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## Digital Archives' Objects

### *Law and Tangibility*

In late 2013 the National Gallery of Modern Art (NGMA) in Delhi staged a solo exhibition of Atul Dodiya's work. Dodiya, a Mumbai-based artist born in 1959, is known for his artistic engagement with Mahatma Gandhi, 'Dodiya's hero and constant point of reference in political, cultural, pedagogic and spiritual contexts'.<sup>1</sup> As the NGMA states:

Dodiya's interest in Gandhi is linked to his childhood memories of a Gujarati growing up in the 1960s Bombay, and his reading of Gandhi's works over the decades which has brought him to a complex awareness about the rites of passage for a nation as it passes from revolutionary nascentcy to trying to establish its foothold within and outside its borders.<sup>2</sup>

Dodiya's interest in Gandhi is also linked to photographs of the Mahatma. One of the works on display at NGMA shows a painting of Gandhi as he leans out of a train window, touching the hand of a young man who reaches his arm out to Gandhi while holding onto the train railing. In close proximity Dodiya placed an abstract sculpture of an arm reaching out, a statuary artwork on a stand of wood and metal. The painting is oil on canvas on top of a digital print of a photograph on Hahnemuehle bamboo paper. It is painted in an almost photorealist style, while also hinting at the softness of brushstrokes. From afar, the painting could easily pass as an enlarged copy of the photograph that Dodiya took as a template.

One visitor to the 2013 exhibition was Aditya Arya, a professional photographer from Delhi now living in Gurgaon. Being only slightly younger than Dodiya, Arya has for the last few years increasingly focused on archiving, collecting and exhibiting photographs and cameras. He also inherited the archive of Kulwant Roy, a photographer who took some of the most iconic photographs during India's and Pakistan's

independence. One of them is the template for Dodiya's 2013 artwork. Arya had only recently digitized the full Kulwant Roy collection and disseminated parts of it online on [www.adityaaryaarchive.com](http://www.adityaaryaarchive.com). He immediately recognized the photograph as one of Kulwant Roy's. He publicly requested that Dodiya acknowledge Kulwant Roy's photograph as a source of the artwork. Dodiya, for his part, declined to do so. The NGMA, when asked to take action, did not take up the case.

This chapter examines the legal question of reproducing content that – at one stage – was disseminated in digital form. It starts by trying to answer the question of whether Arya would have had legal grounds for his request to acknowledge Roy as the author. Reverting to legal claims and understanding the rights connected to online dissemination is essential in dealing with heritage objects, not only to enforce existing copyrights, but to be able to identify potential limits in their current formulation.

Copyright related to digital reproduction rests on a division between copy and original. Delving into this more theoretical debate allows me, in the second part of this chapter, to turn to an essential question of using digital objects. Does this distinction prove valid in times of digital reproduction, or is it more helpful to think of neither digital nor analogue objects as finished entities? The chapter shows that despite enhanced possibilities and serious differences in the produced objects, the original–copy divide suggested nearly a hundred years ago still dominates understanding in the cultural heritage sector, both legally and socioculturally. Benjamin's (1969) essay on reproducibility through photography remains canonical in the debate. It is thus no coincidence that this chapter again draws heavily on photography as an exemplar when looking into the shifts that occur through digitization, albeit while trying to free objects from the original–copy straightjacket. Digital objects inform us that (auratic) originals can very much be digital, and hence have an endlessly reproducible form.

This second part establishes appropriated digital objects as border-crossers, an alternative suggestion to binary concepts that I substantiate in the third part of this chapter. Here, I turn to the differences between the material object – as for example Dodiya's artwork – and the digital object. What are the materialities of digital objects, and how are they relevant? What does a transformation from one state to the other imply? The chapter draws on material culture studies and philosophical understandings of matter, but subsequently turns to very practical forms of Indian materialism. Despite theoretical concepts, the brute materialism that Tim Ingold (2012) refers to continues to play an important role in the Indian heritage sector. Despite, or because of, increased digitization, a materialism has entered this sector, resulting in actors longing

for tangible output. Yadav, for example, when thinking about her next project, is sure that it will be in book form rather than an online repository, while at the same time working almost completely with the digital format of Indian Memory Project. Her communication work related to it happens in large part through social network sites and communication apps. Consequently, when thinking about the digital form of her work and the content, Yadav (interview, 2016) answered with a straight 'No' when asked, 'Do you think there's an urge for the people to also have it in material, offline form?' – 'No, not really. I mean I'm sure if they want, they can print it out. I don't do that'.

Yadav's simultaneous engagement with the digital and her longing for a more physical output, as well as the shifting forms of Kulwant Roy's photographs from physical to digital and back, are but two examples that guide this chapter. They are proof of novel appropriations of heritage material disseminated online through digital archives, and will help to disentangle some of the theoretical, legal and practical questions that come with these shifts.

## Copyright

The legal basis for digital objects is copyright. It functions at the intersection of the interests of the creator of a work and the public. Its aim is to protect the artistic or intellectual work of a person as intellectual property and to make sure that the person benefits economically and/or morally from their work, while at the same time ensuring that creations or inventions also foster further public development, knowledge and activity. To balance the interests of the creator and the public, international as well as national copyright regulations are in place.

The most important aspects protected through copyright are the right to reproduce and to disseminate. Arya bemoaned exactly this when he criticized Dodiya's exhibition at the NGMA. His case would rest on the Indian Copyright Act 1957, which has its precursor in the era of British rule and has been amended six times since 1957. Regarding photography, all photographs published prior to 1958 are subject to the Indian Copyright Act 1914, providing a copyright period of fifty years from the time of publication. The currently applicable Indian copyright expands this period to sixty years after first publication.<sup>3</sup>

The person holding copyright of a photograph is the photographer, but s/he can assign this right to a third party; this is where Arya fits into the picture. He has held the rights to reproduction and dissemination of the Kulwant Roy photographs since he inherited the collection. In

other words, for these as for all other Indian photographs the photographer or the person to whom s/he assigned the copyright needs to be consulted for consent if anyone wants to reproduce the photograph for private or public consumption or attempts to circulate a copy of the photograph. The form of reproduction is of little concern; photographs or digital reproductions of a piece of work count as reproductions.

However, there are exceptions to this rule. In order to protect individual user rights and/or the public interest in these works, Indian copyright defines terms of fair dealing (section 52 of the Indian Copyright Act). Private or personal use, including research, does not count as an infringement of copyright. Neither does criticism or review or reporting of current events and current affairs.<sup>4</sup> There are also exceptions for, among other things, using copyrighted material in teaching and the electronic storing of media in non-commercial public libraries.<sup>5</sup> As the High Court of Delhi argued in a ruling in September 2016, copyright is:

not an inevitable, divine, or natural right that confers on authors the absolute ownership of their creations. It is designed rather to stimulate activity and progress in the arts for the intellectual enrichment of the public. Copyright is intended to increase and not to impede the harvest of knowledge. It is intended to motivate the creative activity of authors and inventors in order to benefit the public.<sup>6</sup>

Fair dealing is especially important when copyright does not lie with the museum or archive that wants to digitize and disseminate online, or if authorship cannot be definitively attributed. Indian law states that ‘the reproduction, for the purpose of research or private study or with a view to publication, of an unpublished literary, dramatic or musical work kept in a library, museum or other institution to which the public has access’ is not an infringement of copyright (section 52, subsection (p)), if the author of the work is not known to the library, museum or other institution. What have been termed orphaned works in other nations’ legal contexts seem relatively straightforward in the Indian context, leaving public repositories in charge of disseminating these works. Other national laws require, for example, a ‘substantial’ or ‘thorough’ investigation before publication of orphaned works is permitted. Yet what seems like a comparatively easy task is often in practice a mammoth undertaking, when authors’ names are recorded with articles, books or documents, but finding their whereabouts and hence the clearing of (potential) copyright issues results in a time-consuming and uncertain search for an individual or their descendants. Consequently, museums and archives tend to operate in grey areas when deciding to digitally

reproduce and disseminate orphaned works, knowing that the possibility of violating copyright is not completely eliminated.

The case of Arya vs. Dodiya is not a case of fair dealing, since the photograph was not used for educational or research purposes, nor is it a private work. What is important, though, is knowing whether the photograph has been published previously, a question that Arya is not able to answer. If it can be found in a newspaper or magazine (presumably from the 1940s), the copyright will by now have expired and will not lie with Arya, but will have entered the public domain in the 1990s. Arya only holds the copyright for the images that *he* first published, either in exhibitions like the one held at the Indira Gandhi National Centre for the Arts in 2008, in his book *History in the Making* in 2010 or on the website [www.adityaaryaarchive.com](http://www.adityaaryaarchive.com) from 2009 onwards. For these images, only fair dealing as defined in section 52 is allowed, and Arya holds the copyright for these images until the end of the 2060s.

But even if the photograph was published in the 1940s, some rights remain with Arya. Section 57 of the Indian Copyright Act is an adaptation of the Berne Convention, an international copyright convention from 1971, of which India is a member. The Berne Convention – the result of heavy diplomatic discourse – defines moral rights in copyrights. Moral rights allow an

author to demand (i) identification of his name as author of a given work (right of attribution) and (ii) respect of the integrity of his work which may not suffer alteration without his prior consent (right of integrity) and depending on countries, (iii) to exercise the exclusive right to disclose his work to the public for the first time (right of disclosure[]) and the right to withdraw his work from circulation. (WIPO Standing Committee on Copyright and Related Rights 2015: 20)

The Indian Copyright Act transformed these international regulations into national law, and defined the author's special rights in section 57 as independent of copyright, even after the assignment of rights to others. These special rights comprise (1) to claim authorship of the work, and (2) to restrain or claim damages of the work (distortion, mutilation, modification) if these damages are prejudicial to the author's honour or reputation.<sup>7</sup>

In legal practice, these moral or special rights were grounds for a lawsuit that the artist Amar Nath Sehgal fought and won. Sehgal sued the Indian government after it relocated and damaged one of his murals, which the government originally commissioned him to create. Sehgal won the case on the grounds of his special rights as the author of the



work, being allowed to claim damages even if (as in this case) he had assigned copyright to another body (in this case the government) (Rajan 2012). Based on a similar argumentation, Arya could, despite the fact that the copyright for particular photographs by Roy may have expired, claim authorship in Roy's name and in consequence ask for this authorship to be acknowledged in an appropriate form.<sup>8</sup>

However, these (potential) legal cases also show that claiming rights and obtaining rights are two different things. Taking a case forward is a question of cost and benefit; calling and fighting a case requires financial resources and time. With the accelerated speed of disseminating work through digital reproduction and the internet, it has become even more difficult to trace copyright infringement in the first place, and to get hold of the perpetrator in the second. This situation encourages a rethinking of claiming copyright over digitally published works, and consideration of Creative Commons or Traditional Knowledge as alternatives.

### *Creative Commons and Traditional Knowledge Labels*

If a museum or archive digitizes its collection and disseminates it online, it can obtain some form of copyright, on the basis of first publication (as in India) or of ancillary copyright (as for example in Germany, where a *Leistungsschutzgesetz* exists).<sup>9</sup> However, some institutions take contemporary handling of digital content into consideration and have decided to strike new paths. One of the best-known examples is the Rijksmuseum Amsterdam. The Rijksmuseum, a museum of Dutch art and history, made more than 660,000 of its 1.1 million objects available at the Rijksstudio (<https://www.rijksmuseum.nl/en/rijksstudio>). Its makers explain:

The ultra high-resolution images of works, both famous and less well-known, can be freely downloaded, zoomed in on, shared, added to personal 'studios', or manipulated copyright-free. Users can have prints made of entire works of art or details from them. Other suggestions for the use of images include creating material to upholster furniture or wallpaper, or to decorate a car or an iPad cover for example. ... The Rijksmuseum now allows free use of [formerly 125,000, currently 660,000] high-quality digital reproductions, with absolutely no limitations. These are not 'thumbnails', and there are no watermarks or sharing restrictions. (Gorgels 2013: n.p.)

The reasons for renouncing potential copyright are, according to the makers, the concepts of open content and open design (*ibid.*). Technical

means have made it exponentially easier to copy and disseminate content, and everyday practices of downloading, altering and redistributing digital content have fostered habits that support Creative Commons, a legal option to declare open or less restrictive access to intellectual property. Attaching Creative Commons labels when publishing creative or scientific work helps to maximize openness without necessarily preventing commercial restrictions or opposing the very idea of copyright (Garcelon 2009).

However, the idea of Creative Commons also faces criticism. Creative Commons might not be a good option for Indigenous communities, who might have different concepts of ownership and access rights. Christen (2005, 2008) illustrated this convincingly with the example of Aboriginal regulations of secret and sacred objects, where rights to see particular images of deceased persons or sacred objects are subject to socially (re)defined individual status. To respect and acknowledge the values of source communities, copyright protections are very much needed. However, as existing copyright regulations are often based on 'Western' concepts, Anderson and Christen (2013) developed Traditional Knowledge labels. These labels – to be used in the style of Creative Commons labels and applied by the creator or author according to his/her choice – comprise a wider range of approvals, which reflect Indigenous conventions of seeing and using works.

## Copy and Original

The legal aspects of copying and disseminating objects and archival material rest on a general distinction between copy and original. Most prominently, Benjamin (1969) advocated for this division in his 1930s essay on the mechanical reproduction of artworks and historical documents. This essay has been quoted and analysed repeatedly, and has also been of use for theoretical reconsiderations regarding digital reproduction. In digitizing museum objects or archival material, one creates representations or replica of the original object, usually digital scans or digital photographs of a three-dimensional object, and these digitized objects are regarded as copies of existing artefacts. They do not exist independently of them, but represent them (Mitchell 1994, 2001). They are technical reproductions that require 'original' objects as reference points. They are – initially – in very close relation to them.

The pre-existing artefacts, on their part, attract particular attention through digital reproduction. They usually obtain or manifest their status as originals. In museums and archives, where objects already enjoy



high esteem as expressions or carriers of cultural heritage and historical information worthy of preservation (Burmeister 2014; Dorrian 2014; Pomian 2001; Thiemeyer 2011), their significance increases further with digitization. They gain their importance now not only through being located in a museum or archive, but through being worthy of reproduction for the sake of preservation and access. The original artefacts require effort and care in their constitution as museum and archival objects, and enhance their status by requiring or inspiring copies, while also demarcating themselves from these.

It is thus questionable if the aura of the original really is lost, as Benjamin argued, when we copy it. Peter Walsh (2007: 29), for example, states with reference to photography that, ‘In fact, Benjamin has the aura of art exactly the wrong way around. It is the mechanical reproduction – the photograph – that created the aura of the original, much as it was the machine that created the “handmade,” the negative that created the “positive,” and the digital that gave retroactive birth to its latent opposite, the “analog”’. In other words, copies of an object make it better known, which can result in an increase in popularity and awe for the ‘original’ object. The digital, Walsh (2007) argues, has today taken the place of photographic reproduction; it creates or enhances the ‘original value’ of an initial object. To put it more colloquially and pointedly, if something does not exist with a corresponding online representation, it does not exist at all.

Yet there are also voices that would revise rather than abandon Benjamin’s concept in the age of digital reproduction. The cultural turn led to a more open conceptualization of the fluidity of objects and the materiality of digital objects, and also allows for a more relational and multidimensional understanding of aura. According to Dominik Bartmanski and Ian Woodward (2013), Benjamin applied a too rigid understanding of a copy, of which we have a more nuanced comprehension today. Drawing on the example of vinyl records, Bartmanski and Woodward convincingly demonstrate that a technically reproduced medium can also obtain value beyond being a copy, and even become an ‘original’ (first pressings of vinyl records, for example). Copies today need to be understood in nuances between technical reproducibility and digital hyper-reproducibility (ibid.).

In accordance with this differentiation, we can also see that photographs (which in the form of positive prints are themselves copies of the negative) can (re)acquire importance, value and even aura, whether as limited editions, first prints, newly framed or as subject to legal copyright disputes. Furthermore, I would add, aura can also apply to digital objects and digital copies. When in Benjamin’s concept of aura we

replace uniqueness with categories such as relative rarity (as Bartmanski and Woodward (2013) suggest), digital objects can also acquire auratic properties. Digitized objects can gain a touch of elusiveness, creating value or status as collectors' items. As I have shown elsewhere (Müller 2018), the Berlin Museum's Pergamon Altar provides an example of digitized museum objects acquiring auratic character. The Fraunhofer Institute scanned the Altar in 3D, just before heavy renovation began on the Pergamonmuseum and the Altar was closed to the public. The 3D scan is available online (<http://3d.smb.museum/pergamonaltar>), and at some point it was also considered that it would be displayed with parts of the original in an interim building during the 10+ years of renovation and restoration. Such an installation would underline the border-crossing qualities of digital objects, as they become objects in space in their own right without denying reference to the museum object under restoration (ibid.). Such a merging of physical and digital objects furthermore stresses that the properties, qualities and materiality of objects are constantly in flux. Exhibiting digital and analogue parts of the Pergamon Altar together enhances the meaning of the Altar as an important work, while abrogating the binary of original and copy. The digital object takes cautious steps out of the shadow of the 'original' and is no longer perceived as a copy of the same, but as its own entity.<sup>10</sup>

The border-crossing character of digitized objects becomes even more apparent when they find expression in a different material. When Dodiya used the available photograph that Arya digitized, it experienced 'remediations in curatorial contexts' (Deliss 2014). Collected objects, Deliss (ibid.) argues, require – especially in the context of ethnographic museums – a critical integration into contemporary work as well as a change in their methods of communication. Becoming part of an artistic appropriation and subsequently an exhibition connotes a new valuation of the image, and arguably a new aura in the context of the art gallery. Dodiya appropriated a historical photograph and re-mediated it into new form and context. Arya, too, transformed digital photographs into a new, physical form when he reproduced the digital and later online images in the form of a large coffee-table book, which he wrote and published together with a historian.

While it can be argued that both of these remediations of Kulwant Roy's photographs could have been done without a digital go-between, I would argue that cases exist where the digital is the easiest if not the only way for a work's reproduction to cover large distances. As I have argued elsewhere (Müller 2017), this is especially the case when it comes to museum or archive collections from colonial contexts where the source of the collection and its current storage are far apart. The fluidity of the

digital form allows for an unprecedented capacity of (re)appropriation and includes an openness regarding novel formats that neither visual returns nor repatriation necessitate. Digitized objects require a new act of formation – in exhibitions, worship or as reprints, for example – for their perception to go beyond the user interface of human–computer interaction. Such acting on digitized objects leads to various forms of valuation of the object, implying a reframing of the aura (ibid.).<sup>11</sup> An example of creating material objects from digitized objects is the 3D print of the Tlingit killer whale that the Smithsonian National Museum of Natural History created in close cooperation with the Tlingit. They scanned an object from the museum’s collection before repatriation and reproduced the object using a 3D printer. The Tlingit used the digitized and printed version together with the original on multiple festive occasions for dance performances, before the printed version became part of the museum collection and the older one returned to the Tlingit (Hollinger et al. 2013).

These examples demonstrate that digitized objects can become border-crossers that oscillate not only between different appropriations and forms, but also between originals and copies. To argue that digital code is hence the new object (Buchli 2010) is in my view not very convincing, since the new entities comprise the digital object in its entirety, particularly its visual or perceivable form, which goes beyond computer code. A digital object is rather the intertwinement of digital files and the technologies that deliver them, requiring us to think of digital objects as entities in their own right that derive from specific contexts as well as particular materialities. Digital objects in museums form an enduring continuum of precursors, technological mimesis and objectification (Geismar 2018). Digitized and rematerialized objects undergo new meaning making and valuation (up to heritagization; see Müller and Wille 2019), which is embedded into new or expanded contexts. Although reference to the ‘original’ object does not completely vanish in these processes, digitized objects do acquire their own meanings as new objects. Digitized objects, although created as copies, can obtain their own valuation and biography (Kopytoff 1986), even their own aura. Reference to the original becomes only one property among many.

## Born-Digital Objects

The situation is slightly different for born-digital objects, although overlaps are multiple and frequent. In the legal context, they are comprised under computer programs in the Indian Copyright Act, and received

increased attention and protection in the last amendment in 2013, albeit in an effort to ensure operability, which often includes some form of copying and (temporary) storing. Beyond that, consumer studies have been contributing to research on born-digital objects. Rebecca Mardon and Russell Belk (2018) studied online games and digital trading cards to demonstrate how born-digital objects have become sought after due to their limited availability. Creators and companies distributing these objects online have programmed software to restrict digital reproduction, introducing geotagging and other spatial or temporal metadata to singularize digital objects, giving them the attribute of an 'original'. Their value can also be measured monetarily when turning these objects into commodities and trading them. In conclusion, Mardon and Belk (*ibid.*) state that digital goods are not necessarily valued less than physical goods, and options are there for product designers to increase the market value of (born-)digital objects.

These arguments also hold true for the cultural heritage sector. Here, born-digital artworks have entered gallery and museum spaces, thereby posing new challenges for storage and preservation. Outside the museum walls, born-digital cultural objects continue to receive increasing attention, with digital photographs probably being the digital objects gaining most traction in both practice and theoretical consideration. Ordinary people might not regard the digital photographs they take to be cultural heritage, but they can gain importance for individuals as valued items and memory devices (Goldsteijn et al. 2012). More noticeable, however, is the contemporary abundance of digital photography and its online dissemination. Worldwide, there are an estimated one million selfies taken each day, 350 million photos uploaded to Facebook (in 2013; Smith 2013), forty billion uploaded to Instagram (in 2015),<sup>12</sup> and a multitude of digital photographs on online and offline storage devices.

India contributes to these numbers. Digital photography, especially among the new Indian middle class, has become an integral part of everyday life (Fuller and Narasimhan 2007; Upadhyaya and Vasavi 2008). Photography thus sits between documenting special occasions and capturing everyday life, between the individual importance of a single image and unlimited sharing. It is a medium for memory making, and increasingly one for communicating current experiences (van Dijk 2007). The technical contexts of digital cameras and the internet slightly alter viewing habits, as spectators are no longer used to seeing only perfect photographs or extraordinary scenes. Digital photography has become a rather common medium, accompanying almost every part of Indian life (see for example Charuau 2018; Müller and Aich 2019). Both born-digital and digitized objects oscillate between their

endless reproducibility, an attributed uniqueness or importance, and their ever-increasing number.

## Materiality of Digital Objects

Despite the ubiquity of digital photographs – or precisely because of it – photographers and photo enthusiasts in India have started to re-discover analogue photography and its techniques. They learn and practise these, for example, in Aditya Arya's workshops. Arya used to regularly offer workshops in cyanotype and other photo developing processes in colleges, schools and for the wider public. In 2017, I signed up for a one-day workshop to be held at the India Habitat Centre in central Delhi. In preparation for the workshop, all participants were asked to send up to five photographs to Arya and his organizing team. As they are sent by email, all the photographs are in digital form. The team digitally transformed these into black and white photographs and printed the black parts on transparent foil, creating something resembling negatives of A5 or A4 size.

The workshop starts with a more theoretical introduction by Arya, who also ponders the difference between the digital and analogue in photography. 'The digital has no ma-bap', Aditya Arya tells the class. It has no material root or source, no 'mother-father', nothing to cling onto; it is missing a carrier material. This is not to discredit digital photography as such; Arya himself has been working as a professional photographer for many years with digital SLR cameras. Yet there is a fascination, maybe even a longing, for something material. Arya says that one of the reasons for the renewed interest in old photographic development techniques is their contrast to digital photography. People are not satisfied with the digital. Here in the workshop the twenty or so participants produce cyanotypes from their 'negatives'. This old technique of printing photographs is comparatively easy, but brings unique and beautiful results in the form of blue photo prints.

In the hands-on part that follows the introduction and explanation, we participants – ranging in age from early twenties to late fifties – are assisted by Arya's team, most of them students whom Arya teaches at art college. They set up the workstations with chemicals, brushes and frames as well as water baths in the yard. We carefully coat paper in the dark, expose the negatives to Delhi's summer sun and rinse and tone the cyanotypes. Over the course of the day, each participant produces numerous individual cyanotypes, with the results being light to dark blue coloured prints on thick paper, showing precisely arranged framings or

the person's brushstrokes. Each print is unique, even though some people decide to produce multiple prints from one negative. The amount of chemicals applied, the brushstrokes and the time of exposure determine the outcome of the pictures, which all of us take home at the end of the day.

There seems to be a big difference between the results of this workshop – the haptic cyanotypes as blue prints on paper to be carried home – and the digital photographs that served as visual points of departure. One of them is very much material and the other rather immaterial. Indeed, in a narrow sense, digital objects visually displayed are not material if we understand matter as something physically substantial. Ingold (2012: 432) refers to this as the 'brute materiality or "hard physicality"' of objects. Digital objects as such have no substantial properties, but are a binary code of zeroes and ones, which can be read, visualized and altered with the help of computers.

However, if we talk of the immateriality of digital objects being in opposition to analogue objects' materiality, it ties in with the debate on material culture and matter that social anthropology and other disciplines have been engaged in for quite some time now. Material culture can comprise all things used in a society, which we can only make sense of in the context of their use (Hahn 2005). It can also denote the sum of all things that are meaningful in a society (ibid.). A clear distinction between material and immaterial culture has proven to be difficult to draw, even when not considering the digital realm (see Buchli 2002; Miller 2005). Material culture studies stress that objects in general are not stable and fixed entities, but are always in a state of becoming. Or, as Ingold (2012: 432) puts it, next to 'brute materiality' there is the other side of materiality, which is 'the socially and historically situated agency of human beings who, in appropriating this physicality for their purposes, project on it both design and meaning in the conversion of naturally given raw material into the finished forms of artifacts'. This understanding of materiality, subject to the cultural turn, sees objects as social constructs.<sup>13</sup> One part of this is that performances are required or voluntarily used to produce an artefact: crafting a stone makes it an altogether different object to the stone in crude form.

Similarly, programming makes a digital object a perceivable entity. An object is always subject to the process of its (natural or human-related) creation, leading Ulla Johansen (1992) to coin the phrase *materialisierte Objekte* (materialized objects), capturing more appropriately this aspect of becoming and the immaterial culture (literally) taking shape here. Going a step further, one can also argue that the making of an object does not end when a product is finished or an artefact manufactured,

but objects can be understood as being in a permanent process of making, not only regarding their meaning, but also regarding their materiality. Not only are their subjective qualities subject to change, but their ‘objective’ and measurable properties need to be understood as histories created, applied, perceived and acknowledged in human–object interaction (Ingold 2012).

Digitization processes have given a strong new impetus to this debate. Material objects stress the question of where exactly object boundaries lie. Where do digital objects end and where do they begin? Horst and Miller (2012) identify three aspects of digital materiality: (1) the materiality of digital infrastructure and technology, (2) the materiality of digital content, and (3) the materiality of digital context. Digital infrastructure as an (extended) materiality of digital objects mostly takes the form of hardware devices and cables. Without the infrastructure of cables, hard drives and screens, digital objects cannot be generated and perceived in their anticipated form – a fact that we appreciate mostly in times of their dysfunction. Soft- and hardware necessary for creating and perceiving digital objects can hence be understood as part of digital objects. The materiality of digital content refers to what is produced through digital technology, be it text, websites, 3D prints or exhibition displays. Finally, digital technology also creates new spaces and new relative proximity, when the Internet of Things, geolocation systems, games or apps provide an enhanced context, within which we move (ibid.).

Digital materiality has furthermore provoked an investigation of the meaning of the word ‘material’. As Paul Leonardi (2010) explains, it can be understood in the sense of matter or significance; objects matter when they differ from talks, social practices or interaction through being an entity. In other words – and in close relation to Heidegger’s *Zeughaftigkeit* – anything that can translate an idea into action is material. ‘Whether in physical or digital form, an artifact that translates idea into action is material’ (ibid.: n.p.). Whether an artefact has a physical form is hardly relevant here. Furthermore, matter can be the topic or theme of an examination or a conversation. Matter as meaning or significance develops in interaction between human and object. The digitality of an object is again of little concern: ‘No matter whether those artifacts are physical or digital, their “materiality” is determined, to a substantial degree, by when, how, and why they are used’ (ibid.). Objects become material, relevant and real through the relationships between objects and the human beings that produce or consume them.

With regards to photography, digital photographs are also mentioned in studies asking for the most meaningful objects in a household, even though study participants tend to point them out less often than objects



with a brute materiality, such as paper-based diaries or inherited jewellery (Goldsteijn et al. 2012). Arya's work, too, does not strictly value the material over the seemingly immaterial, but he rather deals with photographs in their multitude of forms and creates meaning or a frame for others to do so. He praises analogue photography and its technical sophistication in his workshops. He archived the negatives and positive prints of Kulwant Roy, along with a large collection of cameras and photographic equipment. At the same time, he engages with the digital, proudly claiming to have taken up digital cameras at a very early stage, before his clients in Europe even knew how to store or circulate digital photos. He digitized the Kulwant Roy collection he inherited with the help of government funding and private sponsors,<sup>14</sup> and also made some of the photographs public through the internet in what he calls the India Photo Archive and the Aditya Arya Archive.<sup>15</sup>

The subsequent publication of Kulwant Roy's photographs in book form (*History in the Making*) and in Atul Dodiya's art installation once more point to the crossover qualities of digital objects. Shifts and changes here relate to the concept of original and copy, as well as materiality. Kulwant Roy's photograph oscillates between material infrastructure, the materiality of digital content and context, the absent brute materiality and the (re)acquisition of the same when shifting from one form of appropriation to another. Demarcating lines between analogue and digital or material and virtual hence comes with a certain unease. The ambiguity of matter, materiality and the digital refuses a binary division between digital and analogue. Rather, material-focused approaches to the digital substantiate the concept of digital objects as border-crossers. Digital objects are situated both in the material and the immaterial world, and cross over from one side to the other in multiple ways.

## Longing for Materiality

This crossing over also has to do with a certain longing for a more stable materiality as opposed to the ever-fluid digital object. In more general terms, returns to the analogue can be seen in the context of the ever-increasing permeation of the digital into every aspect of society. This time of severe social, cultural and economic change has seen a renaissance in handmade, analogue products as a consequence. It is not only nostalgia that fosters this back-to-basics movement, but a response to larger and long-term economic and cultural shifts (Luckman 2013). The analogue becomes different and desirable, an alternative when seemingly everything is digital (*ibid.*). In addition, there has been a

recent growing awareness of the cost of mass production, whether environmental or societal. Handmade analogue objects are especially imbued with an authenticity that comes through touch, expertise and the time it takes to produce such items (ibid.).

Two aspects of Arya's work shall serve to illustrate this point by focusing on the Indian context. One is his continuing investment in producing books of his photography, whether from digitized analogue photography – as in the case of the Kulwant Roy collection – or based on newer, born-digital photography. Book publishing is an outreach strategy that other actors in the heritage sector follow as well. The second aspect relates to Arya's collection of cameras and camera equipment. These material objects with a very brute materiality used to take up the whole of his basement, and were shifted in summer 2019 to the museum building that Arya was able to create in Gurgaon, called Museo Camera. Examining the emergence of the museum and of book projects related to digital photography in more detail will help to unravel some of the perceived distinctions and constructed characteristics that constitute the two sides, between which digital objects shift back and forth.

### *Books – between Materialism and Literacy*

Producing a book is situated somewhere between the abundance of the digital and the singularity of art or handcrafted objects. As briefly mentioned above, Arya produced – among other books and catalogues he created throughout his photography career – a large coffee-table book based on the Kulwant Roy photographs. The book comprises numerous images and their historical contextualization. Next to this 2.2 kilo, 330-page version, Arya also produced a lighter editor's collection of *History in the Making*. Only two hundred copies were made of this linen-bound, high-end print and paper version. One of them even found its way into the hands of former Prime Minister Manmohan Singh, who presented it to former US President Barack Obama on one of his state visits. Arya here artistically created a book as a collector's item. Limiting its run and using premium material and artistry for its production are value-raising techniques that we also encounter for other artefacts. Arya's book performs similarly to the vinyl record (as Bartmanski and Woodward (2013) portray it) or digital objects that become collector's items (Mardon and Belk 2018). What is technically a copy can acquire status as an original and rare object, something that Arya created with the collector's edition.

That art or history/heritage books can acquire such a status is a recent phenomenon in India, as the book in general has occupied a

difficult position in Indian society. Historically, Indians regarded the spoken word as superior to the written word, and the centuries-old oral tradition of passing on the Vedas and other religious texts is a prominent example of the fact that more information (intonation, length, etc.) can be transmitted through memorization and recitation than through written word (Kesavan 1986). While the written word did appear on palm leaf manuscripts, the introduction of the printing press, and hence of wider circulation of books and newspapers, came from outside, through missionaries and colonial occupiers. The written word circulated in its early days in the form of the Bible, newspapers and English or local-language prints of Indian law, literature and scripture (Trivedi 2008). The literacy rate was – compared to the literacy rates in Europe at the time of the introduction of printed books – high, but books were also valued for their paper or as a curiosity (Gosh 2008). With the Sikhs' Guru Granth Sahib, the holy book of the Sikhs, India is also home to one of the rare cases of religious worship of a book. As profane artefacts, books in colonial India – especially in Bengal – tended to be closely associated with speaking or performing the written word, which took place in popular reading sessions or theatre performances; reading in private alone was very uncommon (*ibid.*).

However, after independence the situation seemed to shift, especially when looked at from the perspective of book sellers and traders. In the 1960s and 1970s, they lamented low literacy rates, limited purchasing power and a 'lack of book-mindedness and reading habit' (Chatterjee 1970: 5). With only one-third of Indian's population being literate, literature struggled to find a market, which to some extent contradicts the descriptions of books' popularity that we find in historical accounts (Fraser and Hammond 2008). M.N. Chatterjee (1970) states that a good percentage of Indian readers focus on textbooks, and read only when they have to, indicating a shift from novels, poems and entertainment to nonfiction books used for studies. Spending power is an issue, as is – at the other end of the line – the fact that authors can rarely make a living from writing. This leads P.N. Venkatachari (1974: 63) to state that books have no significance for the general Indian public. The book, according to him, does not even have 'snob value' as an indicator of high culture (*ibid.*).

With the liberalization of the Indian economy in 1991, two things changed significantly. First, the readership's focus on textbooks increased. Priya Joshi (2008) demonstrates, through the example of the Connemara Public Library in Madras, that large reader growth after 1991 went hand in hand with the library catering to the textbook market and to the demand for vernacular language novels. Since the 1990s, readers have come to the library to learn how to master postcolonial

modernity (ibid.), for which textbooks seem more necessary than poems and novels. Second, liberalization opened doors for new attitudes towards materialism and consumption. Traditionally, the notion of actively extending the self through possessions seemed a bit too proactive an act to be applied to India, where the self is said to be less individualistic and less susceptible to the dualism of object and subject (Mehta and Belk 1991: 399). This is substantiated through ‘Hindu traditional beliefs [that] emphasize renouncing material desires as the ultimate enlightenment’ (ibid.). As late as 1996, Güliz Ger and Russell Belk (1996) ascertained that India, due to its sociocultural stability and traditionalism, was comparatively unmaterialistic. Possessions used to construct identity could be found primarily among the few more affluent Indians. The majority of Bombay citizens questioned in Mehta and Belk’s (1991: 404) study cited shrines, family idols or guru photos as their favourite possessions. The second most mentioned item was the Godrej cupboard, an item usually acquired at or shortly after marriage, indicating that there are some valuable belongings to be stored, such as expensive clothes or jewellery. Mehta and Belk (ibid.: 405) read the Godrej’s prevalence in less affluent households as a sign of social and economic change, where cultural identity no longer plays the only role.

More than twenty years later, the situation has definitely changed. The steady inflow of consumer-centric culture in the context of globalization, along with advertisements and pro-consumer media influences, has led younger generations in particular to shift their consumption behaviour and attitudes towards materialism (Mishra et al. 2014). A new consumer culture developed alongside the increased focus on markets, characterized by the availability of goods and extended credit systems. This leads Rimple Manchanda et al. (2015) to the conclusion that Indians have shifted to materialism in the aftermath of the social and cultural changes of liberalization. Material goods are no longer taboo among the youth, and are actually now used to measure success (ibid.). Mishra et al. (2014: 312) come to slightly different findings, stating that the young have shifted towards materialism, although habits of prudence and careful consideration before buying remain strong.

This changing consumer behaviour and the increasing demand for textbooks have contributed, in consequence, to India being the third largest producer of English-language books and one of the largest consumers of books in the world (Trivedi 2008: 27). Adding to the status of books is the fact that South Asian literature has found international recognition and been featured on numerous book prize shortlists. The piracy of (predominantly English-language) books prevalent in many Indian cities is another indicator of a demand for books (at

more affordable rates) and the existence of a readership that is willing to invest at least a certain amount of money in buying books, 'to feed a demand for unreasonably expensive objects of legitimate desire' (ibid.: 28). Consumption and spending rates will of course be considerably higher in other product segments. But with changing attitudes to materialism and the book by now a deep-seated element of Indian society, stakeholders in the heritage sector have found a potential market for their publications, especially in the higher price segment. Arya's *History in the Making* in its two editions shows very well that books in India today can become signifiers of cultural capital, for which people – albeit only a small segment of society – are willing to pay.

This is also what Anusha Yadav builds upon when considering her next project, called 'Love Letters'. 'Love Letters will be a celebration of the idea of romantic love', Yadav explains (private conversation, 2017). It will be a collection of facsimiles of love letters from all over the world, contributed ideally by any gender, caste, age group and religion. Like Indian Memory Project it will be crowdsourced, but it will definitely be in book form. Yadav is aiming the book at the newly consuming middle class, who might be in their late thirties or older, and willing to pick it up from the bookshop or the airport as a gift for their loved ones. 'The book', Yadav (ibid.) stresses, 'is not a vanity thing. But it comes as a book form also to earn money from it'. It will be self-published and needs investment – individual or crowdfunded – to make the publishing process possible. In summary, Yadav, like Arya, draws on a new consumerism that includes books as material goods. Given the standing of literature in India, it will be a small but affluent segment of the population that qualifies as buyers of such material manifestations of cultural heritage.

### *Museum Space – Creating a Legacy*

An even stronger material manifestation of once digital or digitized cultural heritage is the museum, which both Arya and the 1947 Partition Archive envision themselves setting up to house their respective collections. The 1947PA states on their website that their aim is:

Bringing knowledge of Partition into widespread public consciousness through i) creative and scholarly expression including but not limited to literature, film, theater, *visual arts, other creative medium*, and academic research, ii) proactive world-wide primary education curricula, iii) traveling exhibits as well as *physical 'Centers for Learning'* designed to memorialize the people's history of Partition and serve the public for research and educational purposes.<sup>16</sup>

In detail, this will also include a permanent physical space, very much like a museum, which Guneeta Bhalla envisions as a physical centre for learning in South Asia, probably with satellite centres abroad. This physical space will make use of archival material for public education, especially for children from kindergarten to twelfth grade. It will be a place to go to and to reach out from, to communicate and educate about ethnic violence and communal harmony on the basis of the testimonies collected (private conversation, 2017). Bhalla traces the first seeds of this idea to her visit to the Holocaust Memorial in Japan. The opening of the Partition Museum in Amritsar in 2017,<sup>17</sup> under the aegis of Kishwan Desai and with no relation to or cooperation with the 1947PA, is consequently viewed with suspicion and as a rival.

While Bhalla's dream of a physical space for the digital archive remains a future vision for now, Arya has been able to make significant progress in this direction and eventually achieve his aim. In 2017, he signed an agreement with the government of Haryana to set up a photography museum in the centre of Gurgaon. The government provided him with a plot and a building (formerly a badminton court that now lay abandoned), as well as the funds to reconstruct and convert the building into a museum for his photographic archive and camera collection. The building underwent a complete makeover, including a new basement, a first and second floor, division of the exhibition, office and lecture rooms, air-conditioning and electricity. A restaurant, bathrooms and a large firewater tank were built, and showcases for the permanent exhibition have been carpentered. Arya and his crew did much of the designing, decorating, installing and shifting themselves. While construction sometimes tended to progress slowly, in summer 2019 Arya was finally able to open his unique space – a museum with 1,700 square metres of exhibition and gallery space dedicated to photography. He describes it as:

India's first centre for the photographic arts. Museo Camera is a modern museum to showcase the art, science and history of photography. A space that has on display antique cameras from over 100 countries, photographic equipment down the ages, historical archives, the works of legends as well as cutting edge contemporary lens-based art. A centre where professionals and amateurs have the rare opportunity to learn and experience the magic of photography, and through it, to explore the arts, ideas, and issues of our time.<sup>18</sup>

Arya (private conversation, 2019) says that one reason for building a museum was, of course, to have a significantly larger space for his collections

and the increased possibilities that come with this. Furthermore, according to him, nothing can beat a physical space. Yes, he has created a website as an online outlet for the India Photo Archive, but more important is the physical object – the book or exhibition. Material things, Arya explains, have a life and they cannot so easily disappear. They are not like digital storage devices or servers that might fail or crash. Once you create physical objects such as books or prints for an exhibition, you can also aim to create a physical space to display these objects, allowing you to build a legacy.

The idea of legacy building through a physical structure is not new, echoing ancient practices of building monuments and memorials. Monuments are in general three-dimensional structures that function as memorial devices in public space. Installed by the government, they often serve to foster national identities, but are also an expression of claims for representation of a particular class or individuals in a society (Menkovic 1999). Even though, from today's perspective, monuments appear directed to past events, institutions or individuals, they had at the time of erection a very clear focus on the future. It is not only a gesture of ennoblement (*ibid.*: 1), but an intentional solidification of an idea, achievement or statement, directed at informing future generations. Opening ceremonies and/or repetitive displays of reverence to the built structure verify its claim for continuous interaction and reception, and are at the same time a demonstration of political power within public space. Monuments – as well as museums, I would add – are semiophores for power, designed for perpetuity (*ibid.*).

Arya's museum is now subject to an eleven-year contract, which can be extended as long as both he and the government deem it fit. Currently, they do:

Together [Arya and the government] seek to make Museo Camera a symbol of excellence and emerge as a place for learning and showcasing contemporary photography including providing a platform for emerging and established artists from various genres of photography, and to establish it as a celebration of photography and its evolution as an art form and a medium of human expression. Above all, both seek no profit from this endeavour, and commit that earnings, if any, shall be invested back to further the aims and objectives of Museo Camera.<sup>19</sup>

Building the museum thus creates an opportunity for both Arya and the government to create a physical structure in public that is meant to last and send a message. The cooperation between the government and Arya speaks of a democratization of the culture of remembrance,

opening the public space to more stakeholders than the government only. The Museo Camera might not be a monument, but it is, as Arya said, a permanent space that people can turn to, reminding them of the techniques and art of photography. The museum will at the same time serve as a reference point for traces of Arya's work and the exhibition work of the museum. The museum building becomes a material reference point.

## Digital / Analogue Objects

Zooming in on the various facets of Arya's work has demonstrated that the digital and the analogue take many forms in today's practice and interpretation. Visuals, especially photographs, seem to shift easily when used, from digital to brute material form. Digital objects – whether digitized or born-digital – can no longer be termed clear antipodes to analogue objects. Material culture studies and theoretical takes on the digital approach the divide from both sides and make it more permeable. They constitute the theoretical approach to digital objects as border-crossers, which can be observed in practice and use. The movements between human–computer interfaces and novel materializations with digital objects also lead to new or extended considerations and valuations, bringing a softening of the original–copy binary. In times of hyper-reproducibility, mechanical copies, high-end digital reproductions or digital copies enhanced with singularizing traces acquire market value, social lives and status as originals.

Nonetheless, a longing for stability and durability also paves the way for a renewal of (or return to) analogue techniques and the creation of something literally cast in cement or bound with ink on paper. This holds true especially for cultural heritage and its tendency to refer to the past (as well as its use and benefit for the future), and when this longing is paired with a less solid trust in digital technology. Relevant and acknowledged in the heritage sector, these practices also help to define digital objects, though only for the very narrow realm of digitized or born-digital artefacts in archives and museums. Given the variance of digital objects, 'it can be problematic to seek a definitive ontology of digital consumption objects or to treat all digital consumption objects as equal' (Mardon and Belk 2018: 547). Outside the museum/archive sector, digital objects can be understood as anything from an app to a social network profile, to a tweet or a smart meter, thus making a general definition or characterization of digital objects extremely complicated if not impossible. Here, however, we have seen an ontology of



digital objects of Indian heritage as copies-turned-original, as entities in their own right, which are constituted through HCIs and an extended understanding of their materiality. In use and appropriation, they cross the more permeable borders between brute materiality and digital code with ease.

This ease certainly also causes legal disputes. Copyright infringements are likely to occur when ubiquitous online availability meets the habits of retrieving (heritage) information from the web. This coalesces around two legal aspects that need to be singled out. First, copyright laws were developed in the first half of the twentieth century and have been repeatedly amended, often as a reaction to new technology. Especially with ICT, legal readjustments cannot keep up with the pace of technical developments. This produces legal grey areas, for better or worse. National and international protection mechanisms, as well as the resources required to enforce these, compel the individuals involved to make decisions while and after disseminating digital objects (e.g. relying on existing copyright or publishing with Creative Commons or Traditional Knowledge labels, considering potential copyright infringements before using a digital object, enforcing infringements in others' uses). These legal uncertainties require and allow stakeholders to choose between, or even balance, the circulation of information through digital objects and the protection of established rights. While such decisions are best made on a case-by-case basis, state heritage institutions in particular need to weigh up the arguments of socializing the costs and privatizing the profits, financial disadvantage and a loss of sovereignty of interpretation, in balance with the potential decline to insignificance as regards cultural coproduction.

## Notes

1. Exhibition description by the National Gallery of Modern Art (NGMA), Delhi. Retrieved from <https://www.artslant.com/ber/events/show/307670-experiments-with-truth-works-1981-2013> (accessed 6 March 2019).
2. Ibid.
3. Indian Copy Right, retrieved from <http://copyright.gov.in/Documents/CopyrightRules1957.pdf> (accessed 16 May 2020).
4. Ibid.
5. India's limitation of copyright benefits teaching, research and the visually impaired, among others. In this regard, it goes beyond many national conventions and international recommendations. Despite the tightening of copyright in India after economic liberalization in 1991, and especially after increasing pressure from (US-based) film industries, there are what Thomas (2015) calls instances of 'copyleft' in Indian copyright.
6. High Court of Delhi, 16 September 2016, Case Number 2439/2012: 1–94.

7. <http://copyright.gov.in/Documents/CopyrightRules1957.pdf> (accessed 16 May 2020).
8. Arya did so with another image by Kulwant Roy, which Getty Images published online. Coming across this image, Arya asked Getty to acknowledge Kulwant Roy as the author, which they did once Arya could show that he held the original of the (cropped) photograph that Roy probably sold to one or multiple agencies. Getty, on the other hand, could provide details about acquiring the photograph as part of a larger stock from a different agency, but had no further information about the photograph until Arya provided it.
9. In Europe, only Spain and Germany recognize ancillary copyright (in German called *Leistungsschutzrechte*), which grant rights to a photographer for his effort and work, even if the outcome does not qualify as a piece of original art. Examples are photographs of a picture, which are nearly 1:1 reproductions of the same. A prominent court case – which was eventually decided in favour of the *Leistungsschutzrecht* – was the Reiss-Engelhorn-Museen against photographs published on Wikipedia. The person scanning museum catalogue pictures of paintings that are in the public domain due to their age was ordered to not do so and ordered to stop publishing these on Wikipedia on the grounds of the museum photographer's ancillary copyright, which he acquired through taking the photographs in the first place and which had not yet expired. However, the Directive on Copyright in the Digital Single Market (Directive 2019/790) from 2019 makes such a ruling in the future impossible. Nonetheless, when photographing a museum object where lighting, exposure time and so on mean that the digital photo can be regarded as a piece of art, copyright will continue to be applicable.
10. Eventually, however, the Berlin Museums decided against the digital-analogue exhibition of the Altar and instead had a large-scale panorama picture installed.
11. Lorne Dawson and Douglas Cowan (2004) show that worship is also possible for online objects.
12. According to [https://en.wikipedia.org/wiki/Instagram#User\\_characteristics\\_and\\_behavior](https://en.wikipedia.org/wiki/Instagram#User_characteristics_and_behavior) (accessed 16 May 2020).
13. An idea that has gained a stronghold since the 2000s; see Cameron 2007; Pink et al. 2016.
14. Money was required to buy scanning equipment and software, and to hire staff to scan and digitally archive the complete collection.
15. [www.indiaphotoarchive.org](http://www.indiaphotoarchive.org); <https://www.adityaaryaarchive.com/> (accessed 16 May 2020).
16. <https://www.1947partitionarchive.org/mission> (accessed 16 May 2020), emphasis added.
17. <http://www.partitionmuseum.org/about-us/> (accessed 16 May 2020).
18. <https://web.archive.org/web/20200531172924/https://www.museocamera.org/> (accessed 12 April 2021).
19. <https://www.museocamera.org/mission> (accessed 16 May 2020).

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