GOTHIC IVORY SCULPTURE
CONTENT AND CONTEXT

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Gothic Ivory Sculpture: Content and Context
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Detail of Fig. 10.1,
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EPILOGUE
TOUCHING IVORY ONLINE
JACK HARTNELL

The collections of the British Museum contain a small ivory plaque (Inv. 1888,1217.1 [Dalton 363]), a writing tablet from fourteenth-century France (fig. 10.1). Measuring only five by eight centimetres it is tiny, small enough to fit neatly into the palm of your hand. This is significant.

In it, a collection of men and women are tightly framed by three architectural niches to the top; some stand, one is seated, another kneels on the floor. The scene depicted is not immediately recognisable, but these courtly figures are playing a game known in the Middle Ages as La Main Chaude [The Hot Hand] or sometimes Haute Coquille [Hot Cockles].

Its affectionate and jaunty name masks a rather less tender pastime. We can glean the game’s outline from several extant ivory depictions like the British Museum plaque—others in Lyon (Musée des Beaux-Arts, Inv. D716), Ravenna (Museo Nazionale di Ravenna, Inv. n. 1092), Paris (Musée du Louvre, Inv. OA 2762), and Princeton (Princeton University Art Museum, Inv. 1996-153)—as well as some manuscript depictions (fig. 10.2). To play, someone is first blindfolded. In the case of the British Museum plaque, a young man appears to have been chosen and he kneels on the floor at the centre of the action, his head placed inside the folds of a seated woman’s skirt. Despite the piece’s small size his outline is still delicately rendered, ghostly beneath the cloth, as is the silhouette of his hand creeping up the woman’s left thigh. The game continues with the blindfolded victim being spanked. The act is not shown directly here, but rather premeditated in the pose of the raised right hands of two women standing to the ivory’s left. The hands are striking, both literally in their flat slapping swing and figuratively in their exaggerated size and repetitious, echoing forms; repetitious just like their left hands which hitch up the folds of their gowns, mimicking each other’s grabbing motion and also, perhaps, motions going on underneath the dress. Lastly, the game follows, if the blindfolded individual can successfully identify his or her slapper by touch alone they are rewarded by stealing a kiss, as depicted at the ivory’s top right.

On the Mississippi you can take a six-hour trip on a paddle-steamer, obviously fake, constructed according to the latest mechanical criteria, but it still transports you along wild shores inhabited by alligators…

— Umberto Eco, Faith in Fakes

Hands—les mains de la ‘Main Chaude’—are everywhere in this piece: they slap, pat, hitch, point, grope, caress, spank. And the more we look, the more of them we see. The woman whose skirt the man is under rests her left hand on his head, her right at the same time pointing with a strangely elongated finger upward to the assembled crowd. The bearded figure in the lower left, who presumably is up next (or should that be under next), seems to be using his hands to part the crowd, edging his way between the women with
flattened palms. Even the woman to the far left, a figure so peripheral as to not even be granted a whole body within the bounds of the plaque, is still given a large flapping hand tucked inside the ivory’s centre-left frame.

Placed in the palm of the hand, as the object of a writing tablet would often have been, these tactile details resonate. With depicted hands fanning out left and right, the ivory could be said to represent the sense of touch in action amongst its figures. But as well as proudly depicting actual tactility, there are other more complex ways in which a carving like this courts and complicates manipulable sensation, not just in its historical past but in its digital present and replicant future.

Studies of medieval manuscripts have, in a sense, been here already. Take the words of Michael Camille in 1998:

"The future direction of any major manuscript repository such as the British Library is not in anything so bound as the book as it is in cyberspace. Already Portico, the World Wide Web server, offers Internet users all over the globe the chance to see hundreds of images from the British Library collections… Graphical user interface designs will make thousands of previously unavailable manuscript pages available in the home."

Writing in ‘Sensations of the Page: Imaging Technologies and Medieval Illuminated Manuscripts’, Camille observes the inevitable fact that in the digital age to come, medieval
images and knowledge of the medieval would soon be more widely accessible than ever before in human history. This article was not his first discussion of the fate of medieval artworks in the modern age. Eight years earlier in 1990, *Critical Inquiry* had published his now well-known examination of the facsimile history of the *Très Riches Heures de Jean Duc du Berry*, a Benjaminian consideration of the various mechanical copies of the manuscript, replicated many times and in various contexts since its re-discovery in the late nineteenth century. In surveying this century-long process of repetition and abstraction, Camille charted the dramatic rise in images of the manuscript and the simultaneous, equally dramatic fall of the manuscript itself, confined to a safe room in the Musée Condé at Chantilly, then (as now) almost totally restricted from view. Sheltered from touch, the book is quite literally out of our hands.

An understanding of the problems wrought by repetition and dissemination, from parchment to Portico, runs through both of Camille’s pieces, as does a concern for the sense of touch. Taken together, the two articles represent the view that touch is vital to both fact and fiction. Vital to fact, because of the sensation’s fundamental importance in understanding the details of object cultures, manuscript culture in Camille’s case. He voices a familiar call, even in the 1980s and 90s, for an increased consideration of the tactile experience of manuscripts that has returned to the fore recently in the so-called ‘Material Turn’. But vital to fiction, too, because of touch’s capacity to expose material fantasies and truth. In facsimiles, like that of the *Très Riches Heures*, we see the original in every detail—colour, line, form, even the binding or outline of the page—and sometimes quite convincingly so, but it is our fingers that give it all away. In Camille’s words: ‘Like Zeuxis’ birds pecking at illusory grapes, we are struck by the false appearance only when we touch’. His writing is typical of any scholar considering a new-tech zeitgeist, coupling both anxiety and excitement. The digital leap represented by things like Portico or its successor, the British Library’s ‘Turning The Pages’ (somewhat sinisterly marketed simultaneously as key to the nation’s heritage and a hugely profitable hi-tech product), represents a clear step forward in terms of access and—the potential for understanding. But such a leap forward is also, advertently or by coincidence, a reference back to a previous medieval age. The digital humanities are an interesting futurespective echo of the corporeal and sensation-based world of medieval scholastic making, of manuscripts in particular, replaying online similar ideas of cutting, pasting, copying, and dissemination across borders and tongues. The process of viewing books on a screen, from medieval manuscripts to *Courtauld Books Online*, simultaneously rejects and courts the medieval literary field’s sensory, corporeal roots.

These ideas need not only be discussed in terms of a manuscript trend. Notions of digitisation and dissemination, of touch and gloss, of realism and fiction, of gain and loss, are in many ways just as relevant to the discussion of the three-dimensional, especially since the advent of the digital corpus that is the *Gothic Ivories Project*. As a resource, the project provides unparalleled access to objects across continents, with medieval ivories
available to infinitely more scholars, researchers, and members of an interested public than ever before. We might be tempted to see an uncanny continuation between historic and modern practices, ivories slung around the globe not on the trade routes of the medieval past, but on the information superhighway. But ivory is not the same as parchment, and nor is 2015 the same as the 1990s. We can now go deeper both into tactility and technology.

The medieval concept of touch is difficult to get to grips with. Recent studies of the sense by Christopher Woolgar and others have brought out many of its inherent problems and contradictions. On the one hand, we know touch was thought of as the basest of senses in the Middle Ages, as is often seen in its representation at the bottom of the sensory pile beneath other tangible senses like taste or smell, and well below the more ethereal, mystical sensations of vision and sound (fig. 10.3). Yet on the other hand, touch, through its immediacy, was also privileged. Unlike scent, sound, or sight, touch was a sturdy and hard-headed sense that gave direct and definitive contact with the world.
around you. It could be at once medical and magical, asserting the authority of the
itinerant physician diagnosing the sick as much as the royal ruler dispelling scrofulous
misfortune through digital divine right. Moreover, in some ways touch was thought the
most vital of all the senses, for despite its lower sensory ranking medieval scholars contin-
ued to acknowledge Aristotle’s claim that touch was the one sense necessary for life: that is
to say, an organism might exist without its other senses—might be deaf, dumb, blind—but
without any sense of touch it is lifeless.8

Touch, in short, is tough. And touch in relation to ivory is perhaps even tougher, not
least because its specifics are still being debated.9 Like the dirty corners of manuscripts,
some ivory objects show clear signs of wear by touch, their details buffed and bleached
by the hands of their owners at various points, something particularly present on the
much-held handles of knives (Historisches Museum Basel, Inv. 1928.837) or much-kissed
curved ivory paxes (Suermondt-Ludwig-Museum, Inv. KK 875). Whilst it is unclear to
what extent other more substantial objects were actually touched, especially religious
statuettes of the Virgin and Child or ivory crucifixes, the surface of ivory was clearly an
important thing for the medieval audience. This was not just in its visual materiality, its
skin-like translucence commonly evoking associations with whiteness and purity, but also
in its more literal sensation. Medieval scholars drew on Pliny the Elder’s designation of
elephants as cold-blooded and moral beasts to evolve a relationship between chastity and
ivory’s temperature, its literal coolness to the touch.10

Is all of this medieval tactile importance and inference lost online? Unlike ‘Turning
the Pages’, where at least a vague acknowledgement of the tactile process of turning a
manuscript page is given by the three-dimensional rendering of the page’s corner being
thumbed up before being flipped over, the Gothic Ivories Project does not seek to render
ivory in three-dimensions. One can move it, zoom it, spin it (fig. 10.4, video), but anything
approaching the actual tactile three-dimensionality of the real ivory is largely lost on a
flat computer screen.

Technology has, however, come some way since the advent of ‘Turning the Pages’.
Digital times have shifted the senses and, in some ways, occluded them. Historians, an-
thropologists, and sociologists have all suggested something of a sensory loss in the ex-
istence of modernity and post-modernity, often affirming the primacy of the visual at the
expense of much else, sensorially speaking.11 This is nowhere clearer than in the early digi-
tal realm—up to around 2005—where we see constantly attested what Camille termed an
ocular-oriented ‘perceptualist fallacy’: looking at the screen, its icons, and its image, was
paramount.12 But in the technology of the last decade or so, touch has interestingly made
up some of this ground. Whilst our eyes might strain to see ever-smaller screens on our
ever-smaller phones, tactility has come to the fore of contemporary digital design in the
form of wearable and touchable tech. We can now sensorially engage with bio-sensitive
watches, interactive body systems like clap-on lights or gesture respondent home cin-
ema, and most obviously the jump-start of this tactile trend, Apple’s 2007 first generation
Video. An image of the British Museum carving on the Gothic Ivories Project. Viewed and manipulated on an iPad.

If you are experiencing problems viewing this video, please click on the figure reference number to navigate to the Courtauld Books Online channel.
iPhone. As affirmed by the even more recent and even more meteoric rise of the tablet market, the touch-screen is a technology that many now take for granted in their bags and pockets. Even ‘History’ itself is not immune from this tactile immediacy, or at least history as represented in popular culture. At the time of writing, the trend for TV historians is not to be shot à la Simon Schama, pacing endlessly through fields whilst delivering to camera, but sitting instead on location and flicking through historical documents and images on iPads, endowing the viewer with the digital benefits newly at their fingertips (fig. 10.5).

If one loads up the Gothic Ivories Project website on iPads or iPhones, today’s observer too can bring this sense of tactility to viewing objects. With a swipe or twist of the fingers we can manipulate ivory sculpture, at least in two dimensions; we can even scrawl on the back of the British Museum Hot Cockles tablet, as was originally intended, albeit not with a stylus into set wax but our fingers on the pixelated page (fig. 10.6, video). And like Camille’s vaunting of Portico as a pseudo-medieval practice, viewing ivories online also engages with notions of looking inherited from the Middle Ages. Compartmental framing, for example, is a mode of presenting images that has been utilised by both medieval ivory carvers and today’s designers of the multi-windowed online experience. On the Project’s website, one can even combine the square-framed form of some ivory diptychs with the similarly-sized, convenient windows of the site’s zoomable viewer to rearrange a fictional, digital order in the blocky squares of the original object (fig. 10.7).
Video. An image of the British Museum carving on the Gothic Ivories Project. Viewed and manipulated on an iPad.

If you are experiencing problems viewing this video, please click on the figure reference number to navigate to the Courtauld Books Online channel.
The technology also exists for a more complex three-dimensional, tactile experience. Stemming from research carried out at the University of Washington, in 2006 Microsoft launched a now-defunct online platform, Photosynth, which uses a compositing technique known as photogrammetry to layer batches of photographs drawn from large-scale...
historic repositories or crowd-sourced from online sites like Flickr. Using multiple images of the same object taken from a number of angles, the tool built three-dimensional reconstructions of spaces and objects as diverse as Cologne Cathedral, Barack Obama’s 2009 presidential inauguration, or an ivory task from Benin now in the Minneapolis Institute of Arts. More complex enterprises exist in a similar vein too, like CENOBIUM—an online project documenting the capitals of Sicily’s Byzantine cathedral cloisters—which uses detailed photographs to produce online models that can be browsed in three dimensions. The capitals can even be viewed in varied lighting conditions, the computer cursor recast as a sort of lit candle wielded digitally by the viewer (fig. 10.8, video). But this, of course, brings us back again to Zeuxis and his birds. For whilst in these developments of the online world we are provided with the impression of touch, or at least manipulation of light via touch, the actual touch itself instantly belies any fiction the image on screen might muster. If anything, whilst the hi-res detail here is more convincing than ever as a representation of the ivory, the flat, un-contoured object of a computer or tablet screen is itself further away from the original ivory than even an expensive facsimile is from an illuminated manuscript, which at least preserves the size and form of the object it images.

Not, of course, that ivories are beyond more literal facsimile. In the winding, crypt-like basement of the Courtauld’s Conway Library, just meters away from the former office of the Gothic Ivories Project, are two cases stuffed with ivory casts of all shapes and sizes (fig. 10.9). Created as part of that great Victorian penchant for didactic dissemination, these Plaster of Paris replicas of some of the world’s greatest ivory collections represent a distinctly haptic dimension of the nineteenth-century copying ethic. Such remnants still largely languish in the basements of institutions like the Bargello or the Louvre, although historians have been turning to consider their historical relevance for some time. On a more quotidian level too, one only needs enter any major museum shop to find convenient copies of ivories from museum collections. In the British Museum, for example, punters can acquire a plastic copy of a casket lid duplicated from an original in the Castle Museum at Boulogne-sur-Mer (Inv. 408), the ivory conveniently counterfeited for display on your mantelpiece at a mere £90 (fig. 10.10). And of course the professional forgeries and fakes made of medieval ivories, particularly those infamously created for the nineteenth-century Parisian market, continue to affect the content and very nature of Gothic ivory scholarship. Their impact is as significant as it is troubling, enticing the discourse into a typically
academic obsession with authentication and the debate of ‘true’ originals at the expense of other more inventive routes of study.

All of these forms of facsimile—the educational, the intellectual, and the commercial—attest to an urge to make ivory graspable and own-able, if not necessarily in total veristic likeness then at least in three-dimensional shape and weight. Whilst vital resources like the Gothic Ivories Project clearly do not aim at a cast-court notion of spreading knowledge via literal replication, evolving technology might in fact mean that this is one way such online repositories could be used in the future.

CES, the Consumer Electronics Show, is an enormous event held annually in Las Vegas and a veritable Jerusalem for today’s global tech pilgrims. It is there that the latest in future technologies are unveiled to the world, from curved HDTVs and window-cleaning robots, to hybrid cars and digital kitchenware. 2014, critics agreed, was the year of a new kid on the block: the 3D printer. Much vaunted in the media ever since, news that we
might one day be able to use such technology in the home, printing out whatever we want in three-dimensions, is often met with the question, ‘Why would we ever need to do that?’

But whilst PR marketeers are slowly convincing a broader public of 3D printing’s potential benefits, its appearance has spurred museums and galleries into imaginative and inventive uses of 3D technology to promote their collections in ways never seen before. The museums of the Smithsonian Institution in Washington, for example, began 3D scanning a wide variety of objects from their collection, unveiling them in 2013 as Smithsonian X 3D, a ‘set of use cases which apply various 3D capture methods to iconic collection objects, as well as scientific missions’. The project places 3D scans of a variety of objects online for free, from an ancient Greek Kylix cup (c.800 BCE) in the Cooper-Hewitt National Design Museum to a full scan of the Bell X-1, the first plane to fly faster than the speed of sound, now in the National Air and Space Museum. Evolving methods of capture and dissemination will eventually allow visitors—not to the museum, but to the museum’s website and online resources—to browse detailed scans, and even print off their own miniature facsimiles of the objects.

Such techniques are available for the replication of ivory too, although strangely this is more complicated than scanning an ancient Greek bowl or even a historic plane. In the case of objects of historic value which cannot, or at least should not, be heavily touched during the scanning process, non-invasive scanning techniques are vastly preferable over contact-based methods. Such sympathetic technologies effectively capture the distance from various parts of the object using reflected light, either by measuring the return time of a beam to and from a scanner, or by using several points of light at once to triangulate the precise position of an object in relation to a series of sensors. The use of such focused light, small directional laser beams, can be particularly tricky for ivory: objects that are small, monochrome, and opaquely reflective tend to foil the reflective measures on which such scanners rely. It is strangely in keeping with medieval conceptions of ivory’s material uniqueness—a property which saw it transported across continents at great expense—that its makeup is unusually resistant to today’s contemporary processes of replication.

This has not stopped people trying, at least in the service of ivory ethics. In 2015, a San Francisco-based biotech startup named Pembient announced it had combined 3D-printing technologies with recent developments in genetic engineering to create replica rhinoceros
Pembient’s horns are printed directly from the keratin proteins that form such animal appendages naturally in the wild, making them not only visual reproductions but perfect genetic reproductions too. The company’s founder, Matthew Markus, hopes the popularisation of the technique will have a tempering effect on the $20-billion black market for endangered animal horn, and intends to expand operations to incorporate elephant ivory, tiger tooth, and pangolin skin.

Art historians and museum curators are also using techniques to scan and recreate Gothic ivory carvings, albeit on a less scientifically ambitious scale and often with mixed results. One of the more successful attempts was occasioned when the missing left half of the Llandaf Diptych (National Museum Wales, Inv. NWM 01.335), a fourteenth-century ivory carving, was identified in 2006 in the stores of the National Museums Liverpool (Inv. 53.114.277). The chance of reuniting the two at first seemed unlikely, with neither institution willing to part with their precious half. So in 2009, a detailed 3D scan of the Liverpool section was used to craft a machined-resin replica panel for its Welsh counterpart in Cardiff, a complicated process both technologically and logistically, but which eventually reunited the two panels, at least in spirit, for the first time in centuries. Today, technology has come so far that if you have 3D-scanned an ivory carving, relatively cheap 3D modelling and printing techniques allow for a single machine to print off a low-quality, fresh ivory copy approximately every 5 minutes, pumping out an army of ghostly Gothic palimpsests (fig. 10.11, video; fig. 10.12). It is easy to conceive of a not-too-distant future where the photographs of objects on the Gothic Ivories Project are pooled to create three-dimensional models that we can all print out at home, to examine, to hold, and to touch.

The idea of such ivory facsimiles presents itself as a sort of Benjaminian pinnacle. On the one hand, a to-the-millimetre-accurate, patinated copy is about as vivid a re-rendering of the ivory object as is currently possible, receptive to both eyes and fingers. Yet, this counterfeit is at the same time about as far away from the original object as can possibly be: it is not just a re-imaging of the original, it is a whole new identical object in its own right. The urge to perfect the copy—itself prompted by a quest for believable touch, to let one’s fingers be convinced—will always be kept in an absurd limbo, a constantly
progressing movement between two extremes, the same tension identified by authors like Camille back in 1998, between disseminating the copy of an object and knowing the object itself.

It is easy to see how the now more than 5000-object-strong resource that is the Gothic Ivories Project fulfills the initial tenor of Camille’s prediction with which I began. In terms of quantity, quality, and availability, both high quality images and extensive histories of Gothic ivories are accessible anywhere in the world, giving an exceptional clarity to individual pieces and the entire genre. Soon, through coupling with ever-evolving technologies, such a resource might push back tactility as facsimile’s final frontier. Perhaps, one day, we might evolve from groping blindfolded under cloth, like a figure playing Hot Cockles, and touch ivory online.

2. This game plays interestingly into the complex interpretations of medieval gender and structures of courtly and political power recently discussed by historians of medieval sexuality. Certainly if the blindfolded figure is male, as in the British Museum plaque, the rewarded kiss forms a rather hollow victory for the woman. For more generally on medieval gender roles, see: Judith M. Bennett, ‘Medieval Women in Modern Perspectives’, in Judith M. Bennett and Ruth Mazo Karras (eds.), *Meanings of Sex Difference in the Middle Ages: Medicine, Science, and Culture* (Cambridge: Cambridge University Press, 1995); and many more works cited within these volumes.


13. CENOBIUM was originated by the Kunsthistorisches Institut in Florence, the Istituto di Scienza e Tecnologie dell’Informazione in Pisa, and the Soprintendenze of both Pisa and Palermo.


18. I would like to thank Lloyd de Beer and Naomi Speakman at the British Museum for allowing me access to the ivory, as well as Su Thomas at Fuel3D for the loan of a scanner, Stephen Atkinson for his expertise in taking the scans, and Jeff Powers for his help in printing the replica.