The photographic surface: between substances and spaces

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Chapter 2

Touching PHOTOGRAPHIC SURFACES

FIGURE 2.1. Detail of *Crowhurst II,* 2007.
Corrugated appearance of the gelatin layer due to the paper's structure.

The yew tree in Tacita Dean's *Crowhurst II* is separated from its surroundings by the white gouache that neatly embraces trunk, branch, and twig on the photographic paper. The texture of this flat gouache layer is immediately arresting, as is the undulated photographic surface of the unpainted areas. The impression of this juxtaposition is intensified by the way the matte paint absorbs light, while the glossy and wavy gelatin layer reflects it. Tension between flat and undulation, between matte and glossy, result in a tangible relief, which lends an unexpected physicality to this photowork and its depiction of the old yew's bole and branches. The different material properties of the two interacting surfaces produce an optical tactility out of the ordinary flat photographic experience.

It is the tree's surface, its bark, that stays with us (fig. 2.1). When explored in nature with the touch of the hand, the tree's 'skin' is sensed by the body's skin, which acts as a sensory boundary between the two perceptual beings. Skin as the endless surface of the body, without beginning or end. On one side, an internal impression is left by bark on human skin, on the other, the bark itself has its textural properties. When mediated by the photograph, a third skin comes into play: the photographic surface. The perception of the photograph of the tree relies on a remembered bodily and haptic experience of trees to invoke and sustain any impression or sense of touch. It depends on an established knowledge network of relationships that connect the visual with memories of how it feels to touch any such material (Cipriani 2016, 161). Thomas Elsaesser and Malte Hagener's *Film Theory: An Introduction Through the Senses* (2009) bases its approach to cinema as a haptic experience on a conception of the skin as an organ of continuous perception (Elsaesser and Hagener 2009, 126). In this, Elsaesser and Hagener follow in the footsteps of other remarkable scholars in film theory whose work will be addressed (among other disciplines) in this chapter on the tactility of the surface. Perhaps the most prominent and widely cited by photography scholars is Laura U. Marks. She introduces the term *haptic visuality* in her book *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* (2000). Marks states that optical visuality requires the separation of the viewing subject and the viewed object, whereas haptic looking also discerns texture and form by drawing attention over and around a surface. She describes this haptic looking as something that moves rather than focuses, grazes rather than gazes (Marks 2000, 162). Precisely this experience of looking was triggered when I approached and examined *Crowhurst II*. The questions of this chapter spring from here: what tactile qualities of the photographic surface contribute to the idea of touch? Which tactile and haptic encounters are triggered?

In the penultimate section of 'Part One: The Texture and Structure of the Photograph', Van Lier describes how mental schemas are triggered by photographic material. The photograph frustrates nearly every property of perception, he says. Therefore the process of perceiving a photograph is not something that happens through an interaction between the photographic imprints and the body, nor between signs and imprints, but between the print's brighter and darker areas and the viewer's mental schemas (Van Lier 2007 [1983], 39–40). For Van Lier, the photograph is foremost an extraordinary trigger of mental schemas, there is an "immediate activation of the eye-brain nexus, thereby bracketing the other parts of the body" (2007 [1983], 43). This argument is based on an almost entirely visual perception of the photograph. Giuliana Bruno goes further and positions touch and the haptic sense as central to mental activity in the section 'The Fabric of Touch and Mental Images' of *Surface: Matters of Aesthetics, Materiality, and Media*. Basing her argument on contemporary neuroscience, she states that we use the same neuronal paths that make up material sensory perception when creating mental images (Bruno 2014, 18–20).

In this section on the tactility of the photographic surface, I would like to discuss non-visual sensory capacities that can be associated with the production and perception of a photograph. Mika Elo, author and editor of *Senses of Embodiment*: *Art, Technics, Media* (2014), has written a number of interesting articles on touch in relation to new media and photography and I will return to this more fully later in the dissertation. Elo approaches touch "as a mediator between processes of signification, affectivity and materiality" (Elo 2016, 272). My approach pursues a similar division. I want to begin by highlighting one process that immediately comes to mind when considering touch and the photographic surface: the haptic actions that are undertaken in the darkroom by the artist or printing professional. In the first chapter of

this thesis, I elucidated this as a physical process: the bodily engagement with chemicals and the light sensitive surface. In this chapter, my attention shifts to the affective process of holding and looking at photographs. To help us apprehend the tactile properties of (material) photographs I highlight the reciprocity between touching a photograph and being touched by its material and subject matter. My third consideration of the tactility of the photographic surface emerges from the exhibition space, a place where haptic perception of the photowork involves a substitution between vision and touch: the eyes act as surrogates for the fingers.

2.1. TACTILE INTERACTION WITH THE *Photographic Surface*

Before delving into the theoretical connotations of the photograph's tactility, I want to begin by zooming in on the encounter between the photographic surface and the human hand. The setting and the photograph's format both influence the way in which a person can address the photographic material. At what moments does the human hand actually touch the photographic surface? The most common way to hold a single photograph is with the pad of the thumb lightly resting on the photograph's surface and the other four fingers backing the photograph. While pinning a photograph to the wall or the fridge, the thumb will often touch the front. If the photograph is mounted in an album, its paper back is hidden, but when pointing at the image, the index finger might – deliberately or not – touch the surface. Not to forget those situations when a photograph is torn apart or crumpled in anger.

Interestingly, the very first encounter between the photographic surface and the hand tends to be overlooked, perhaps because it takes place in the obscured space of the darkroom during the development of the photograph. Here, too, it is desirable to keep physical contact between fingers and photographic surface to a minimum, because of the sensitivity of the negative and photographic paper. Wherever the emulsion is touched, even if the hands seem clean and dry, a minimal residue of oils, dirt or perspiration will be deposited on the gelatin. To reduce contact between emulsion and fingers, the (processed) film or paper photograph is best held lightly between the outer edges of the thumb and the index finger. Different print tongs can be used to get the wet prints out of or into the different solution trays, and protective nitrile gloves are also manufactured for development and post-development handling.

THE FINGERPRINT

Although many scholars have drawn the comparison between the photographic message and the notion of the trace, the footprint or the fingerprint, any relation with an actual fingerprint on photographs is habitually omitted from the analysis. The French film theorist André Bazin stated in the essay 'The Ontology of the Photographic Image', that the photograph and the photographed share a common being, after

FIGURE 2.2. Alison Rossiter, *Eastman Kodak Kodabromide G2, expired March 1946, processed 2009,* 2009. Two silver gelatin prints, left: 17×5.6cm, right: 17.6×12.2cm. Collection of Leslie, Judith, and Gabrielle Schreyer.

the fashion of a fingerprint (Bazin 1960, 8). The fingerprint as a possible threat to the photographic surface is a very real part of handling photographs (throughout making and viewing). Different fingerprints can be present on or in a single photograph. The fingerprint caused during development by touching the emulsion of the film negative will appear enlarged and lighter than the surroundings on the developed print. Another real-size fingerprint may show up after processing the silver gelatin paper in either black or white, if contaminated fingers have touched the non-exposed light-sensitive photographic paper in advance. And finally, there is the fingerprint that is made on the fully developed photograph which has been held in hands or touched when hung on the wall. Hypothetically, all four forms of fingerprints could be present in one photograph.[1] The conceptual fingerprint-figure in photography theory refers to the indexical capacity of the photograph to depict what has been there in front of the camera. The literal multiplicity of possible fingerprints on the photographic surface all, equally, point to what has been there: the layers of (handling) processes that encircle a photograph.

Indexicality has been taken up by generations of photography and art critics. Elspeth Brown and Thy Phu argue in their edited volume *Feeling Photography* (2014) that indexicality is a means

of conceptualizing the tactile sense of feeling in photography. They base this understanding on the connection between the referent and the represented image: that the photographic surface is touched by reflected photons is confirmation of the photography's evidential efficacy (Brown and Phu 2014, 14). Similarly, Margaret Olin, in her essay 'Touching Photographs: Roland Barthes's "Mistaken" Identification', says that the photograph as a remnant is a trace, and a trace is inherently tactile (Olin 2002, 100). Olin slightly amends the indexical power of the photograph, and her conception is even more relevant than the classical conception to my study of the tactile qualities of the photograph. She states that the indexical connection may lie more in the relation between photograph and beholder, than in the relation between photograph and referent. She creates a notion of a "performative index" or "index of identification" (2002, 115).

Van Lier further elaborates the idea of indexes in the second part of his first chapter. He differentiates between indices and indexes in order to find the relationship between the photographic imprint and the spectacle:

> INDICES are not signs; they are the physical effects of a cause they physically *signalize*, either through *monstration* [...] or *demonstration,* as when an unusual disarrangement of objects might reveal a thief's route to a detective. Indices are non-intentional signs, and are neither conventional nor systematic, but physical. Lastly, INDEXES indicate objects much in the same way the index finger or an arrow might point to an object. These are outright signs, as they are intentional, conventional, and systematic signs. Moreover, they are minimal signs since they designate nothing by themselves; they merely indicate (Van Lier 2007 [1983], 17, emphasis in original).

The fingerprint in the photograph is hence an *indice*, it demonstrates the handling gesture of either the person developing the film (or print) in the darkroom, or the person holding the photograph. It is a physical effect of the finger touching the photographic surface of the film or the print, and it physically signals this effect. An interesting example is the photowork *Eastman Kodak Kodabromide G2, expired March 1946, processed 2009* (2009) (fig. 2.2) by the American artist Alison Rossiter (b. 1953). As the title indicates, Rossiter has a special interest in working with historic photographic papers. While processing 'only' the expired photographic paper Eastman Kodak Kodabromide G2, without exposing it to any light source, black fingertips appeared around the edges of the white paper. Like a ghostly presence, the life-size indices of the fingers of an unknown and absent person, who once touched the undeveloped paper sometime between 1946 and 2009, arose in the developing bath. As this is a black-and-white paper, the black tones of the fingerprints indicate that the silver halides in the emulsion have been converted to silver particles here. In fact, these fingertips are now visually represented by the same material, as any imaginative image would be.

Expired papers often have exhausted halide chemistry and are therefore no longer sensitive to light. Rossiter explores the material in the darkroom under safelight by processing the papers with conventional silver halide developer and fixer. Both her experience and the properties of the paper influence the final outcome. It is a play between control and loss of control that challenges her artistic darkroom practice. Another uncontrollable element comes in through the flaws and other marks of wear that can be found in historic papers such as this Kodabromide G2 paper by Kodak. The practice affirms Van Lier's reasoning that photonic imprints are always indices that signal their cause (Van Lier 2007 [1983], 17). In this instance, light reflections from the photographed objects ultimately share the common visual effect of the imprints of a fingertip's grease.

GESTURES IN THE DARKROOM

It is unusual for photographic gestures to be subjects of a photograph, as Margaret Olin states in the introduction of her book *Touching Photographs* (Olin 2012, 13–14). The term 'gesture', in the context of photography, refers to the moment of taking a photograph rather than to the moment of receiving or making it in the darkroom. When Vilém Flusser dedicates a whole chapter of *Towards a Philosophy of Photography* to the notion of the gesture, he considers the photographer's actions while taking the photograph, but he neglects the subsequent stage during which a photograph is developed in the darkroom. Both gestures are effectively hidden, somewhere off the edge of the photograph's field-of-vision. Olin briefly mentions the "massaging gesture" performed in the darkroom as one of the few photographic gestures that actually registers on the print, but she does not pursue the form or relevance of this gesture (2012, 13). For her, "[...] photographic gestures indicate that photographic practices do more than merely represent the world. Gestures turn photographs into presences that populate the world like people and act within it to connect people" (2012, 14). Photographic gestures position the photograph in a relational network, drawing together photographed objects, subjects, a photographer, a viewer, and sometimes (if the photographer does not develop the print him/her/themself) even a professional printer. In the following analysis, I stay with the simplified case of a photographer developing his/her/their photographs in a darkroom.

The tactile interplay between the photographer and the exposed photographic surface takes place for the first time in the darkroom, as the latent images on film are developed into photographs via multiple chemical and physical steps. The film must be removed from its canister, unfurled from the spool, fed into and then wound onto the film reel, before it is put in the developing tank. After the film has been developed, it has to be taken out of the tank again and dried before being exposed to photographic paper. All these actions come with the possibility of (unwanted) fingertips on the film or on the paper. The photographer's gestures engage only with the materials of the second stage of the image-making process: water, chemicals, light (or its total absence), film, light sensitive paper, and a projection enlarger. However, as various photographers and darkroom specialists have explained, the eyes and the mind (the imagination) are also primary tools. The developer's hands translate vision into action as they operate machinery, hold back the light (known as *dodging*), and move the paper through the steps of chemical development. Closeted in a darkened room, the

mystery of this process is seldom accessible to others, who confront only the final result of the photograph – this may be why there are so few academic texts that deal with the darkroom's relation with the photograph.[2] Van Lier characterizes the photograph as "the most vivacious experience of what physicists call the *black box*, where one can clearly perceive the entrance (*input*) and the exit (*output*), without ever knowing quite well what takes place between the two" (Van Lier 2007 [1983], 38, emphasis in original). The tactile interplay between the photographic surface and the person exposing and developing the photograph is hidden in the dark. As the output (the photograph) is not the same as the input (the negative), we can only guess at the significance of the gestures that take place in the black box of the darkroom.

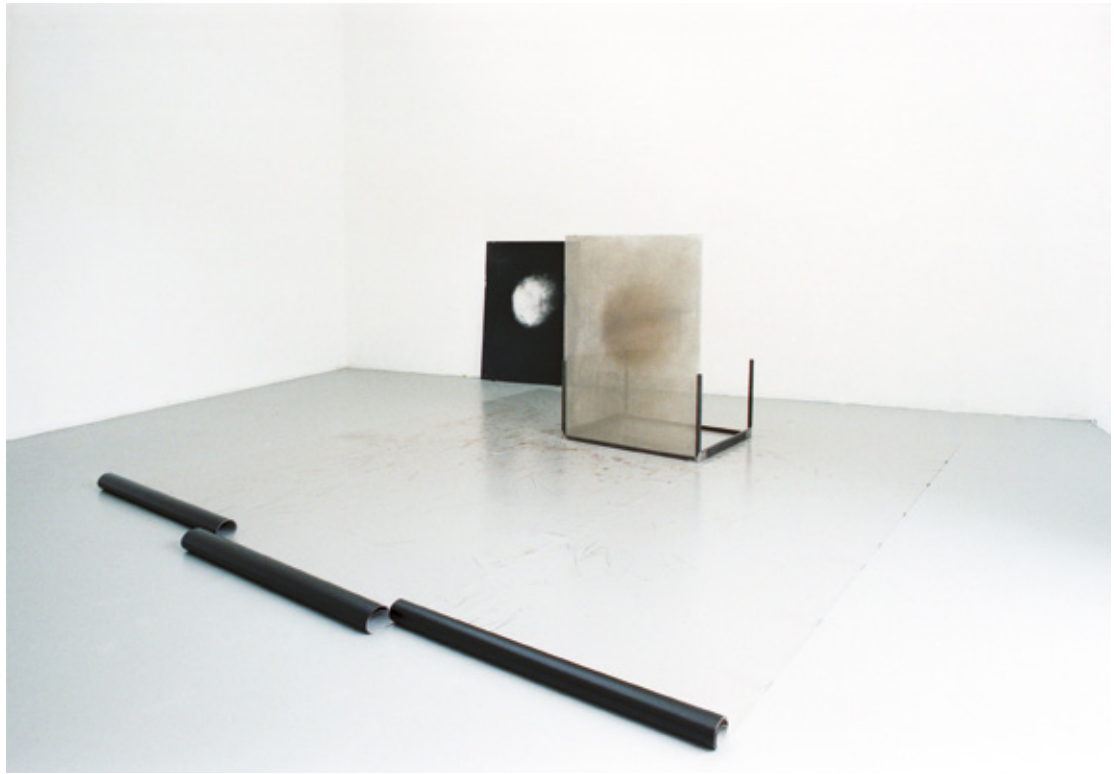


FIGURE 2.3A. Gwenneth Boelens, *Exposure Piece (Sensitizing)*, 2010. Collodion glass negative, gelatin-silver contact print on aluminium, both 127×169.5cm, metal, dance vinyl, total dimension 450×550cm. Installation view at Prix de Rome jury presentation, Amsterdam, The Netherlands.

One photowork that lifts this veil is the photowork and installation *Exposure Piece (Sensitizing)* (2010) (fig. 2.3a) by the Dutch artist Gwenneth Boelens (b. 1980). The work presents the traces of the artist's actions through a process of sensitizing, exposing, and developing a huge collodion glass negative and its silver gelatin contact print. In exhibition, the work is encountered as an abstract black-and-white photograph leaning against a wall, and a glass negative of the same size held by a simple metal construction, installed on three rolls of white vinyl floor. The vinyl floor is as much a part of the final spatial sculpture as the photograph or the negative glass plate: the floor 'records' the making process of the photowork as it shows dark stripes of footstep marks that were caused by silver nitrate spilled during the making of the negative (fig. 2.3b). Boelens captures her body's movements on the floor, and in so doing she brings the performative dimension of the darkroom developing process into the exhibition space. The extraordinary size of the glass (127×169.5cm) also enlarges the dimensions of handling. To lift the plate in and out of the baths of chemicals, Boelens needed the help of three assistants. After the glass plate was sensitized, it had to be exposed within ten minutes. Boelens intuitively cast a simple ray of light on the wet emulsion and this created an abstract image on this huge glass negative. Later, she created a contact silver gelatin print by placing the dried negative on sensitized paper of the same size and exposing it.

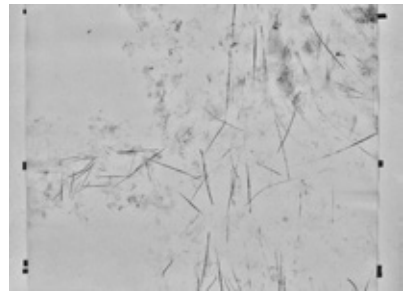


FIGURE 2.3B. Gwenneth Boelens, *Exposure Piece (Sensitizing)*, 2010. Dance vinyl.

Such contact paper has a low sensitivity to light and can be exposed with a normal lightbulb from a metre away. Contact printing involves a negative that is mounted with the paper in a spring-loaded frame, and the emulsions of both are kept close together during exposure (Benson 2008, 164). As Richard Benson relates in *The Printed Picture* (2008), which covers all types of photographic printing, most nineteenth-century materials were handled in room light, and it was not until the beginning of the twentieth century that papers became more and more sensitive to light. This is the moment at which the darkroom made its entrance into photographic practice (2008, 148). In the obscurity of the darkroom, the photographer can control the print's exposure to light. As Ansel Adams has argued, the negative holds neither black nor white, but a wide-ranging scale of grey tones, which the photographer can decide to apply as black or white on the print (2008, 160). This explains his often quoted image of the negative as a musician's score, which waits to be played out on paper through the photographer's darkroom interpretation (ibid.).

Exposure Piece (Sensitizing) is part of Boelens's long-term exploration of the negative as proto-image. Fascinated by the fact that the negative is closer to the image source than any print, but at the same time often overlooked as an intermediary image, she puts it at the centre of her artwork. In some works, the negative is installed in a spa-

tial relation to the print, as in *Exposure Piece (Sensitizing), It Has Been Here* (2010), and *Peering Grasping Longing* (2011). In others, it is installed on its own, as in *Negative, Rather than Truth* (2010) and *Events Unwitnessed* (2012). The question of what the image really is: the negative, the print, the object, or even the gesture, is manifested through the materials that the artist uses. It lingers in her oeuvre. The act of touching the (photographic) surface is naturally part of her practice, which culminates with a series of huge and varied ceramic tablets that she made by hand in 2013. Boelens's fingerprints cover the surface of these plates and give them their shape. Even though she departs here from the photographic process to express her ideas of trace and gesture through clay, these ideas are enduringly rooted in her photographic practice.

Silver gelatin photographs, among other historic processes used and interpreted by Boelens, are only sensitive to the blue and blue-green region of the light spectrum, and so they can be developed under red or amber safelights. Chromogenic photographic materials, in contrast, are sensitive to all visible wavelengths and reproduce natural colour tones. Therefore these are the most extremely sensitive photographic materials and need to be handled in complete darkness. In the total darkness of the colour darkroom, the hands alone can enact the craft of development. The imperative here is on tactile perception and the experience of the person developing the print. He/she/they follows a kind of choreography that is orchestrated by the various stages through which the colour print has to pass (I will discuss this more thoroughly in the third chapter).

As I was seeking a language for this form of tactile interaction, I happened upon the work of the Australian artist Danica Chappell (b. 1972), who coined the term *darkroom haptic* for the methodology of her own master's thesis. According to Chappell, the darkroom haptic describes and encompasses the "materially-driven haptic processes that are developed in the blind space of the colour darkroom" (Chappell 2012, 2). It qualifies the bodily actions that are performed in complete darkness to produce the photographic artwork. Chappell poetically describes these actions as follows: "Fingers lightly dance over all the surfaces in the darkroom to produce the latent image; however, the toil that guided the haptic action is hidden in the fixed record on the photographic surface" (2012, 47). For her own unique photoworks, she used a complex photogram process which was split into two stages, first producing a "negative-gram" and a "transparency-gram", and then building an adapted photogram, using the materials of the first stage (2012, 46). Working blind in the darkroom's total darkness, these handcrafted photoworks rise beyond the artist's intentions and expertise. The result is a photographic recording of the layers of processes and gestures that merge on the photographic surface (fig. 2.4). For Chappell, the haptic is that which determines the relationships between the materials, the darkroom, and light. It refers to the physical action and tactile interaction that "pulls four-dimensions into two-dimensions; resulting in an irreproducible moment and outcome" (ibid.).

The unnatural setting of the darkroom gives a sighted person insight into an experience of blindness. Navigation through space and the handling of things rely solely on the senses of touch, sound, and

FIGURE 2.4. Danica Chappell, *Thickness of Time #1*, 2018–19.
Unique chromogenic photogram, orientation flexible, 116.8×86.4cm.

smell.[3] In this context, Chappell speaks of her mind's eye, a perceptual experience which speculates on the outcome during the developing process, and emerges through a haptic vision. To make sense of this relationship between the optical and the tactile she refers to Deleuze's writing on Francis Bacon, in which he describes the infinitely rich relationship between eye and hand. He argues that this relationship passes "[…] through dynamic tensions, logical reversals, and organic exchanges and substitutions" (quoted by Chappell 2012, 46–47). For Deleuze, this richness frustrates any simple understanding that the eye judges and the hands execute. The analogy between hands and eyes is clearly a topic that has its own complex discourse, which I will not elaborate here. I use this reference here to emphasize the tactile exploration that occurs between photographer/artist and photographic material, which arises when visual perception is excluded during the developing process of colour prints in general, and of Chappell's photograms in particular.

CONTACT IMAGES

Today, the digital imaging process is omnipresent and the tactile nature of the photographic record and print vanishes into oblivion. The act of touching may seem rather abstract when it is understood as light particles hitting a photographic surface (as described at the beginning of chapter 1), or chemical solutions enveloping and infiltrating the exposed. However, these phenomena mean that film-based photography is

inevitably above all a *physical* chemical process. Artists such as Danica Chappell and Gwenneth Boelens who intervene with light sensitive material highlight the bodily entanglements of the developing process.

Rossiter's photowork with its fingerprints, Boelens's photo installation, and Chappell's *Double Dark* photograms, share in their diversity one key feature: they are all contact images. Fingers, negatives, or objects have, at some point, touched the photographic surface, and thereby affected the (non-) exposure of the light sensitive particles. The touched and untouched parts comprise the image of light present or absented. These non-perspectival representations underline the tactile quality of the surface as the critical site of image creation. French philosopher and art historian Georges Didi-Huberman's poetical-associative train of thought when introducing contact images in his essay on that subject is a good starting point here. It simultaneously draws on the physical origin and effect of this kind of image:

> Contact images? Images that touch something and then someone. Images that cut to the quick of a question: touching to see or, on the contrary, touching to no longer see; seeing to no longer touch or, on the contrary, seeing to touch. Images that are too close. Adherent images. Image-obstacles, but obstacles that make things appear. Images coupled to each other, indeed even to the things of which they are the image. Contiguous images, images backing each other. Weighty images. Or very light images that surface and skim, graze us and touch us again. Caressing images. Groping or already palpable images. Images sculpted by developer, modelled by shadow, moulded by light, carved by exposure time. Images that catch up with us, that manipulate us, perhaps. Images that can ruffle or chafe us. Images that grasp us. Penetrating, devouring images. Images that move our hand (Didi-Huberman 1997, unpaged).

In his discussion of contact images, Didi-Huberman uses photograms as his example because they make explicit this thing that concerns all photography, but which too often drowns in the seductive depths of field of perspectival images. His introduction gathers together all the paradoxes that a contact image holds, unfolding from this momentary unity of object and image when the surface is exposed. The dialectics of touching and seeing, weight and weightlessness, proximity and distance, are mediated by the photographic surface. The photo historian Geoffrey Batchen describes photograms in particular, as one form of contact image, in *Each Wild Idea: Writing, Photography, History* (2000):

> Here object and image, reality and representation, come face to face, literally touching each other. Indeed the production of a photogram requires real and representation to begin as a single merged entity, as inseparable as a mirror and its image, as one and its other (Batchen 2002, 160–161).

What characteristics of the contact image encourage this notion of touch, and thereby invoke an awareness of the tangible qualities of the photograph's surface? I will focus on the photogram in particular, for the purpose of a clear argumentation and response to this question. The photogram can be seen, ultimately, as a paradigm for all contact images and photographs that share the photographic surface as their carrier. The physical contact between surface and pictured phenomenon gives photograms a direct quality. This directness is bolstered by the fact that there are no mediating optical instruments between the pictured object and its reflection, which relate at a scale of one-to-one. In 1927 and 1928 the Hungarian artist László Moholy-Nagy wrote several essays dealing with the matter of photography, and in particular of the photogram. He highlights the light-sensitive layer as the main instrument of the photographic process (as opposed to the camera), and this makes photography "[…] the first means of giving tangible shape to light, though in a transposed and – perhaps for that reason – almost abstract form" (Moholy-Nagy 1989 [1927], 83–85 as quoted by Van Gelder and Westgeest 2011, 192). Whereas the field that surrounds the pictured appears to be a monochromatic void, the image object is created by the non-exposed parts – the residue of that which has been obscured. These often abstract shapes seem to be pressed against the picture plane. One important characteristic of the photogram is that it does not afford gradations of spatial differentiation between the two extremes of figure and ground, unexposed and exposed. Its visual content is built of two-dimensional shapes, rather than through perspective. As Batchen writes:

> But a picture of this kind also collapses any distinction between figure and ground (as well as between up and down), and its edge becomes an arbitrary cut within a field of potentially infinite elements rather than a rational frame surrounding a discrete object (Batchen 2016, 9).[4]

The visual proximity of these shapes recalls the near-space of haptic exploration. Unlike vision, touch is confined to the body's surface and so it does not have a three-dimensional sensible field and does not differentiate between near and far. Likewise, the shapes perceived in a photogram are all aligned on the same level: the surface. The volume and depth of the objects that created the image are absent from the photogram. What is represented, and left behind for the viewer to relate to, is only this *one* element – touch, immediate and singular. We can only graze the photographic surface, the bright and the dark parts. The sensory awareness of touch cannot cover spatial awareness at once, (as opposed to visual perception). Only moving the hand or the body can lead to a haptic experience through which we might track the volume of an object or the constraints of the space.

Vision is "[…] distanced and even deceitful, whereas touch seems more intimate, reassuring and proximal […]", as Mark Paterson writes in the first chapter 'The Primacy of Touch' (Paterson 2007, 2). In its proximity and immediacy, he writes, the haptic experience is base or even bestial. His book investigates the tension between "immediate" and "deep" metaphorical touching, a tension that I will consider in the next section on the reciprocity of touching and being touched. As we are technically dealing only with the visual trace of the removed object, the sole tangible relic of this encounter is the photogram's surface. It is not without reason that Didi-Huberman describes contact images as "images that move our hand" in the introduction to his essay, which concludes with the following paragraph:

> Thus contact images are not immediate images (a genre which, in any case, probably does not exist). Rather, they are images

> that impose a certain symptom of adherence on optical distance, such that we can feel our seeing touched. Or that force physical contact to retreat – severely or only slightly – in a well-composed distancing, such that we can feel our touching seen. Contact images? A slight trembling from front to back. A dialectical groping of the hand that seeks to see and the eye that seeks to touch (Didi-Huberman 1997, unpaged).

Didi-Huberman's double figure of the hand seeking to see and the eye seeking to touch is made manifest in the all-embracing title of his essay: contact images. Images that are created through physical contact and which, in return, 'make contact' through their visual closeness. Twenty years before Didi-Huberman, Rosalind Krauss wrote about the allegorical power of photograms as physical traces in her bipartite 'Notes on the Index: Seventies Art in America' (1977). She states:

> But the photogram only forces, or makes explicit, what is the case of all photography. Every photograph is the result of a physical imprint transferred by light reflections onto a sensitive surface. The photograph is thus a type of icon, or visual likeness, which bears an indexical relationship to its object. Its separation from true icons is felt through the absoluteness of this physical genesis [...] (Krauss 1977 part 1, 75).

Krauss explores how the index appears and functions in 1970s art, with an expansive explanation of photography as index (as well as reflection on her contemporaries). Her work has been influential for scholars. But when – like many other scholars – I focus on the presence of the photographic trace and the absence of its cause, I overlook the intrinsic material presence of exposed silver particles and the absence of non-exposed silver halides in the photograph's surface layer. Whereas the exposed silver halides are developed into metallic silver and ultimately become the black parts of the print, the non-exposed silver halides are converted into a water-soluble complex in the fixing bath, and washed away.

Consequently, the trace left by the object *on* the surface of a photogram is converted, during the developing process, into an *absence* of silver halides. What remains here is the coated white paper without anything dispersed in it. Can it still be called a trace, when nothing is left behind? Can absence be regarded as trace? The trace of the objects placed on the photographic surface is an 'emptied' trace. The contact did not impress, imprint, or inscribe anything, as the suffix of the word photo*gram* – from γράμμα or *grámma*, meaning written character, letter, that which is drawn – would insinuate. The contact simply covered particular parts of the surface in darkness, withholding light from this sensitive surface. The photogram is therefore rather a *skotogram* (deriving from σκότος or skotos for darkness). As Didi-Huberman wrote in the excerpt quoted above, photograms are metaphorically "sculpted by developer, modelled by shadow, moulded by light, carved by exposure time". Just as the photographic surface is touched by all of these phenomena, so too the contact image can "graze", "grasp", and "touch" us in reverse.

Such 'emptied traces' in *skotograms* can nevertheless affect us and we 'fill' them with our (emotional) associative response. I understand why for Van Lier the "photograph is strictly an effect. *Photo-effect. Effect-photo*" (Van Lier 2007 [1983], 20, emphasis in original). For Van Lier, "photography is an ambiguous word" because "[g]raphs as writing or drawing, are the human products par excellence; and light, as physical agent, cannot be drawn or described" (ibid.). This *photo-effect* is a physical consequence of matter being affected by light, and subsequently of the effects that image and object have on a viewer. These effects will be discussed in the following two sections.

2.2. THE RECIPROCITY OF TOUCHING AND BEING TOUCHED

"I began by collecting postcards of deformed trees – strange mutations with rogue branches or outsize trunks, not consciously knowing why, but just adding them to my collection of images that I found in flea markets", writes Tacita Dean (Dean 2011a, 84). The interest that was sparked by these found black-and-white postcards later evolved into a deeper investigation into the ancient trees of Dean's natal country, England, and this, eventually, found its way onto photographic paper. Dean continues reflecting on this process: "And then idling in the studio, I began outlining the tree shapes with white – highlighting their forms and monumentalising their grotesque beauty. It was very satisfying, denying all the chaos of the background" (ibid.). For two years after this, she painted, first on the small postcards, the *Deformed Trees* series (fig. 1.10), and later on the huge "painted trees" (figs. 2.5a–f) including *Crowhurst II*.

FIGURE 2.5A. Tacita Dean, *Majesty*, 2006.
Gouache on black and white fibre based photograph mounted on paper, 300×420cm.
Tate, London, United Kingdom.

FIGURE 2.5B. Tacita Dean, *Beauty*, 2006.
Gouache on black and white fibre based photograph mounted on paper, 358.14×373.38cm.
SFMOMA, San Francisco, United States.

FIGURE 2.5C. Tacita Dean, *Crowhurst*, 2006.
Gouache on black and white fibre based photograph, 300×409.9cm. The Museum of Modern Art, purchased with funds provided by Kathy and Richard S. Fuld, Jr., New York, United States.

FIGURE 2.5D. Tacita Dean, *Majesty (Portrait)*, 2007.
Gouache on black and white fibre based photograph mounted on paper, 368×299cm.
Fondation Louis Vuitton, Paris, France.

FIGURE 2.5E. Tacita Dean, *Monkey Puzzle II*, 2007
Gouache on fibre-based photograph mounted on paper, 499.9×329.2cm.
Norton Museum of Art, West Palm Beach, Florida, United States.

FIGURE 2.5F. Tacita Dean, *Tree of Life*, 2016.
Gouache on black and white fibre based photograph mounted on paper, 336×420cm.
Marian Goodman Gallery, New York, United States.

In the same passage, she expresses her pleasure in dealing with these impressive trees with such closeness and focus: "I then hand-painted around every branch with a small gauge paintbrush in white gouache paint, delighting in my proximity to even the tiniest and most inaccessible of branches on these mighty trees" (Dean 2011a, 84). Her proximity to the exposed photographic skin contrasts with the viewer's physical distance when standing before a photowork like *Crowhurst II*. Still, her physical engagement with the material, in the acts of painting and mounting, produces a haptic photowork. The juxtaposed bulging photographic paper and matte dried gouache contribute to the photowork's sensuous appearance. How can we approach these values and dimensions with a perspective that includes and acknowledges the somatic sense experience in addition to the primal ocular observation? In particular, how can a photowork like *Crowhurst II* invoke a more affective experience of touching or being touched for the viewer, when direct cutaneous contact is out of the question?

This subsection focuses on the photowork's relation to various ideas of touch, whether tactile sensing, haptic perception, tangible materiality, or the metaphorical notion of being affected. Mark Paterson's *The Senses of Touch: Haptics, Affects and Technologies* (2007) was a guide for me as I found my way through these overlapping categories. Touching, in the sense of *tactile* experience, can be characterized as an immediate sensation: skin brushes against the surface of something that gives both a sense of the surface's texture and a "spatial awareness that derives from interoceptive (inward-oriented) senses of bodily position, movement and balance" (Paterson 2007, 3–4). In comparison, the *haptic* pertains to the sense of touch and of tactile sensation. A haptic perception need not presuppose physical contact, but draws on previous tactile experiences and quotidian habits. The *haptic* also "expands the reach of touch from cutaneous surface to more inwardly-oriented senses", says Paterson (2007, 4). Understanding the tactile properties of a haptic photowork like *Crowhurst II* is then also an attempt to understand its "capacity to affect", as Paterson explains in a more general sense (2007, 80–81).

I am particularly interested in how we can speak of the reciprocal effect of touching a photograph and being touched by its material and its subject matter. I argue that the essence of the interaction between viewer and photograph – what happens when we hold a photograph in our hands – might elicit something of the core of our relationship with photography, which stands in contrast to, but is still present when, dealing with (monumental) photoworks on the exhibition wall. Because we cannot touch those photographs without triggering an alarm, we have to rely on other, more indirect forms of sensing and experiencing the tangible.

THE PHOTOGRAPH'S AFFORDANCE: (FORBIDDEN) TO TOUCH

On Tacita Dean's *Crowhurst II,* several fingerprints are visible on the corners of the work and along the right and left edges (fig. 2.6). Some of the fingerprints carry little particles of white gouache paint. These are likely to have been made during the painting process and to be prints of the artist's own fingertips. The other fingerprints, which did not leave paint traces, might also be Dean's, because other professionals who have dealt with the artworks (printers, art dealers, curators, conservators, and others) are likely to have used professional lint-free, nitrile or cotton gloves to protect the photographic gelatin from the finger's oils. These oils can destroy the emulsion and can lead to bleaching, staining, and silver mirroring, all of which are serious threats to

FIGURE 2.6. Detail of *Crowhurst II*, 2007.
Fingerprint on photographic surface.

the photograph. As in a criminal investigation, these fingerprints offer indisputable evidence of a person's presence: of the contact they made and the nature of the action. A conservator will always search for these marks when seeking to determine the condition of a photograph for the purpose of treatment or a condition report, before and after exhibiting the photowork (especially when it is being loaned). Fingertips and other forms of mechanical or chemical damage, as well as additions made by the artist, are used to retrace the biography of the photowork when it is being 'mapped' (I will return to this later).

The work of Elizabeth Edwards, an English anthropologist and historian, is central to any analysis of the photograph as a tangible material object that is shaped by our tactile engagement with it. Edwards views the context in which the work appears as an important element of material practice. The 'placing' of a photograph frames its meaning but also the engagement with it that can be expected or triggered. During my previous work in exhibition making, I was struck by the lack of respect that visitors showed towards photographs when compared to, for instance, paintings. Photowork condition reports testify to this, itemizing several fingerprints, scratches, once even a 'noseprint'. I cannot but attribute this harmful intimacy to the fact that we literally 'feel close' to the medium because we all have a relationship with photography as photographer and subject (through shooting, printing, touching, sharing, and in Dean's case, leafing through piles of photographs). Because of this personal engagement with prints, and because of the idea that they are reproducible, we lack respect for photographs. I argue that these associations, which derive from our personal treatment and use of photographs, come into play when we approach photoworks in a museum environment. Though the museum setting assumes a specific treatment of artworks, the compulsion to touch a photograph is so strong that it over-rides assumptions of restraint and physical separation. Edwards, in her description of this process of 'placing' a photograph, states that there is a certain etiquette to viewing photographs (Edwards 2012, 226–227). This leads to an inherent and context-sensitive paradox: touching photographs and absolutely not touching photographs.

Back to basics: which (tactile) actions occur when we use a photograph in normal life? One way to consider the photograph as tangible object is to think in terms of what it affords. James Gibson pioneered the idea of affordance in *The Ecological Approach To Visual Perception,* the same book which helped in the first chapter to understand the tripartite relation between surface, texture, and structure of the photographic surface. Gibson coined the noun *affordance,* referring to a contingent behaviour or action that comes forth between the (surface) distribution of the environment, and the animal. In brief, a few examples of affordances for humans: anything cup-shaped affords drinking, anything firm at knee-height above the ground affords sitting. Important elements of an affordance are to Gibson that it implies a complementary of human and environment, and that it is relative to the human. The latter has the consequence that an affordance cannot be measured. His description here returns to the fact that viewer and environment are both crucial:

> An important fact about the affordances of the environment is that they are in a sense objective, real, and physical, unlike values and meanings, which are often supposed to be subjective, phenomenal, and mental. But, actually, an affordance is neither an objective property nor a subjective property; or it is both if you like. An affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is equally a fact of the environment and a fact of behaviour. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer (Gibson 2015 [1979], 121).

So, what affordance(s) can be attributed to the photograph and its beholder? To answer this question we have to distinguish between the photograph as material object and as image. The fact that there is a wide range of photographic objects means that their affordances must also be multiple. Most prominently, we have private photographs, onscreen or printed (left over from the analogue period). Gillian Rose discusses the affordances of such photographs in *Doing Family Photography*. The scale of the printed family photograph allows them to be picked up individually and placed in albums, boxes or frames (Rose 2010, 20). It is hard, in fact, to establish clear material-based affordances for family snaps in Rose's book. When she writes about the objects' qualities and their affordances, the surrounding and preceding practices automatically come into play (as it does in Edwards's writings). The most significant affordance, however, is independent of these display and circulation practices: it is the indexicality of what these photographs show. Rose mentions that this indexical affordance of photographs was taken for granted by all the interviewees she consulted when conducting her research (2010, 30). When family photographs are shown to or shared with others, indexicality is key. Even though these images situate themselves in the context of happy family leisure, they appear so "truthful" that at times they seem to substitute for memories of the depicted individuals (2010, 32).

So, seeking an answer about a photograph's material affordances, we return to Gibson. He asks at the beginning of his theory of affordances: "How do we go from surfaces to affordances? And if there is information in light for the perception of surfaces, is there information for the perception of what they afford?" (Gibson 2015 [1979], 119). Hesitantly, he proposes that the composition and the layout of the surface might already constitute what they afford. It is indisputably the size, paper thickness, and the (glossy or matte) surface layer that reveals (tangibly and at first sight) the nature of a photograph. But perhaps even more significant is the very specific distribution of the grains, and therein the photograph's graininess, which forms the visual language that we associate with any photographic image, positioned somewhere between sharpness and out-of-focus. It is this material-based visual language, as part of the photographic surface, that indicates immediately that we are dealing with a photograph rather than any other image medium.

Gibson points out that "[…] the basic affordances of the environment are perceivable and are usually perceivable directly, without an excessive amount of learning" (Gibson 2015 [1979], 134).

Following from that, I would argue that the 'picking up', 'looking at', 'storing in', 'caressing', and 'sharing' are the affordances of loose printed family photographs. With the handheld touchscreen, the current display and storage object for family snaps, a "perceived affordance"[5] is the (swiping or ticking) touch of the index finger, the thumb, or both, in order to share, enlarge, or to delete. What is left is a trail of grease on the glass, detached from the photographs. Though highly tactile, the 'screened' photograph itself remains untouched during and after viewing. In fact the reciprocity of touching and being touched by the photograph, including *both* the traces left on the photographic surface *and* in the emotion of the beholder, is unique to printed photography. By taking up an argument by Cathryn Vasseleu, Mika Elo explains in his article 'The New Technological Environment of Photography and Shifting Conditions of Embodiment' how digital technologies detach the objective aspect of touching from its affective qualities. They rely on a "formalization of touch" wherein touch becomes an objective sense (Elo 2016, 276) and the finger its omnipresent tool. Accordingly, the affective and physical aspects of touch are separated and represented as two "relatively autonomous dimensions" (2016, 277). Elo concludes:

> With regard to the tensional relation between vision and touch this implies that it is the affective link between the user's body and digital information that tends to motivate the visual appearance of media contents in digital culture, whereas in pre-digital visual culture the most powerful substrate of affectivity was made up by visual appearances (2016, 278).

I mention the polarity between the physical and the affective touch, as enhanced through digital means, to highlight the difference between digital and 'analogue' experiences of touch. Introducing the sense of touch, Elo says that in contrast to other senses, "touch makes the sensing and the sensed coincide" (2016, 271). I would go so far as to argue that the differentiation between subject and object is questioned if not abrogated, when it comes to touching the photographic surface. Gibson's idea of affordance, which involves both human and (a part of) its environment, also defies the problematic subject-object classification by focusing on the complementary relationships. Drawing on Gibson's description of touch as "both physical and psychical, yet neither" (Gibson 2015 [1979], 121), I am even more tempted to regard touching as the most basic affordance of a photograph – even though (following Rose) the indexicality may be its most significant. The tactile and the indexical affordances are two different systems and both are at stake when we approach a photograph. Both are at hand when we speak of the reciprocity of touching and being touched by photographs. In that very encounter, photographs become 'objects of affect'.

FIGURE 2.7. Tacita Dean, *Floh*, 2001.
Artist book. Made in collaboration with Martyn Ridgewell. Page unknown [176], Hardcover with linen cloth, Smyth sewing, slipcase, Edition of 4000 signed and numbered, 29.7×24cm. Published by Steidl, Göttingen, Germany.

OBJECTS OF AFFECT

Dean's postcards of deformed trees, which she found browsing flea markets all over the world, are not outliers in her practice. These particular postcards led to the monumental painted tree photoworks. In another work, *Floh* (2001), published with Steidl as an artist book, Dean pays tribute to the original images she found. *Floh* has no text, it is a selected and edited reflection of her massive accumulated archive of found photographs, which appeared as a numbered and signed book edition of 4,000. Dean creates sequences of images that are open to the reader's own associations with family snaps, private portraits, landscape views, or still lives (though there are no trees). She often displays paired photographs, printed on facing pages. Only occasionally are these scanned or rephotographed images displayed in full bleed (which makes the subject or content of the image appear more pronounced). Most of the photographs appear to be represented in their original size and with the marks that history has left on them, all of which draws emphasis to the nature of each image as an object (fig. 2.7).[6] *Floh* can shed light on how Dean appropriates and uses found photographs in her own projects, and also on our own basic tactile interaction with personal photographic objects. With this in mind, we might think differently about how *Crowhurst II* can have a tangible and haptic impact on our perception, even though there can be no direct tactile engagement with it. The focus is on the photograph's layered stories, as well as on the visual content of the images.

As mentioned before, Edwards conducted, developed, and discussed many material approaches to photographs in her outstanding work. For her, the visual apprehension of the image was not sufficient – it needed to be extended into the subjective and emotional placement of photographs as "objects of affect". In an essay with this title, she writes,

> The shifts from meaning alone to mattering and from content to social process are integral to material approaches to photographs and have demanded an analytical approach that acknowledges the plurality of modes of experience of the

> photograph as tactile, sensory things that exist in time and space and are constituted by and through social relations (Edwards 2012, 228).

Edwards is a key figure in the academic field of material approaches to photographs and it is easy to find relevant arguments across her written and edited volumes. But when I read her texts, thinking with my own research into anthropologies of material culture, I find myself pondering the extent to which her analytical methodology is relevant to artistic photoworks. Dean's works, rooted as they are in found vernacular photographs, might bridge the two different approaches. Best known for her 2004 book *Photographs Objects Histories: On the Materiality of Images* (co-edited with Janice Hart), Edwards has recently turned her object-oriented attention to the networks in which the photograph travels, thereby building its social biography.[7] She regards social biography (as borrowed from material culture studies) as an effective concept for understanding the shifting roles and meanings of photographs as they move through different spaces and hands. Edwards refers to the biographical model Igor Kopytoff established in 'The Cultural Biography of Things: Commoditization as Process' (1986), in which he "[…] argued that objects cannot be understood through only one moment of their existence but are marked through successive moments of consumption across space and time" (quoted by Edwards 2012, 222). Edwards and Hart distinguish between two forms of social biography, of which one is the social biography of image content (as different prints, publication formats a.o.) in which the material form can differ. The other is that of a specific photographic object, which physically changes as it moves through time and space (Edwards and Hart 2004, 5). In the case of the collection of photographs presented in *Floh*, the social biography was that of specific single objects, until remediation by Dean. Each showed the marks of time and affection it had acquired before and during its time on the flea market stall. Each then appears in a new materiality, that of a paper book page, following Dean's collecting, scanning, editing, and publishing it. Thus one form of social biography becomes the other: object biography becomes the biography of image content. Post-publication, some pages of *Floh* have been rephotographed and posted online by viewers and users. Here, the historic photographs take on yet another form, one without any materiality at all.

Her collection of tree postcards (fig. 1.10) which eventually led Dean to *Crowhurst II*, are an interesting case. The (social) biographies of the overpainted postcards define them as objects. The historic postcards became part of a contemporary artwork, which now adds to their biography. In this form, can we propose that a new (social) biography, that of an artwork, begins? Or is the artistic intervention only a part of the initial social biography? How might Edwards respond to this possibility of divergence in the photograph's social biography – a divergence that could be seen as inherent to the artistic process of repurposing photographs? She draws on two models to extend her own biographical framework. The first model is Alfred Gell's idea of the "distributed object", which facilitates a nonlinear social biography of photographs that appear in "divergent multiple material originals." Edwards quotes Gell:

> In the process [of viewing], photographs emerge as relational or *distributed objects* enmeshed within various networks of telling, seeing, and being, which extends beyond what a photograph's surface visually displays and incorporates what is embodied in their materiality (as quoted by Edwards 2012, 224, emphasis in original).

The other model is Deborah Poole's conception of "visual economy" (1997), which accounts for the asymmetries of imaging practice and is based on the images' "exchange values" in circulation. As Edwards explains:

> Poole placed the meaning of photographs not in content alone but in the fluid relationships between a photograph's production, consumption, material forms, ownership, institutionalization, exchange, possession, and social accumulation, in which equal weight is given to content and use value (Edwards 2012, 223).

Whereas Edwards and Hart were distinguishing in their book between the two forms of social biography (Edwards and Hart 2004, 4–5), Edwards admits years later that the meaning of photographs as their various forms "shift through a double helix of image biography and the biography of material refiguration and remediation" (Edwards 2012, 224).

None of these three models – Edward's "social biography of the photograph", Gell's "distributed object", or Poole's "visual economy" – are quite right for the demands of an artistic photowork like Dean's *Crowhurst II*. Therefore I propose that most of Edwards's collected methodological tools are helpful because they take into account the connotations of the photograph or photographic objects regarding its/their historic or vernacular usages and performances. An artistic photowork can make reference to these uses, but ultimately it comes from a different motivation. The mechanisms of presentation, circulation, and conservation, then, determine the course of its biography (as I will address at the end of the third chapter). As Edwards and Hart say in their introduction, contemporary arts practice is beyond the scope of their book, even though the "material turn" is directly relevant to the work of artists like Christian Boltanski or Joachim Schmid, whose practice is rooted in an engagement with photographic material (Edwards and Hart 2004, 4). Having said this, Edwards's approach does meet the needs of a photowork when it comes to the place of affect in the apprehension of objects (Edwards 2012, 228–230). Edwards states that the "affective qualities", not only the visual, but also things like texture, weight or size, are the qualities that "invite tactility, gesture, and embodied apprehension" (2012, 228). The explicit involvement of the body in its relation to the photograph, which is crucial to any sensory appreciation and comprehension of the photographic image, is as relevant to artistic photoworks as to personal photographs.

THE PHYSICAL PUNCTUM

In 2005, the year that Dean over-painted her found postcards, Mark Godfrey wrote a profound article on *Floh* for *October* magazine. Interestingly, his text evinces a couple of (still tentative) thoughts concerning the tactile aspects of photographs, which would be articu-

FIGURE 2.8. Tacita Dean, *Floh*, 2001.
Artist book. Made in collaboration with Martyn Ridgewell. Page unknown [176], Hardcover with linen cloth, Smyth sewing, slipcase, Edition of 4000 signed and numbered, 29.7×24cm. Published by Steidl, Göttingen, Germany.

lated and elucidated, years later, by scholars including Margaret Olin, Elspeth Brown and Thy Phu, and Tina Campt (I will address these works of scholarship individually in this subsection). Godfrey tries to understand and to characterize Dean's "treatment of photography" by looking at how she has collected and presented found photographs. I will highlight two of his observations here. Firstly, he examines how Dean selected the photographs, which she calls "lost objects" rather than found images. And secondly, he considers the role of the photographic material in this process of finding and presenting these lost objects. Godfrey compares Dean's process with the ways in which other artists have used found photographs, and concludes that Dean, searching randomly through flea markets, found the photographs in a less directed manner than her peers: "The photographs had to find her, so to speak, jumping out of the piles of old images to attract her attention" (Godfrey 2005, 101). When looking through photographs or postcards in a flea market, Dean says, it's her attraction to a certain subject that will initiate one of her mini-collections. A collection is begun whenever she has two or more versions of something (Obrist 2013, 32–33).[8]

Of course we cannot lay bare *what* exactly moved her, but we certainly can state *that* she was touched. Discussing the deformed tree postcards (fig. 1.10), she admits that she was collecting them while "not consciously knowing why" (Obrist 2013, 80). There is an ambiguity in being affected by anonymous found photographs, as they do not depict personal memories and lack contextual information. This particular habit, in which the true referent of the photograph can be unknown even as it 'touches' the viewer, is consistent with Olin's notion of an *index of identification*. The beholder's emotional reaction (re-) contextualizes the image with personal associations in an unforeseeable manner. Godfrey describes how, as the many photographs in *Floh* are not ordered thematically or hierarchically, the volume "offers to us the possibility of finding our own images" (Godfrey 2005, 115). As a wordless publication, *Floh* does not direct our reception by imposing meaning on these found images or giving provenance. There is no option but to respond in an intuitive and personal manner, as Dean did when leafing through the cards on flea-market stalls.

Reading Godfrey's text, it becomes clear that Dean's attention is caught by both the images' content and also by marks of affection and hatred *on* the photographic material. Godfrey builds his argument around two photographs which bear clear signs of intervention. One is a group portrait of twenty-three men and women arranged in three rows. The faces of two of the women are scratched out with blue pen (fig. 2.8). Godfrey:

> These marks, sitting on top of the photographic surface, or rather on top and within it (the pen has torn away the paper), witness an altogether different kind of treatment of photography. They find their match toward the end of the book in another mark over a photograph of two young boys returning successful after a fishing trip. This time it is a mark of tenderness: we see a fingerprint over the youngest boy's face, the indexical sign of the index finger that once touched the image of the child (Godfrey 2005, 110).

The dual meaning of touching – sensational and emotional – is physically manifest in these two examples from *Floh*. Contributions to the 'Touchy-Feely' section of the edited volume *Feeling Photography* pursue this double path. They affirm my impression of the reciprocity of touching and being touched. As the editors Brown and Phu state in their introduction:

> As numerous practitioners, critics, and collectors would agree, photography is fundamentally tactile. Touching photographs, whether it is the glossy surface of a developed print itself or even the protective frame that might enclose this print, is one of our most compelling engagements with the medium, particularly since this act is often accompanied by the sensation that the subjects pictured on this surface can somehow touch back (Brown and Phu 2014, 13–14).

At one point, reflecting on the marks of affection and disregard, Godfrey switches in his article to write in the first person:

> Such touches of hatred and care spring off the pages of *Floh* as I turn through the book, and once I notice the scratched-out faces of the cadets, or the tenderly touched face of the young boy, I cannot see the images in the same way again. Could these latter marks act like a punctum, then? (Godfrey 2005, 110).

This personal voice emerges logically from his line of thought, as he is struck by these material traces of expressed emotion. *Studium* and *punctum*, coined by Roland Barthes in his *Camera Lucida*, are terms with a personal tint – their meaning is completed by the contemplator.

They have, to a certain extent, aided the progress of photography theory, but they have equally been shown to be problematic, when simplified. Barthes describes the punctum in the first part of *Camera Lucida* (1981, original title *La Chambre Claire*, 1980) as follows:

> [...] it is this element which rises from the scene, shoots out of it like an arrow, and pierces me. A Latin word exists to designate this wound, this prick, this mark made by a pointed instrument: the word suits me all the better [...] for *punctum* is also: sting, speck, cut, little hole – and also a cast of the dice. A photograph's *punctum* is that accident which pricks me (but also bruises me, is poignant to me) (Barthes 1981, 26–27, emphasis in original).

By asking whether the punctum could be something *on* the photograph instead of *in* the photograph, Godfrey, however, brings up the new and compelling prospect of a third person – somebody who is involved here, but whom Barthes himself did not envisage. Godfrey argues that these relicts of the touched surface point to the irrational aspects of everyday photography (Godfrey 2005, 112). Though present in absence, they bring in beholder(s) who at one point shared one or more moments with the photograph. Herewith, Godfrey turns also to the other (more indexical) conception of the punctum, articulated further on in *Camera Lucida* by Barthes:

> I now know that there exists another *punctum* (another "stigmatum") than the "detail." This new *punctum,* which is no longer of form but of intensity, is Time, the lacerating emphasis of the *noeme* ("*that-has-been*"), its pure representation (Barthes 1981, 96, emphasis in original).

Strictly speaking, it is the material of the photographic object that triggers the idea of the 'second' punctum. For Godfrey or for Dean, when looking at this particular *Floh* photograph, this apprehension of the punctum occurs twice: for the photographed young boy (who is by now either aged or even dead) *and* for the person who has been there caressing the photograph of him. In response to Godfrey's question, then, this is not an either/or issue, the punctum can be both something on *and* in the photograph at once.

In both *Touching Photographs* by Olin and *Feeling Photography* by Brown and Phu, a rereading of *Camera Lucida* precedes many of the authors' reflections on the relation between touching the photograph and being affected by it. Brown and Phu even attribute to the punctum a crucial role as powerful concept for a "theory of feeling photography" (Brown and Phu 2014, 4–5).[9]

Another essay in *Feeling Photography*, 'Photography between Desire and Grief – Roland Barthes and F. Holland Day' by Shawn Michelle Smith, stands out in this context, as Smith focuses on the notion of the "wound" in relation to Barthes's punctum. For Smith, *Camera Lucida* is Barthes's provocative attempt to describe photography's affective power (Smith 2014, 29). She focuses on this affective approach, what Barthes called "affective intentionality": his active way of observing a photograph (quoted by Smith 2014, 30). Smith aligns Barthes's understanding of photography with that of photographer F. Holland Day. Both, one through words and the other through the lens, believed that "feeling intervenes in the relationship between photographic signifier and signified" (2014, 30–31). Whereas Smith's article considers how feelings can be seen *in* photographs, and doesn't think of the viewer – how photographs make one feel – nonetheless, I want to highlight her elaboration of the wound here.

Barthes chose a deliberately haptic language of feeling to describe his punctum, thus illuminating the physical effects that a photograph can have when triggering our emotions. As Smith states (and Olin too), his understanding of photography is notably tactile: "[…] his experience of viewing is one of being touched" (Smith 2014, 34). She describes the punctum as follows:

> The unpredictable wound of the punctum disrupts the scripted meaning of the studium. It opens the photograph to deeply personal significance. It is the trigger that meets the viewer's "affective intentionality" and transports her down a unique path of associations. The details of the image become springboards that send one in unexpected directions. Although dependent on the contingency of the photograph, and on its indexicality, the punctum unsettles the site of photographic meaning, opening it up to the viewer's affect (2014, 34–35).

Interestingly, the associations and emotions that are triggered can then again take the form of physically touching or 'hurting' the photographic surface: touching and being touched go hand-in-hand in a continuous haptic engagement. The physical residue of the emotional response to the punctum's wound can then quite literally be surface wounds of the intact gelatin layer: fingertips, creases or scratches. One of the collected contributions to *Issues in the Conservation of Photographs*, published by the Getty Conservation Institute, explains that finger oils and sweat are acidic (with sodium chloride as its principal component) and can etch the binder layers over time (Norris and Gutierrez 2010, 611). Due to a less developed gelatin hardening technology in earlier periods, older photographs (those printed on photographic paper manufactured more than fifty years ago) are more susceptible to the effect of a fingerprint than contemporary photographic material. A fresh fingerprint on a contemporary photograph can be wiped off the surface more easily without leaving any mark (Hendriks and Krall 1993, 12).

In *Floh*, physical damage to the photographs is a mark or residue of past feelings, and it intervenes with the depicted scenes. Surface damage disrupts the portraits of the two boys and literally defaces the group portrait. This sends the viewer's attention off in a different direction, that is, it draws attention to the person who touched the photographs and was affected by it. There are no indexical indications of this person who caressed or damaged the surface, and so the viewer must rely on personal associations (unless they take a forensic approach, searching databases for a matching fingerprint). It does not surprise us, then, that Godfrey's response is affective and it led him to seek a relationship between the physical marks of the touched surface and the notion of the punctum.

The signs of use on the photographic surface reveal the "[…] time of printing, storing, and gathering dust; the time of treasuring and touching" (Godfrey 2005, 109). According to him, these marks

refer to an "expanded temporality" that follows the instant of exposure. Tina Campt coined the term *haptic temporalities* for these various 'times' of the photograph. Especially in the first chapter ('Family Matters – Sight, Sense, Touch') of her book *Image Matters: Archive, Photography, and the African Diaspora in Europe* (2012), Campt explores a selection of domestic photographs of black German families through the sensory and affective register of touch. She takes her own archival encounter and scholarly engagement with these photographs as point of departure, but emphasizes that this interaction is only one fraction of a series of haptic encounters that these photographs had and will have. These are haptic temporalities and not tactile temporalities, she says:

> [...] the haptics of a photograph reside not only in its status as tactile object of physical contact or in their optical representation of engaging visual depictions. The haptics of domestic photos derive from their capacity to solicit a relay of social transactions that evoke sensate, embodied, and affective engagements (Campt 2012, 44).

Her concept of haptic temporalities therefore resonates through both physical and psychical contacts with family photographs, beside the visual contact of seeing.[10] Godfrey's writings align with Campt's definition of these haptic temporalities:

> [...] initiated at their moments of production through a desire to create a material object of sentiment to have and to hold. The multiple temporalities of these images continue through the diverse temporalities of their circulation, distribution, and the passing on of these objects to others (2012, 34).

Although these family photographs of black Europeans from the first half of the twentieth century are much more contextually loaded than Dean's *Floh*-photographs, I cite Campt here because of the way she positions herself and her treatment of the photographs as part of their haptic temporalities. Campt acknowledges that her contact with these photographs shapes them in the present and will initiate other haptic encounters in the future. These temporalities have already shifted during her research, from the moment of initial contact to the moment of her writing about them. She confesses:

> [...] even the haptic temporalities in which I participate are rife with the affects I attach to these photos as objects I, too, [like their makers and keepers] invest with sentiment and meaning as traces of people, many of whom I did not know yet some of whom I once knew but never quite knew "like that" – as the people captured in photographs of past lives and earlier selves (2012, 34).

The multiple emotions that a photograph can provoke will automatically extend its temporal register. In that sense it can be appreciated as a meaningful object that accumulates many layers of use and affection during its existence, including through our own encounter(s). The critical difference between the photographs Campt discusses, the *Floh*-photographs Dean edited into a photobook, and *Crowhurst II*, lies in their different tactilities. When the four strokes of *Crowhurst II* were laid out, one at a time, on the huge table in the restoration studio of the Stedelijk Museum, I was even then not allowed to touch the sensitive surface with my gloved hands during our examination of its condition.[11] I could look from different angles and come close to the photowork's surface without an alarm going off, but for the rest, my non-tactile encounter did not differ from that of an exhibition visitor. This only placed a greater significance on the role of my eyes. Vision had to sense the gloss, the corrugations, the brittle gouache paint, the paper, et cetera. This is why I turn in the next subsection to writings by film scholars who have theorized a *haptic visuality* over the past three decades, much in contrast to photography studies, where the notion appears only tentatively.

This photowork touched me at that moment of examination and in that moment, shaped my theoretical approach. By forcing me to deal with it in a haptic manner, without touching, I had to find a suitable theoretical framework that would include its signifying material properties. It offered me a chance to extend my theoretical register, and I hope that my account of the tactility that *Crowhurst II* evokes can open new doors for haptic encounters with this photowork, or even with other photoworks.

2.3. PERCEPTION OF THE HAPTIC PHOTOWORK IN EXHIBITION *Spaces*

Because *Crowhurst II* has an unprotected open surface, it is very vulnerable to external factors like humidity, light, *and* curious museum visitors. Protective framing or mounting of the photowork behind glass would, however, tremendously alter its appearance and therewith the artist's intention. Moreover, the viewer's perception of and response to the photowork are determined by the extra surface of the protective (though transparent) glass on top. Nevertheless, photographs, when exhibited, are often framed. Conservational concerns prevail, especially for vintage and historic prints. The consequences of such a widespread policy are seldom thought through. A haptic photowork like *Crowhurst II* epitomises this matter, which matters to all photographic prints when thinking of their material and haptic qualities. How can we (theoretically) characterise our relations with all the values of photoworks that lie beyond the visual – whether through or in spite of our obedient tactile approach to exhibited photoworks? What agency can be attributed to the tangible character of photoworks in exhibition contexts?

THE DISEMBODIED VIEWER AND THE DISEMBODIED PHOTOGRAPH

Glenn Willumson, former curator of photography at the Getty Research Institute, has written about the consequences of framing photographs following formal criteria that are based on the tradition of the fine art print. Although his text 'Making meaning: displaced materiality in the library and art museum' dates from the beginning of the millennium, the curatorial practice of framing vintage and historic photographs remains current. Traditions of presentation for the fine

art print were taken as the point of reference, and formally applied to photographs when they entered the art museum context (Willumson cites the first photography exhibition(s) at New York's The Museum of Modern Art). The result of this established framing practice is, according to him, a displaced photographic materiality in the art museum, where the attention is limited to the surface quality of the photograph (Willumson 2004, 74). Discussing the practice and publications of Beaumont Newhall – former librarian at The Museum of Modern Art and from 1940 on the first curator of the photography department – Willumson shows how framing discourse "divorced the photographic object intellectually from its materiality and its context" (2004, 76). He states that Newhall delivered the first comprehensive exhibition of photographs in The Museum of Modern Art in 1937 (which had a now-famous accompanying catalogue *The History of Photography*), and that Newhall's curatorial practice shaped a methodology for photography exhibitions in the United States. The fine art framing process was instrumental in the historical shift towards the reception of photographic works as fine art. Photographic works, especially documentary photographs such as those by Margaret Bourke-White, were aligned with traditional models of art historical methodology and museum practice to enter the sphere of fine art. Newhall's criteria established a common practice that has endured to this day. Material aspects of the photographic object are often lost in this mode of presentation.[12] This preliminary method of presentation for photographs, initiated in 1937 and modelled on the exhibition practice of other accepted art forms, has had also a positive effect on the preservation of these photoworks in the long term.

Willumson claims that the art museum setting is one that intentionally removes the body of the viewer and its tactility, for the purposes of preserving the art object (2004, 73). Monica Marchesi explains how framing is common part of preventive conservation, that leads to a "blindness about frames" among conservators (Marchesi 2017, 180–181). As it is regarded as a "neutral, safe action", the consequences it has on the perception of the photograph by the viewer is left out. The corollary of this practice is that it eliminates any traces of the previous trajectories of the photographic object – its entire personal biography. Willumson poignantly summarizes this in a single sentence: "Just as the museum displays enact the disembodiment of the viewer, so exhibition policies enact the disembodiment of the photograph" (2004, 74). He advocates exhibition policies that give space to the histories and trajectories of photographic objects. When we treat the photograph as an organic thing that, like the human body, has its own personal biography, we can address an audience who will recognise this experience as familiar (2004, 77).

So what does Willumson mean, exactly, when he describes the disembodiment of the viewer in relation to the disembodiment of the photograph? Does the disembodiment concern the body of the viewer and his movement as he views the framed photograph on the wall? Or does Willumson try to address the various senses of perception that are receded from optical perception by such displays? Fay Zika, a Greek scholar in philosophy and theory of art, published an essay, 'Tactile Relief: Reconsidering Medium and Modality Specificity' in the *British Journal of Aesthetics* in 2005. Basing her arguments on the term "tactile pictures", theorized by Dominic Lopes, Zika shows how a single medium (in her case painting) may be associated with the sensory content of more than one sense. Lopes's line of argument relies, inter alia, on empirical psychological studies that explore how blind people experience pictures. One study invited blind and sighted people, when blindfolded, to touch drawings and feel the outlines of the drawn objects and landscapes. The researchers discovered that the blind people were able to reproduce recognisable versions of these drawings afterwards, without tuition. It is commonly assumed that sight but not touch can give insight in the spatial properties of the world. Lopes argues that the findings of this empirical study refutes that (Lopes 1997, 428–431). Still, vision, unlike touch, affords a perspectival experience, whereas touch apprehends – albeit directly – only point-by-point parts within space. It cannot present an overview of spatial relationships within a single point of view. For this reason, Robert Hopkins has criticized Lopes's argument in an article written in response, 'Touching Pictures' (2000). Zika, in turn, juxtaposes the two point of views with the intention of refining Lopes's term *tactile pictures.* Her answer lies somewhere between the multisensory, and the multimedia multimodal (Zika 2005, 437).[13]

Zika emphasizes that sight-sensing can activate or evoke other sensory contents, and this leads to a unified experience of the artwork. Her argument aims to overcome the modal singularity of any specific medium (2005, 435–436). The discourse of framing, as criticized by Willumson, excludes, or at least minimizes, the perception of the photographs with other senses than sight. The glass that is placed over the photographic surface becomes the object's surface as the viewer perceives it. Its glassy homogenous plane prevents the viewer from exploring any small undulations or irregularities on the photographic surface. Mounting and framing not only hides the back of the photograph (and in the case of passe-partouts also the edges), it presses the photographic object into perfect flatness between the glass and the back cover. Taking a side-angled view doesn't reveal new insights on the photograph, rather, it brings the light reflections from the exhibition spots into view.

One of the differences between an inkjet print and a silver-gelatin or a chromogenic photograph becomes visible when looking at the surface sidelong under grazing light condition. Whereas the dark image parts of the inkjet print stand out (in contrast to the light parts), the smooth gelatin surface of the photographic paper does not show up any visible differences between dark and light image parts.[14] This clearly discernible disparity between these fundamentally different processes is effaced when framed behind glass. The glass in front of the photograph stands in analogy to the screen in that it renders the photograph's materiality to one and the same outer material configuration. This is not a carrier medium but an encapsulating medium. The picture frame 'absorbs' the body of the photograph by directing all the viewer's attention to its image content. This is why Willumson talks of the disembodiment of the photograph in exhibition policy. Storing and dis-

playing objects and artefacts behind glass automatically contextualizes these works as predominantly visual. When we lose these other forms of information given by the object, which refer to their original cultural context, there is always this risk that the photowork will only be understood on limited terms (Marks 2000, 114–115; Classen 1993, 136). But this is the responsibility of the museum staff, who must find modes of display that on the one hand fulfil the conservational needs of sensitive photoworks *and* on the other hand facilitate the adequate perception of the photowork as a multi-faceted object.

A HAPTIC PHOTOWORK

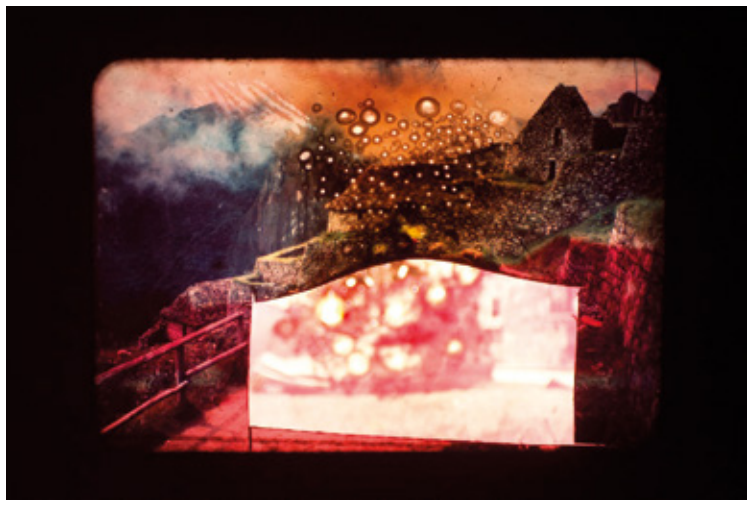
How can/does the viewer's perception pay tribute to the tangible nature of the photowork, given that actually touching it is forbidden? The tactile aspect of the visual realm has been approached as an abstraction by (in chronological order) art history (Alois Riegl), philosophy (Gilles Deleuze and Félix Guattari), and film theory (Laura U. Marks). Here, the haptic is a notion that demands an embodied perception without automatically suggesting physical touch. Instead, the eyes function as organs of touch, establishing a connection between exterior (image surfaces) and interior (modes of feelings).[15] The *haptic*, as discussed by these scholars, is not a synonym for *tactile*, though tactility can certainly be an aspect of the haptic.

Visual culture studies' discourse on the haptic often defer to Alois Riegl's notions of *tactile* or *haptic vision*.[16] Riegl was an Austrian art historian at the beginning of the twentieth century, his influential work explores the complex relations between the hand and the eye in visual experience. Riegl centralises this relationship as the critical faultline between the art of antiquity and the art of the modern world, from the Renaissance on. His analysis addresses ancient depictions of objects as clear material entities, individually delineated and impermeable, and contrasts these representations with depictions from the Renaissance on, in which objects are presented within a unified space. Riegl asserts a connection between these distinct historical perceptions and representations, and antagonism between the (disembodied, long-distance) vision of the optic and the (close-range, tactile) perception of the haptic. He focuses on craftworks such as jewellery, textiles, or architecture; objects that are intrinsically tactile. Mark Paterson outlines the key figures of this longstanding debate within the art historical tradition of the optic and the haptic in his book *The Senses of Touch: Haptics, Affects and Technologies* (2007). My aim here is not to reproduce the various conceptions of the haptic-optic dichotomy as established in art theoretical discourse, but to investigate how scholars in the field of photography have taken up these discussions so that I can assess their value for my approach to photoworks.

I can think of only a handful of scholars (discussed in the previous section – Elizabeth Edwards, Margaret Olin, Tina Campt, Elspeth Brown and Thy Phu, and Geoffrey Batchen) who profoundly elicit the haptic aspects of (vernacular historic) photography. However, in film theory since the 1990s there has been a veritable upsurge in the theorization of an embodied film experience centring on the haptic. Thomas Elsaesser and Malte Hagener rationalise this concern as a consequence of linguistic signification and of the ocular-centrism that dominated previous film theory.[17] In the introduction to their edited volume of photography theory, Brown and Phu ask why photo criticism has been so reluctant to address the feelings and haptics of photography. Their answer is that this form of criticism drew almost exclusively on what they call a methodological "thinking photography". One reason for this aversion to feeling could be that in the 1970s and 1980s "feeling became the collateral damage in the disciplinary war against the often depoliticized incorporation of photographic images into the art historical and museological canon" (Brown and Phu 2014, 3). The circle is closing with Willumson's account of the reception of the photograph as something that has been enduringly influenced by the modernist methodology of exhibiting photography.[18]

As the viewers have internalized an expectation that photoworks will not be touched in exhibitions, their sight surpresses any haptic perception. The question is, can the cognition of the visitor in an exhibition space align with that of the viewer who is immersed at the cinema? One photowork that could act as a bridge between the tangible photograph and the screened film, is the double slideshow projection *Cuts, Burns, Punctures* (2012) by Ishmael Randall Weeks (b. 1976) (fig.2.9). Weeks created a hand-altered mechanism for a slide projector that focuses alternately on the materiality of the photo slides and on the depicted images. He adapted found slides from his home country, Peru, from the 1970s and 80s by burning, cutting or drawing on them. These physical interventions, hurting or disturbing the content of these photographs, were Weeks's personalised response to Peru's history during the period of his own birth and early life, a period of extreme violence in Peru. At the same time, the interventions are more than just critique, as Weeks said in an interview on the occasion of his exhibition *Cuts, Burns, Punctures* at the Drawing Center in New York.[19] The cuts, additions, and burns do not undermine the image so much as they re-articulate it. The removal of information simultaneously brings something new, and this transforms the image. Weeks describes it as investigating a past sequence of events and their visualization so as to produce something different in the present.

This photowork brings the dialectic between haptic and optic visuality to the fore. Weeks's alterations of the slides and the slide projector direct the viewer's attention to both forms of looking. In doing so, he activates a double focus, moving back and forth between a past and a present, to unite and acknowledge two different qualities – the depiction of the sceneries in the 1970s and 80s and his later artistic additions; but also the image and the materiality of the image, also focus and out-of-focus, also opacity and transparency, and so on. When we see the scratches, burns or cuts, the image literally moves out of focus, and when we focus on the image the marks become blurred. The blur replaces every differentiation between textures – whether textures of the materials or of the photographed scenery. When the photographic image is blurred, the descriptive content of the photograph no longer obstructs the viewer's awareness of the photograph as a physical presence. Optical perception more usually privileges the representation of



FIGURES 2.9. Ishmael Randall Weeks, *Cuts, Burns, Punctures*, 2012.
Found slides from 1970s/80s Peru, Double-focus slide projection with hand-altered mechanism.

the image above the material of the image. The tangible quality of this slide-projection series transforms it into something else, an accumulation of haptic images. The film scholar Laura U. Marks has borrowed the term 'haptic' from Riegl, but develops it by focusing in on the viewers' tendencies as they perceive these haptic images: a *haptic visuality*. Although this haptic visuality involves the body of the viewer more than that of a classic optical visuality, Marks asserts that both are active in most processes of seeing, in a dialectical movement from far to near (Marks 2000, 163).

Marks also characterizes a haptic image as one that compels the viewer to reflect on the image itself, as opposed to an image that pulls the viewer into its narrative (ibid.). With *Cuts, Burns, Punctures*, Weeks is posing questions about authorship and communal mentality: how this violent revolution affected past communities, and how it can be perceived through historical writing in the present. The photographic material of the slides invites us to contemplate the visualization and textualisation of historic events. Our attention oscillates between the materiality of the photographic surface and the content of the image, and this continuous reciprocal movement embeds the entanglement of the two sites. Marks goes even further, in her final remarks, to assert that haptic visuality implies an entanglement between perceiver and object, and thereby forestalls any assumed initial separation:

> In revaluing haptic visuality I am suggesting that a sensuous response may be elicited without abstraction, through the mimetic relationship between the perceiver and a sensuous object. This relationship does not require an initial separation between perceiver and object that is mediated by representation (2000, 164).

This is true for film. In *The Tactile Eye: Touch and the Cinematic Experience* (2009), Jennifer Barker proposes that the relation between viewer and film should be regarded as a relationship of intersubjectivity and co-constitution, rather than subject and object (Barker 2009, 12–13).

The viewing conditions for photoworks are different to those of the cinematic experience, to such an extent that I wonder whether it would be possible to make the two situations more similar without transgressing practical safety restrictions. Marks's exposition of *haptic images* and *haptic visuality* is helpful in itself as a way of thinking about the many potential perceptual modes of a photowork. However, the predetermined spatial conditions in which we view a photowork might pose a challenge to the validity of her argument in the context of an exhibition. Maybe we need first to consider whether there is any "mimetic relationship between the perceiver and a sensuous object", when considering the viewer and the photowork? How could such a mutuality between viewer and photowork be achieved?

I propose that the viewer whose body is inactive in the darkened space of the cinema is more susceptible to visual haptic information than the viewer whose body is alert and in a state of awareness. Can we say that the mutuality between viewer and sensuous object, which Marks sees as essential to haptic visuality, also flows through the movement of film and the non-movement of the viewer? Is the viewer's embodied experience, while grazing the film with his/her/their eyes

only, facilitated by physical stasis? And if so, would a haptic visuality in exhibitions demand the reverse: that the viewer moves while the photowork remains static? This would then require the viewers to be aware of their real body engaging with the photowork by moving consciously around and towards it. Choosing various positions and viewing angles, but also choosing how long to remain there. This awareness of one's own moving body in opposition to the static photowork might possibly heighten one's sensitivity to the haptic visuality that is expressed by the image. When we *re-feel* what is photographed, we close the gap between us and the (spatially and temporally remote) image. In film, the camera can zoom in to heighten the impression of texture that contributes to a haptic visuality. When standing in front of a photowork, in contrast, the viewer must physically 'zoom in'. The scale of *Crowhurst II* effectively positions its viewer already in a physical close-up. The work's monumentality is necessary because it enhances this effect, triggering the viewer to move in this way: zooming-in and zooming-out to view the photowork from different distances and different angles. The embodied experience goes hand-in-hand with the immersive.

The Dutch cultural theorist Mieke Bal has written an inspiring essay, 'Exhibition as Film' (2008), in which she considers the scenography of an exhibition (objects arranged in space) as a cinematic effect. The essay reflects on *Partners*, an exhibition curated by Canadian artist and collector Ydessa Hendeles (b. 1948) at Haus der Kunst in Munich in 2003–2004. Bal characterizes it as "the most effective, gripping, and powerful" exhibition she has ever seen. Bal advocates for an exhibition model that cultivates an affective relationship between the viewer and the artwork (Bal 2008, 15–16). After receiving an invitation from Haus der Kunst, Hendeles decided to curate an exhibition inspired by the museum's own history and architecture – it was built in 1937 by Adolf Hitler to display the art that he admired. Across fourteen rooms, she juxtaposed objects in unconventional ways: not following traditional, art historical or cultural discourses, but creating new inflections and dialogues among artworks, viewers, and spaces. The featured art included works by Diane Arbus, Maurizio Cattelan, James Coleman, Hanne Darboven, Walker Evans, Luciano Fabro, Paul McCarthy, On Kawara, Giulio Paolini, Bruce Nauman, Jeff Wall, and Lawrence Weiner, as well as series of photojournalistic images, anonymous vernacular photographs, and antique vernacular objects. Photography was the dominant medium, shown together with sculpture and video. Hence, Bal makes an association between the exhibition presentation of photography as a visual storyboard and the cinematic vision. In order to achieve this affective connection between viewer and artwork, but also among artworks themselves, Bal translates between film and the exhibition space.

In this context of inciting haptic visuality, her example of the close-up best elicits my point. Bal regards the viewer's movement as the kinetic equivalent of a zoom-in, moving from long shot to close-up. "Close-ups *exaggerate* photography; they push realism to its limits, and sometimes beyond, when the view comes so close that the image ceases to be legible, that the grain of the photograph and the grain of the skin become one, whereby the object recedes behind its representation" (2008, 26, emphasis in original). Bal's comparison between the photographic close-up and the viewer's movement through the exhibition space is rooted in Marks's haptic visuality. According to Marks, a haptic work may create an image so detailed that it "pulls the viewer in close", denying the possibility of a distanced view. The result is that the viewer perceives the texture as much as the pictured objects (Marks 2000, 163). In this sense *Crowhurst II* is an excellent example of a *haptic photowork*.

For Bal, close-ups in the exhibition space are abstractions that sever the object from the space-time continuum in which the viewers are moving. "Close-ups immediately cancel the whole that precedes them, leaving us alone, thrown out of linear time, alone with a relationship to the image that is pure *affect*" (Bal 2008, 27, emphasis in original). What initially appears to be a dichotomy (between embodied and disembodied viewing modes) is rather an alternating coexistence. The viewers are affected by a haptic photowork to the extent that they forget the physical surroundings of themselves and of the artwork, *and* are emotionally and mentally touched by it.

FIGURE 2.10. Wolfgang Tillmans, *Stedelijk Room*, 2008/2012. Installation, chromogenic colour prints, inkjet prints, photocopies and tables, various sizes. Stedelijk Museum Amsterdam, acquired with the generous support of the Mondriaan Fund, The Netherlands.

THE 'HOW' OF CURATING PHOTOWORKS

Bal's conception of exhibition as film might offer some response to the rigid methodology of photography exhibition practice as critiqued by Willumson, in which photographic objects are displayed as disembodied images in an exhibition space. Bal's vision moves to the other end of the spectrum of possibility, toward a display that provokes an aesthetic experience based on interaction of the artworks with one another and the viewer. The German photographer Wolfgang Tillmans (b. 1968) has been praised for his self-curated installations in which the presentation of his photographs as objects is as relevant to the curation as the engagement with the viewer's subjectivity. For each exhibition, Tillmans responds to the spatial, personal, and sometimes even political circum-

FIGURE 2.11. Wolfgang Tillmans, *Freischwimmer 118*, 2005.
Unframed archival inkjet print on paper, 291.5×390.3cm. Edition of 1 + 1 AP (AP).
Collection Stedelijk Museum Amsterdam, The Netherlands.

stances of the moment to guide the selection of works from his vast image repertoire, and to determine the size, material, framing, and hanging of the photographs. He replaces the dispassionate displays of Willumson's history with an exhibition form that is in every sense relational. The exhibition space, the photographs, Tillmans himself, and the viewer, are all parts of an affective interplay. As Julie Ault describes in her essay 'The Subject is Exhibition':

> Tillmans's belief in collectivity is reflected in a multiplicity of images as *form*, which engages viewers' subjectivities through multiple points of entry and their navigation of relational dynamics between images. Such configurations encourage active audience engagement and require viewers to identify and project themselves into the visual and ideational world that Tillmans carefully orchestrates (Ault in Tillmans 2006, 127, emphasis in original).

These configurations are not only determined by his choice of images but also by the different means of presentation (fig. 2.10). His palette here ranges from huge unframed inkjet prints to folded photographic paper sculptures in custom-made Plexiglas cases, and much in between. The diverse spatial manifestations of his images uphold the significance of presentation as a layer of meaning that is additional to the images' content. I attend here to Tillmans's engagement with the photographic material, because his careful curatorial orchestration of photographs has been widely discussed. Tacita Dean might not be so well-known as an orchestrator or conductor of her artworks' presentation as Tillmans, but if we pay attention to the various presentational forms she chooses, we can discern a similar attitude to framing her works – one that has nothing to do with conservational concerns. We might think of her vulnerable monumental chalkboard drawings mounted 'naked' on the wall, or the framed photogravures (which materially are so much *less* sensitive than her over-painted and unframed silver gelatin photographs).

Ault invokes an experience of intimacy in the encounter with Tillmans's unprotected photographs. "By presenting photographs unglazed, simply as paper in all its vulnerability, they also function as minimal sculptural elements. This ephemeral, sculptural quality of Tillmans's installations contributes to their effective, intimate atmosphere of trust and respect" (2006, 127–128). The viewers are exposed to the 'nakedness' of the unmounted prints, which, I suggest, can stimulate active engagement as they project themselves into, or identify with, Tillmans's perspective as described by Ault.[20] As theorized by Mieke Bal and Laura Marks, pure photographic material pulls the viewers in close. To gain a visual impression of the photowork as a whole, and to experience the haptic quality of the print, the viewers move back and forth in front of the photowork. In several exhibition catalogue essays, different authors stress the affective intentions and impacts of Tillmans's photographs.[21] When he draws attention to the fragility of the photographic paper, he purposefully invokes the photograph as an "object of charge" (Tillmans). So, how might we align the relation between the charged photographic surface and the affected viewer?

If we want to link the material features of the photowork with an affective aesthetic, we first need to understand the possible range of that aesthetic. Jennifer Fisher, who works on the aesthetics of non-visual senses and display practices, has tried to conceptualize a haptic aesthetic in her essay 'Tactile Affects' (2002). For Fisher, the aesthetic experience is comprised of other modalities beside the visual. Of these modalities, the haptic plays a crucial role because it is at once sensorial and relational (Fisher 2002, 19–20). Fisher uses this form of aesthetic to "[…] clarify the *unspeakable* realms of the non-discursive and non-representational" (2002, 21, emphasis in original). But her positioning of "haptic knowledge-as-affect" (2002, 22) outside of the representational – or at least, as something that is never reducible to representation – makes me wonder whether the tactile quality of photographic material, and more specifically of its surface, belong to the non-representational, or whether they are inherently features of the representation. In her concluding paragraph, Fisher describes haptic engagement with the space-in-between as the locus of affect and becoming (2002, 27). The photographic surface is the very definition of this locus of affect and becoming, at least when considering that the image rises from plain ground. In an interview on the occasion of his exhibition at Tate Modern five years ago, Tillmans has explained how the photograph becomes an object of charge after and during its development. A blank, nondescript piece of photographic paper is "charged"

as it becomes an embodiment of the image.[22] Remind here the concept of the *photograph as charge* that I proposed in the first chapter.

Tillmans's fascination can clearly be seen in the material and images of his abstract process-based photographic works such as the *Freischwimmer* (fig. 2.11) or *Lighter* works (fig. 2.12). When shown together with his representational photographs, these abstract photographs might heighten the viewer's sensibility to the features of the photographic process and material. They bring these conventionally overlooked features of the photographic object into view, and they provide an image for the unsayable: the photographic affective. They incite the viewer's imagination, associations, and feelings, where a purely technical or semiotic analysis could only diminish their powerful abstraction. When Tillmans describes his artistic process of photographing, printing, and hanging, he says that "*How?*" is the key question and answer. This is elaborated in the following extract from a videoed interview that accompanied his 2017 exhibition at the Fondation Beyeler in Basel:

> In fact, it's always about the question of 'how'. And that's something for which there's no language. When we describe pictures, what's in them, it doesn't actually say very much about why the picture is good or interesting or bad. But we have language for speaking about something so we often look for a narrative or say what's in it. But when you ask "What is it that makes the picture special?", then the secret of the piece isn't actually described or explained by what it represents. It's more obvious in the other arts. But in the case of photography, the brain, the eye immediately finds a connection to reality and thinks that the message is somehow incorporated in the reality and in the image. The thing is that the message, if we can even call it that, is actually in the 'how', not buried, but not hidden either, just contained in it. And by 'how' I mean all qualities that determine the nature of this kind of picture (Tillmans 2017).[23]

Fisher, for her part, also states that haptic aesthetics play out as epistemological: they concern *how* we know (Fisher 2002, 20–22). Following Gregory Seigworth's assertion that affect occurs "*outside, before* and *in-between* discourse" (2002, 20, emphasis in original), Fisher situates affect outside any predetermined signification processes. She draws on Freud's use of the term as one that "describes the energy with which people relate to the world through passion, pleasure, desire or pain" (ibid.). She also clearly distinguishes her own haptic aesthetics as based on an "evaluation of sensibility" and "immersive sensory processes", which she opposes to the politics of feeling as described by Lawrence Grossberg (I will come to this shortly). Both Fisher and Tillmans would very probably affirm that modes of presentation are directly correlated with the degree of influence on the viewer's emotions – though both would avoid formulating a literal translation ratio. In the following sentences, Fisher outlines her concern most clearly:

> The rush to signification evident in the above theorizations of affect [of Seigworth and Grossberg] may be seen as symptomatic of how the habits of textual discourse – habitually driven to the closure required to produce meaning – elide a more sustained relational politics, a politics that accounts not only for the evaluation of sensibility, but that can interrogate *how* feelings are felt. And it is precisely at the level of sensorial praxis, I would like to suggest, that a haptically nuanced aesthetic can help clarify the *unspeakable* realms of the non-discursive and non-representational (2002, 21, emphasis in original).

FIGURE 2.13. Wolfgang Tillmans, *Lighter 119,* 2023.
C-print in acrylic glass hood, 61×50.8cm (framed: 64.4×54.4×6.5cm). Unique.

This also explains why it is almost impossible to get a theoretical grip on the affective power of Tillmans's photoworks: it lingers in the unspeakable and non-discursive.

Fisher positions her conception of affect in contrast to Grossberg's notion of affect, which "links an individual to socially articulated moods and feelings in the external world" (2002, 20–21). For Fisher, this notion overlooks the sensorial experience that takes place "within" the individual and is independent of the individual's environment. Later, she argues that Grossberg's conception can still be "fruitfully employed to describe the charge and intensity of an exhibition space or a particular enactment of display culture" (2002, 21). In the context of Tillmans's work, I propose that both notions can help us distinguish between the epistemological and the articulated. When Tillmans discusses the "how" for which there is "no language", this

largely concerns the choice of images that he makes as he photographs: something that, again, can affect a viewer who does not know anything of the story behind the image. Each image stands individually within Tillmans's entire oeuvre (rather than as part of a series). By carefully selecting his images in response to the spatial characteristics of the exhibition venue and to contemporary topical issues, Tillmans's arrangements influence the emotional response of the viewer. He pursues a specific intensity and achieves this through the means of presentation (size, material, position on the wall and in the space). For example, Ault describes how some of his works are framed on the wall in such a way as to emphasize that the photographs are constructed objects:

> Since 1999 he has increasingly presented framed C-prints in his exhibitions, the volume of which is now relatively equal to unframed. Within a single space this combination accentuates the connotations of each device, the paradox of photography, and the ways in which distance and intimacy, conservation and access are all negotiated (Ault 2006, 136).

This certainly aligns with Willumson's argument. Elsewhere, Ault compares the constellation of Tillmans's photographs on the wall to the vernacular forms of a teenager's bedroom, in which "images and things installed floor-to-ceiling, edge-to-edge in order to articulate, claim, and control every inch of space" (2006, 130). Already these two possible connotations of the photograph – as a constructed cultural object *or* as a wall poster expressing personal preferences – trigger different forms of affect. Focussing on the associations between the loose prints and framed C-prints, as they are exhibited together, is one way to get closer to these issues: *how* photoworks speak to us and what makes up their haptic aesthetic.

Ault conjoins these two modes of presentation through the opposing figures of permanence and ephemerality, and of distance and intimacy. She points to the paradox of the unprotected photograph, which is acquired by and installed in a museum whose interests (the print's longevity) are opposed to its very real impermanence. "Unframed inkjet prints are seductive, immediate, and ephemeral. Though reproducible they are not everlasting" (2006, 133). I still remember my first encounter with Tacita Dean's *Crowhurst II* in the exhibition space of De Pont Museum in Tilburg. It happened more than fifteen years ago, at a time when I was not even pursuing a career in photography, let alone researching this haptic experience of the photowork that I still recall with such clarity. Overwhelmed and intrigued, I felt the need to return to the photowork a couple of times during my time at the museum, as it had such a strong presence in space (like the yew tree itself in Crowhurst, I imagine). The fact that it is not framed and that it so immediately throws out its materiality was striking. I could still point to the spot where it was installed on the wall, just at the entrance of the last room, like an opening shot that left its mark on my visual memory.

In conclusion, one of the most evocative visual markers of the tactile nature of the photographic surface is the sign of a fingerprint. This is the remnant of the moment a person has touched the photograph. The various types of fingerprint that can appear on the photographic surface are *indices*, physical signals of gestures of creation (in the darkroom), handling, consumption, or affect. Marks such as fingerprints direct the beholder's attention to the (social) biography of the photograph as a material object, something that has shared and will share *haptic temporalities* with different beholders in different environments throughout its existence. They expand the subject or content of the photograph by adding layers of usage and affection, albeit whilst damaging the photographic surface. Touching the photograph can equally mean being touched by its (subject) matter, which links the physical to the psychic.

And so when we include the body's relation with the photowork, we admit the sensory appreciation and comprehension of the photographic image. Even as the exhibition environment dictates certain behaviours, nonetheless affect can be stimulated through a haptic display that acknowledges the body of the photowork *and* the body of the viewer. Thinking with *Crowhurst II,* the vulnerability of its unprotected surface can pose a threat to its permanence and stability. But at the same time, the exposedness of this *haptic photowork* stimulates an embodied and by that affected experience of perception for the viewer.

ENDNOTES

1
For more background information on the chemical composition of fingerprints, their causes and effects, see the article 'Fingerprints on Photographs' (1993) by Klaus B. Hendriks and Rüdiger Krall.

2
The tripartite book series by the famous landscape photographer Ansel Adams (1902–1984), *The Negative* (1948), *The Print* (1950), and *The Camera* (1980), sheds light on the (often hidden) craft of photography from a photographer's perspective. The series is foremost an instruction or methodology for making photographs and photographic prints, in which Adams addresses both visualization and modus operandi, or craft. Today's darkroom photographers still consult his approach.

3
Mark Paterson's book *Seeing with the Hands: Blindness, Vision and Touch after Descartes* (2016) retraces the conceptualization of tactile imagery and the spatial experience of the blind from Descartes's *Dioptrique* (1637) on. Paterson draws on this history to develop a philosophy of blindness.

4
Batchen refers to another interesting characteristic of the photogram as "a marker of the space between the object and its image, but also the temporal movement (the *spacing*) of this object's placement and setting aside – the very condition of the image's production" (Batchen 2000, 161, emphasis in original). The literal space between the object and its image, which he is referring to, is inhabited, or more precisely, *embodied* by the light sensitive surface. Through the temporary placement of objects on the blank surface, followed by exposure and development, this flat indistinct 'space' becomes a specific 'place'. Yi-Fu Tuan's philosophical differentiation between space and place in *Space and Place: the perspective of experience* (1977) has been brought into the photographic context by Helen Westgeest in 'The Concept of Place in Photography in Multimedia Artworks'. Westgeest looks at artworks that combine photographs with spatial media and considers how this combination affects the experience of place in the photographs. While her case studies are installations with photographs, I argue that her approach can be relevant here in the context of photograms. Like Westgeest, I address the direct though two-dimensional referent of a (disappeared) three-dimensional arrangement of attributes. The exposure of the partly concealed photographic paper literally allocates an image to this particular 'place', the photogram. When this transformation happens, the paper is no longer free of value and can become a place of meaning production.

5
Donald Norman uses the term "perceived affordances", appropriating Gibson's term but adding to it an extension that refers to the human actor, who will perceive and activate only some of the many affordances an object may have. Norman applied the term (in his book *The Design of Everyday Things*) especially in the context of interaction between human and machine, which explains why interaction designers popularized his conception, as he wrote in his revised and expanded edition in 2013.

6
A full bleed layout means that the image exceeds the edges of the page and so there is no visible margin between image and edge.

7
The thorough introduction 'Photographs as objects' is a key source for anyone interested in the materiality of photographs (Edwards and Hart 2004, 1–15). In this introduction, the editors write: "It is through material intervention and presentational form that people mark their own desires on the machine-produced or mass-produced object of modernity, reasserting the user as author" (Edwards and Hart 2004, 14).

8
A short statement by Dean on her mini-collections from fleamarkets accompanies the presentation of her project of overpainted deformed trees for *le point d'ironie* (an initiative of agnès b., Christian Boltanski, and Hans Ulrich Obrist), see http://www.pointdironie.com/in/36/dean_en.html (accessed September 19, 2017).

9
Two scholars from literature and comparative literature studies have established a link between the photograph's material (its texture and grains) and Barthes's idea of the punctum. See Kenneth S. Calhoon, 'Personal Effects: Rilke, Barthes, and the Matter of Photography' (1998) and Anne-Laure Fortin's research.

10
Because there is so little theorization of the haptic dimensions of photographs, Campt bases her analysis of family photographs on two approaches. One is Laura Marks's theory of the haptics of film and video, which deploys critical engagement with the surface of these visual forms in order to study the bodily relation between image and viewer (Campt 2012, 31–33). (I will address Marks in the section on 'haptic visuality'.) The other is the work of Elizabeth Edwards, as discussed above.

11
The condition mapping process of *Crowhurst II* took place on June 4 and 6, 2013 in the paper restoration studio of the Stedelijk Museum in Amsterdam, under the experienced lead of the independent photo conservator Clara von Waldthausen (fig. 1.2).

12
For a profound insight into the history, theory and practice of preventive framing as well as 'artist frames', read Marchesi's analysis and discussion oft he use of frames for one of her case studies, John Baldessari's *Virtues and Vices (for Giotto)* (Marchesi 2017, 167–181).

13
Lopes introduces the term 'tactile pictures' because spatial qualities can be perceived by more than one sense, however, it must be noted that Lopes regards the term 'picture' in a broad sense, namely as a spatial representation rather than purely visual (Zika 2005, 431). As Lopes argues: "Pictures are widely viewed as essentially and paradigmatically visual representations" (Lopes 1997, 427). Zika rightly states that using the term 'picture' for representations of and in three-dimensional spaces can only be metaphorical. As the term 'picture' aligns with vision and the tactile with touch, Zika argues that the narrow sense of the term 'picture' still holds, even with the addition of the tactile sense. She mentions, furthermore, that because Lopes argues that tactile pictures are perceived by vision as well as by touch, a 'tactile picture' would be a flat surface or a painting with visual representational content, that can also be touched. The outcome would be that the feel of its surface would not provide any extra specific information (Zika 2005, 432). Ultimately, Hopkins argues that "since tactile pictures do not 'link up' with tactile experience in the way that visual pictures link up with visual experience, they cannot engage us aesthetically in the same way since they lack the required 'link'" (2005, 428). With Lopes's notion and his criticism in mind, one might wonder whether and how physically touching a photowork could actually contribute to its reception?

14
Although some newly developed pigment ink printers can also spray special transparent finisher ink which alleviates these gloss differentials. Like a varnish, these inks are known as GO, Gloss Optimizers.

15
See the overview given by Campt in the introduction to her second chapter (Campt 2012, 31–33).

16
David Parisi's dissertation 'Touch Machines: An Archaeology of Haptic Interfacing' (New York University, 2008) notes that Riegl swapped the term *tactile* for *haptic* in a 1902 article, following the latter term's coinage by German psychologist Max Dessoir as a field of study adjacent to optics and acoustics. For Riegl, the *haptic* implied an interrelation between perceiver and perceived, whereas the *tactile* implied an oppositional relation with the object (Parisi 2008, 207–208). I will henceforward use *haptic* in my own terminology, to avoid confusion and to maintain a congruent argument.

17
The most prominent figures are: Laura U. Marks, Jennifer Barker, Vivian Sobchack and Steven Shaviro (Elsaesser and Hagener 2010, 126).

18
For further reading, see Kelsey 2015, 249–283; '8. Pressing Photography into a Modernist Mold, c. 1970'.

19
Artist interview conducted by Alex Bacon for *The Brooklyn Rail*, February 2013, http://www.brooklynrail.org/2013/02/art/ishmael-randall-weeks-with-alexnbspbacon (accessed March 10, 2017).

20
Tillmans developed his own method of hinging unmounted prints, in order to avoid any surface touching or obstruction by tape or nails. Whenever a work of his is acquired or exhibited, his studio supplies a meticulous instruction manual on how it should be hinged on the wall.

21
As an example, here are some quotes from different authors in the exhibition catalogue *Wolfgang Tillmans* to his first solo exhibition in the United States in 2006: "[…] his *intensely affecting* and unconventional images of friends and other young people […]" (Robert Fitzpatrick and Ann Philbin, 7, emphasis added); "[…] Tillmans's calculated use of scale, juxtaposition, and placement to determine the physical, psychological, and *emotional effect* of his images" (Molon and Ferguson (eds.), 9, emphasis added); "The reception of his work, particularly in the United States, has been biased toward a celebration of his ability to create *immediately affecting* views of everyday life or searching portraits […]" (Dominic Molon, 37, emphasis added); "The documentary aspect of his work is a secondary effect of the pursuit of *emotional responses* […]" (Russell Ferguson, 69, emphasis added); "Tillmans intends his work to have a liberating, authorizing *effect on people*" (Julie Ault, 126, emphasis added).

22
Tillmans explains his idea of the photograph as an "object of charge" in the interview with Lou Stoppard for *In Camera* on April 10, 2017, 1:31:00 to 1:33:00, https://www.youtube.com/watch?v=MiQKFyvHouQ.

23
Tillmans, Wolfgang, "Wolfgang Tillmans: Interview," Fondation Beyeler, Basel, Switzerland, July 26, 2017, 6:00 to 7:50, https://youtu.be/f9RrmzUXnhA.