Aging and the way it relates to the elements of construction is illustrated again in the next stage of binding: the preparation of leather for the spine. In the following example, Peter shows how to 'feather' the leather so that it is soft enough to be bound around the book's contours:

> Peter takes out a piece of leather and his paring knife. He folds over the leather and asks me to rub it. 'It changes the texture', he explains. I rub the leather and feel a tight surface. 'Feel the big step?' he asks. I rub the leather again more tightly. Nothing. No step, just the feeling of smooth leather between my fingers. 'There's a bump there', he says and starts on the leather with the knife, carving away at the edge. He tells me the aim of paring is to make the leather smooth and pliable so that it lies imperceptibly under the original leather and across the spine so that 'bands' show through. He demonstrates by placing the leather on the spine and showing how the leather moulds to the shape of the bands. He then pulls out a fresh piece of leather and asks me to rub it. It's stiff, thick and solid. The more I rub, the more pliable it becomes.

Peter is providing instructions for how to feel the leather being prepared. As well as asking for the leather to be folded and rubbed between the fingers, he guides the touch in the knife-work, encouraging a feel for the change in texture as the knife scrapes the leather's

surface (Figure 4). Again, what is sought after here is a visual and tactile uniformity—the leather is to be worked and 'feathered' so that it is pliable and the edges are barely detectable to touch and eye. The age of the book is preserved, as it were, by hiding the restoration work.

Crucially, it is the application of particular tools and ways of touching that measure the quality of the feathered leather and ultimately its capacity to blend with the book's existing elements. The feel of the paring knife against the leather, the folding and rubbing, the test of the leather around the banded spine and so on are assembled as a means of judgment. That is, one of the constituents of age in restoration, namely preserving a uniformity, is embedded in the materially bound practices; age is seen, felt and worked on through the use of the materials and tools.

There are also, so to speak, foreign agents brought to bear in this business of assembling age. The idiosyncratic qualities of a craftsperson's hands, his or her tools, and their application in the practical work of feathering cord, paring leather, etc. are implicated in the making of age. So too, however, are particular standardized instruments. Below, for instance, we find Sean choosing a typeface to reproduce a book's label:

> Sean picks up a graphite rubbing of the original spine and explains that the type is the first thing he looks at to date a book. 'Edinburgh, 12 point. Look in the lower right hand side', he instructs. Though the typeface is not Edinburgh, Sean has me retrieve the drawer of Edinburgh type. He says that this typeface is most appropriate for the book's age. With a biscuit in hand, Sean swiftly slides several metal pieces into the 'type holder' and tightens the clasp below. He then jumps onto the bottom ledge of the bench, raising his body a few inches off the group, and moves the type holder towards the board. He leans over the board so that he is looking at it from above. As he finishes his biscuit, he does not lift his eyes. Paying close attention to alignment, he slips a scrap of gold foil in between the type and board. He closes and releases the holder, producing a line of gold Edinburgh type.

Sean is employing a standardized albeit antiquated system for typesetting. Approaching this task, he takes into account two contingencies. He first has to find a typeface appropriate for the age of the 19th-century book (Figure 5a), and second he must translate what

Figure 4. (a) paring knife; (b) Peter pares leather for a book spine; and (c) attaches it to cover boards. © Photographs Daniela K Rosner and Alex S Taylor.

Figure 5. (a) metal type in type trace; (b) type holder and blocking machine; (c) comparing the label of the original spine with the newly printed spine label. This system requires the manual arrangement of cast metal 'blocks' from a typeface family in a 'type holder'. The holder is then secured to the blocking machine, aligned with the cloth, prepared with metal foil, and pressed into the cloth or leather. © Photographs Daniela K Rosner and Alex S Taylor.

he recognizes as the typography on the original[2] label to one of the three or so common typefaces he keeps in the workshop. His choice of Edinburgh, an Old Style typeface from the mid-19th century, reflects this. Having imprinted the first line of text onto the cloth, Sean removes the cloth from the blocking machine (Figure 5b) and compares it to the original spine, placing them side-by-side. The original is faded and distressed, rendering the letters just barely legible. Based on the discernible traces on the original book, Sean then rubs the newly imprinted letters with a piece of steel wool, clearing the letters of extra gold bits and distressing the shiny metal just slightly. Satisfied that the letters sufficiently reflect the age of the original book, he again uses the old spine to establish where he should vertically align the next line of type (Figure 5c). Moreover, Sean maps what he sees to what he has on hand in the workshop; there is a degree of pragmatism dictated by local contingencies.

As we further consider how Sean's work reflects conditions beyond the workshop, we find yet another system being applied to the judgments and production of age: referents to Western systems of dating. Sean could make typographic choices based on his knowledge of the binder or binders who initially assembled this book, or he could attend to the aesthetic preference of the owner who commissioned the binding. Instead he uses periodicity—and the annual interval, in particular—to help circumvent the problems of translation. In moving the book from then to now, Sean classifies the book with other books under the mantel of '19th-century binds'. It is by relying on his understanding of the 19th-century typographic tradition that Sean reproduces an enduring Western notion of age and, in doing so, establishes historical orientation and cultural stability.

We see, then, that even where external factors come into play and define standards of practice, the choices of how the book is aged are determined in part at least by the situation and the unfolding actions. Sean employs a good deal of judgment to 'preserve' the

age of the book and, crucially, he does so by attending to a specific set of the book's features—those he is sensitized to through his skill, the tools he has available and the agreed-on standards of bookbinding. The qualities of age, in this way, are not arbitrary, but entangled with the materials and embedded in the attendant practices.

In the next example, there are two further aspects of this crafting of age that appear equally consequential. First, as above, we see the influence of standardization on the selection of material, and, second, we find ad hoc devices that also participate in the binder's engagements with age.

> A small metal ring of cloth samples sits by Peter's in-tray. Each sample has a number on the back that corresponds to a large roll of cloth stacked nearby. Peter picks up the ring and spreads out the samples on the bench. He asks which color 'matches' the cover of the second of two volumes. I point to a brown cloth, which Peter flips past, choosing instead a bright red. The first volume has already been repaired with bright red cloth. The original cloth on the second cover is relatively faded: a reddish-brown tone, light and fleshy around the edges. He raises the red sample up to the book spine such that the new cloth sits on top of the original. Peter pauses for a moment and, without lifting his eyes from the sample, turns to find the matching role from nearby shelves.

Here, Peter uses a ring of different sample fabrics (Figure 6a) to find a suitable match for the aged leather cover of a book. This 'matching' entails removing the swatch samples from the ring and then the use of the eye to contrast the book's old cover with the supplier's color palette (Figure 6c). Thus, the samples and the ring not only enable a handy way of making comparisons that is far less cumbersome than using the large rolls of cloth (Figure 6b) but also provide a standardized referent for factory-specific colors, one that shapes how the binder sees the original book cover's color. In effect, the binder enlists particular devices in making judgments and then reproducing age.

So far we have seen that Peter and Sean bring their hands, tools, materials and skilled know-how to bear in the restoration of their books, and in doing so appear to apply a rather consistent notion of age. Although they may choose to emphasize one feature over another in any one binding job, they employ a broadly unified notion of the qualities of a book that can be worked to reproduce age. Indeed, it would be fair to argue that this is

Figure 6. (a) ring of cloth samples; (b) Sean and Peter next to cloth rack; (c) binders compare old and new cover cloths. © Photographs Daniela K Rosner and Alex S Taylor.

one of the skills of their trade and what distinguishes their work from other bookbinders. However, attending to the work's final product   the book   we are reminded that there can be significant variability in how the restoration of age is understood and, perhaps more importantly, how restoration can amount to fundamentally different ideas of age.

Exemplifying this are the reflections of one of Sean's former customers. The customer had taken two books to Sean and asked that each be repaired, but one with more care than the other:

> Varnaz shows me the first of two books he had Sean and Peter repair. He tells me the cover boards are noticeably warped and shakes his head in disapproval. These are the original boards. I can also see the spine has been re-sewn but most other materials (covers, end pages, fly leaves) have been left intact. He pulls out the second book. 'This book had already been with me for about 20 years', he says and opens the book to his favorite piece. He observes that the page is naturally bookmarked by the creases along the spine and the mottling on the page reveals its heavy use. 'I don't know how he fixed the corner here', he says with awe, pointing to a new piece of board and cover clothes. This second book is repaired similarly to the first: re-sewn and only partially re-covered. He then asks that I smell the books, describing the first as 'stale' and the second as 'sweet'.

As Varnaz's experience illustrates, not all customers are satisfied with the binders' work—at least in part because not all books are the same. Varnaz's first book, which documented the life of a distant ancestor, was a relatively rare 18th-century text that Varnaz bought from an online retailer. He had never read the book (though he hoped to read it someday) and had little attachment to its physical form. The second book was a common machine-bound book that contained musical scores from which Varnaz learned to play the piano. The book's distinctive scent, which he called 'sweet' as he took in the smell, reminded him of the many years he used the book to play piano. The library label on the inside of the front cover disclosed the book's origins: a school library book that Varnaz stole when he was 13. Not only had the book endured everyday use (Varnaz continued to play from the book daily), but it represented and embodied meaningful facets of his past. While this book was theoretically easy to find (copies can be bought online), in actuality it was difficult—indeed, impossible—to find again.

It is in Varnaz's comment about the quality of Sean's repair that we see multiple notions of age. Unaware of Varnaz's relationship to these texts, Sean treated both books the same: he preserved as much of the deteriorating material as possible and, in doing so, retained likeness and contagion (Taussig, 1993) with the original book. Varnaz, by contrast, expected Sean to prolong the readability of the first book and extend the emotional appeal of the second—preserving the materially embedded nature of his memory and personal history. Varnaz's relationship to the books challenged the appropriateness of Sean's binding choices. Preserving the original covers meant something different for Sean than for Varnaz, just as aging materialized differently for both books.

The entanglements of age

The binding practices in Sean and Peter's workshop raise several key issues for our understanding of book restoration and age. First, we see that ideas of age are crafted with

the book. Age is not solely connected to the passage of time; rather, it also emerges through use and intervention. Further, we find this crafting of age a key element in restoring a book; skill is applied to the process of aging, balancing time-honored technique with visual and tactile sensitivity. Next, we see the skill involved in producing age even with the application of standardized tools and materials. Industrially produced metal types and colored book cloths do not dictate material outcomes alone. Rather, these material resources are skillfully selected, employed and further manipulated through arrangement, agitation and staining. We also see that these forms of aging are not just a matter of reproducing the visual and tactile sensation of wear. There is also an anticipation of how the book will continue to perform as a readable text, as an evocative object and as an embodiment of past and future object practices. Lastly, we find that only certain notions of age are being attended to in these processes—that in the making of age, material choices entail certain commitments to authenticity while resisting others.

While notions of age have long been of interest to scholars of material culture, the perspective we present invites what seem to us to be some unaddressed yet important questions. One broad question is in what ways should age, and its crafting, be seen as an empirical concern vis-à-vis material and, for that matter, social practice? Also, what matters should be investigated to better understand the material making of age? And how, exactly, might an examination of age in these terms offer a more thorough understanding of underdeveloped concepts like the authenticity of antiquarian books? In closing, we want to elaborate on how the work described here offers a starting point for accommodating such questions. Moving beyond a view of cultural production as either a social endeavour on the one hand or a material one on the other, we want to suggest our work presents aging as something *relationally enacted* (Law, 2008). That is, it offers a way to examine the ongoing and mutually constitutive roles of both the material and social in the production of age. Not unlike Ingold's (2006) description of sawing a plank of wood, such an understanding of age is seen as something that comes into being through the unfolding use of materials and tools, and the ways these uses are interwoven with know-how and the specific situational demands faced. Thus, in the remainder of this article, our aim is to draw out the ways that our work offers a frame that resists ideas of aging as separate from human enterprise and materially bound practices, and instead treats it as actively produced and surfacing contingencies between skills, tools, materials, preferences and competencies—echoing Ingold's *processional quality* of tooling.[3]

To further ground what we see as our contribution, let us return one last time to the bindery. In this final example, we find Peter attempting to match a book's new blue leather cover with the original (Figure 7).

> Peter dabs the new cover for a book with brown stain. He moves the cotton across each side of the book in a quick horizontal motion. He waits for it to seal and then rubs another cotton ball full of an ammonia-based cream to clean off the stain. The result is an uneven blue. The stain darkens rather than coats the cover. The layers of stain create a similar effect to the layers of age on the original.

Here, deciding on a color is a process of careful layering rather than blithe judgment. Looking between old and new covers, Peter inspects traces of the 'original' and

Figure 7. (a) Peter rubs stain on a book cover; (b) old and newly stained books; (c) Peter rubs methylated spirits to remove stains; (d) newly 'aged' book. © Photographs Daniela K Rosner and Alex S Taylor.

familiarizes himself with their color, texture and tone and then works on the new leather. The characteristics of age are not the only material of relevance, however. Again, at issue is how these characteristics will age in years to come. Through iterative assessment, Peter attempts to work the leather in such a way that will both simulate the current age of the book as well as its future aging.

> With this future in mind, Peter grabs a small rounded brush and a container of Kucel G with 20% industrial methylated spirits. 'It holds [the book] in suspension and doesn't stain leather', he says. Peter dips the brush into the liquid and applies it to the inside corners of the front cover. With two strokes the corners are dampened, darkening in color.

This example shows age coming into being through the progressive stages of staining and sealing. Notably, neither Peter nor the brushes or stains ascribe a pre-determined age to the book's cover. Despite being used hundreds if not thousands of times for the same purpose, the tools are reapplied for the job at hand, in each and every case. The age does not precede the process; it is embedded in it, bound up with each element being brought to bear in aging the blue cover. Age is enacted, if you will, through the shifting relations—the 'intra-action' (Barad, 2007)—between Peter's hands, the brushes, the stain, the methylated spirits and, of course, the book itself. Moreover, there are the broader conditions in which this vignette is situated: the social and material organization of the workshop, the collection this individual book is part of, the client, and so on.

Also apparent, again, are the necessary engagements with wear. Peter identifies the wear, or traces of use, placed on the book due to the exposure of light. While re-working the cover, however, his energies are not directed towards reproducing the color of the book as it is. The restoration, instead, is designed to match an aging color corresponding to its original shade of blue (found on the inside cover). Peter removes the look of wear (traces of use) and reproduces the look of decay (traces of time). In doing so, he erases particular practices and preserves others. Moreover, Peter applies his trained eye to the future, imagining how the new cover will conform to the wear one would expect of an old book. We thus find the traces of time and use—decay and wear—to be qualities that are repeatedly present in the making of age. They are, as a matter of course, worked with and on in the material production of the book's age.

Age, then, in Peter's skilled work is not a prefigured quality of a material, something specifiable to be reproduced through restoration. Rather, aging, played out partly in the tensions between decay and wear, emerges through 'sociomaterial entanglements' (Orlikowski, 2007), entanglements between binder and tools, customer and materials and, eventually, book and customer. Through this understanding, the features of age might be best characterized not by their substance or form, but by the 'outcome of their interconnections' (Whitehead, 1933, in Brown and Duguid, 1994: 7). In short, age and the processes of aging a book reside at the ever-shifting interface of human, tool and practice.

The broad point we wish to make in closing is that, by attending to the entanglements, the enacted relations of 'human and material agency', we find a means of interrogating the making of age. To further unpack this, we believe two aspects of such a perspective offer help. First, age is found not to be something objectively determined by the enduring features of a material or using a standardized system of measurement; nor for that matter is it a product achieved and settled on by human work and skill. Rather, age is understood to be a quality-in-action, entangled in particular trajectories of handwork, tool use, know-how, skill, standards and, more generally, practice; integral to these ongoing processes are social and material relations that shift qualities such as decay and use either into or out of focus. Second, the perspective avoids the simple bifurcation of the social and the material (Suchman, 2007). A material's age, and specifically an antiquarian book's age, is seen as subject to unfolding tensions and contingencies. This suggests that no special emphasis be given to the material, on the one hand, or the social, on the other, and instead an empirical engagement promoted that recognizes the importance of the ever-shifting relations.

Conclusion

We have aimed in this article to demonstrate how hand and tool work in book restoration are entwined with ideas of age. Our perspective has foregrounded the lively entanglements between binder and book, material and tool, binding and text, and revealed them to be basic constituents of book restoration. As we have said, this avoids enforcing a separation between the social and material features of restoration, and also the privileging of one over the other. Instead, the qualities of the bound book—qualities such as age—are treated as emergent or enacted through ongoing relations; the unit of analysis is the sociomaterial, the intermingling between human, material and practice. Orlikowski (2007: 1438) expresses this, cogently:

> We have tended to speak of humans and technology as mutually shaping each other, recognizing that each is changed by its interaction with the other, but maintaining, nevertheless, their ontological separation. In contrast, the notion of constitutive entanglement presumes that there are no independently existing entities with inherent characteristics (Barad, 2003: 816). Humans are constituted through relations of materiality—bodies, clothes, food, devices, tools, which, in turn, are produced through human practices. The distinction of humans and artifacts, on this view, is analytical only; these entities relationally entail or enact each other in practice.

As we leave the binding workshop, we hope to offer a useful orientation for reconsidering qualities such as authenticity and the book. For instance, what counts as authentic

is thrown into doubt when we consider that age is worked into an antiquarian book. If particular aspects of a book's age can be purposefully ignored, actively preserved, repaired with the future in mind and so on, then what, exactly, should be identified as valued or authentic? Is it the book itself, the material, the workmanship, or some combined configuration of each? The likelihood is that, as with age, authenticity is a crafted quality assembled and continually shifting through a network of relations, much as Jones (2010) suggests. The insights into age developed here, however, serve to expand this still further. We begin to see in concrete terms how ideas like authenticity can unravel.

We find an equally important set of questions being raised about the development of craft skills. Encountering the book through its material history—handling the traces of time and wear on and in the book—the binders find themselves curating what has been left behind. Yet this curation can entail several forms of generative work. They can choose to restore the book as if it was first bound (e.g. with 18th-century techniques and materials), as if it was fist bound and left to age (e.g., an 18th-century book left on a shelf for 200 years), or as if it was bound and worn through use (e.g. an 18th-century book used for 200 years). Approaching the book as an opportunity (and responsibility) for modern intervention, the binder's work involves the continual readjustment, arrangement and displacement of old and anticipated material elements (see e.g. Figure 8). If the quality of workmanship is based on fluid histories and 'prophesies', how is (social) value assigned? How can it be attributed to one type of material or skill? More centrally, how can the tacit knowledge of restoration be separated from the social conditions in which it unfolds? It seems the antiquarian status of the book develops as part of balancing ideas of age, as understood through the book's symbolic form, and aging, as understood through the assembly of social and material conditions over time.

Figure 8. Re-sewn 18th-century book prepared for 're-backing'. © Photograph Daniela K Rosner and Alex S Taylor.

Finally, we cannot avoid turning to the contents of books. Just as designers tend to discuss a product's intended meaning or function separately from its aesthetics or form, so do book scholars treat the text as *content* separate from its *container*, the printed page (Price et al., 1996). Such distinctions between form and function, content and container, immaterial and material, echo longstanding debates about mind versus matter (Lyotard, 1988) and the 'dualistic assumptions' they entail for the book, in particular (Duguid, 1996: 78). Returning to the sociomaterial entanglements with restoration, yet more evidence arises for the problems of such separations and binaries. Value is assigned to original sources, for they are where the content originated but, as we have seen, original or authentic here are in a state of flux; value and authenticity are entangled in bookbinding practice, in the handwork and material skill of the craftsman, and bound to the crafting of age. It is through these assemblies and reassemblies that we find a diversity of binding practices that trouble and extend the codex. Though much has been made—theoretically and practically—of the interaction between books and the text they hold, this study of aging suggests that we revisit these practices, and their evolving entanglements, as they extend into the modern world.

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Notes

1. Also see Adorno's (2003: 6) views on the 'jargon' of authenticity, which he uses to critique Heidegger.
2. Foucault (1977) similarly problematizes the status of the author and the author's individuality to identify the 'author function'—how authorship is produced as a 'mode of existence, circulation, and functioning of discourses within a society' (p. 228). By suggesting that different kinds of discourse entail different commitments and relations to the author, he acknowledges the recent invention of authorship as coupled with claims to originality and legal authority. While physical evidence of originality has remained of interest to a range of scholars, from archeologists to historians, considerations of authorship have been a pervasive but under-theorized topic among studies of material culture. Here the book is taken as *original* in relation to the binder's interactions with it, heeding Foucault's warning against an assumed 'orginator' and the role of the 'author function' (p. 299).
3. This has close ties with the discussion of Shove et al. (2005: 1) about value.

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