

Visual Communication

<http://vcj.sagepub.com>

Digital photography: communication, identity, memory

José van Dijck

Visual Communication 2008; 7; 57

DOI: 10.1177/1470357207084865

The online version of this article can be found at:
<http://vcj.sagepub.com/cgi/content/abstract/7/1/57>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Visual Communication* can be found at:

Email Alerts: <http://vcj.sagepub.com/cgi/alerts>

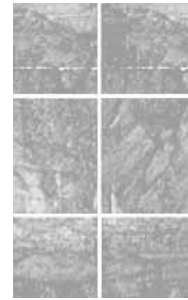
Subscriptions: <http://vcj.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.co.uk/journalsPermissions.nav>

Citations <http://vcj.sagepub.com/cgi/content/refs/7/1/57>

Digital photography: communication, identity, memory



JOSÉ VAN DIJCK

University of Amsterdam, The Netherlands

ABSTRACT

Taking photographs seems no longer primarily an act of memory intended to safeguard a family's pictorial heritage, but is increasingly becoming a tool for an individual's identity formation and communication. Digital cameras, cameraphones, photoblogs and other multipurpose devices are used to promote the use of images as the preferred idiom of a new generation of users. The aim of this article is to explore how technical changes (digitization) combined with growing insights in cognitive science and socio-cultural transformations have affected personal photography. The increased manipulation of photographic images may suit the individual's need for continuous self-remodelling and instant communication and bonding. However, that same manipulability may also lessen our grip on our images' future repurposing and reframing. Memory is not eradicated from digital multipurpose tools. Instead, the function of memory reappears in the networked, distributed nature of digital photographs, as most images are sent over the internet and stored in virtual space.

KEY WORDS

Abu Ghraib pictures • digital technology • identity formation • memory • photography • visual culture

INTRODUCTION

A student recently told me about an interesting experience. She and four friends had been hanging out in her dormitory room, telling jokes and having fun. Her roommate had picked up her friend's camera phone and taken pictures of the group lying in various relaxed positions on the couch. That same evening, the student had posted the picture on her photoblog – a blog she regularly updated to keep friends and family informed about her

daily life in college. The next day she received an email from her roommate; on opening the attached jpg-file she found the same picture of herself and her friends on the couch, but now they were portrayed with dozens of empty beer cans and wine bottles piled up on the coffee table in front of them. Her dismay caused by this unauthorized act of Photoshopping was further aggravated when she noticed the doctored picture had been emailed to a long list of their peers, including some people she had never met or only vaguely knew. When confronting her roommate with the potential consequences of her action, they got engaged in a heated discussion about the innocence of manipulating pictures and circulating them: 'everybody will see this is a joke' was the roommate's defence against the charge of the incriminating potential of the photographs, whereas the student claimed that 'not everyone may recognize the manipulation' and 'these pictures may show up endlessly' with their impact being less transitory than the roommate might have thought.

In recent years, the role and function of western digital photography seem to have changed substantially.¹ In the analogue age, personal photography² was first and foremost a means for autobiographical remembering, and photographs usually ended up as keepsakes in someone's (family) album or shoebox. They were typically regarded to be a person's most reliable aid for recall and for verifying 'life as it was', even if we know that imagination, projection and remembrance are inextricably bound up in the process of remembering (Stuhlmiller, 1996). Photography's functions as a tool for identity formation and as a means for communication were duly acknowledged, but were always rated secondary to its prime purpose of memory (Barthes, 1981[1980]; Sontag, 1973). Recent research by anthropologists, sociologists and psychologists seems to suggest that the increased deployment of digital cameras – including cameras integrated in other communication devices – favours the functions of communication and identity formation at the expense of photography's use as a tool for remembering (Garry and Gerrie, 2005; Harrison, 2002; Schiano et al., 2002). Although it is undeniable that the functions of photography as communication and identity formation have gained importance, I will argue in this article that photography's function as a memory tool is still equally vibrant, even if its manifestation is changing in the digital era.

Before starting this argument, it is necessary to point out a few misguided assumptions we often encounter when tackling this subject. First, communication and identity formation are not novel uses but have *always* been intrinsic functions of photography, even in the analogue days. Indeed, a younger generation seems to increasingly use digital cameras for 'live' communication instead of storing pictures of 'life'. Easy distribution of images over the internet and quick dissemination via personal handheld devices promote pictures as the preferred idiom in mediated communication practices. But what are the implications of this transformed use of photography as a memory tool? Second, personal photography has not changed *as a result* of digital technologies; the changing function of

photography is part of a complex technological, social and cultural transformation. As the student's anecdote illustrates, digitization is often considered the culprit of photography's growing unreliability as a tool for remembrance but, in fact, the camera has never been a dependable aid for storing memories, and photographs have always been twitched and tweaked in the process of recollection. Digital photography raises several intriguing questions concerning manipulation and cognitive editing: what is the power of digital tools in sculpting identity? How do we gauge new features that help us brush up our pictures and make our memories picture perfect? It is simply not true that digital photography has eradicated the camera's function as a tool for memory. Instead, the function of memory reappears in the networked, distributed nature of digital photographs as most images are sent over the wires and end up somewhere in virtual space.

The aim of this article, then, is to show how technical changes, combined with growing insights in cognitive science and socio-cultural transformations, have affected personal photography's role in communication, the shaping of identity *and* memory. Underlying this argument is the recurring issue of control versus a lack of control. Part of the digital camera's popularity can be explained by an increased command over the outcome of pictures now that electronic processes allow for greater manipulability, and yet the flipside is that pictures can also be easily manipulated by anyone who has access to the appropriate toolbox. A similar paradox can be noticed in regard to the distribution of personal pictures. While the internet allows for quick and easy sharing of private snapshots, that same tool also renders them vulnerable to unauthorized distribution. Ironically, the picture taken by the roommate as a token of instant and ephemeral communication may have an extended life on the internet, turning up in unexpected contexts many years from now. As argued earlier, the increased manipulability of photographic images may suit the individual's need for continuous self-remodelling, but that same flexibility may also lessen our grip on our images' future repurposing and reframing, forcing us to acknowledge the way pictorial memory might be changed by ease of distribution.

LIVE PICTURES: PERSONAL PHOTOGRAPHY AS TOOLS FOR COMMUNICATION AND EXPERIENCE

When personal photography came of age in the 19th and 20th centuries, it gradually emerged as a social practice that revolved around families wanting to save their memories of past experiences in material pictorial form for future reference or communal reminiscing. Yet from the early days of photography, we can already distinguish social uses complementary to its primary function. Photography always also served as an instrument of communication and as a means of sharing experience. As Susan Sontag argued in 1973, the tourist's compulsion to take snapshots of foreign places reveals how taking pictures can become paramount to experiencing an event;

at the same time, communicating experiences with the help of photographs is an integral part of tourist photography. Notwithstanding the dominance of photography as a family tool for remembrance and reminiscence, the other functions were immanent to photography from the moment it became popular as a domestic technology. In recent years, we have seen profound shifts in the balance between these various social uses: from family to individual use, from memory tools to communication devices and from sharing (memory) objects to sharing experiences. I will now elucidate each of these profound shifts.

The social significance and cultural impact of personal photography grew exponentially in the past century: by the early 1970s, almost every American and western European household owned a photo camera. By the time sociologists and anthropologists began to acknowledge the significance of photography as a cultural rite of family life, Susan Sontag (1973) took on the ethnographer's cloak and described its meaning as a tool for recording family life: 'Through photographs, each family constructs a portrait chronicle of itself – a portable kit of images that bears witness to its connectedness' (p. 8). Through taking and organizing pictures, individuals articulate their connections to, and initiation into, clans and groups, emphasizing ritualized moments of aging and of coming of age. Cameras are an integral part of family life, Sontag observed: households with children are twice as likely to have at least one camera than households in which there are no children. Photography not simply reflected but also constituted family life and structured an individual's notion of belonging. Quite a number of sociological and anthropological studies have scrutinized the relationship between picture taking, organizing and presenting photographs on the one hand, and the construction of family, heritage and kinship on the other (Chalfen, 1987; Chambers, 2001; Hirsch, 1997; Holland, 1991; Slater, 1995).

Over the past two decades, the individual has gradually become the nucleus of pictorial life. In her ethnographic study of how people connect personal photographs to memory and narration, anthropologist Barbara Harrison (2002: 107) observes that self-presentation – rather than family representation – is now a major function of photographs. Harrison's field study reveals a significant shift from personal photography being bound up with memory and commemoration towards pictures as a form of identity formation; cameras are used less for the remembrance of family life and more for the affirmation of personhood and personal bonds. Since the 1990s, particularly since the beginning of the new millennium, cameras have increasingly served as tools for mediating everyday experiences other than rituals or ceremonial moments. Partly a technological evolution dictated by market forces, the social and cultural stakes in this transformation cannot be underestimated. When looking at current generations of users, researchers observe a watershed between adult users, large numbers of whom are now switching from analogue to digital cameras, and teenagers and young adults, who are growing up with a number of new digital multifunctional

communication and media devices (Liechti and Ichikawa, 2000; Schiano et al., 2002). The older group generally adheres to the primacy of photography as a memory tool, particularly in the construction of family life, whereas teenagers and young adults use camera-like tools for conversation and peer-group building.

This distinctive swing in the use of photography also shows up in ethnographic observations of patterns revealing how teenagers take and manage pictures. One American study focusing on a group of teenagers between 14 and 19 found a remarkable disparity between what teenagers say they value in photography and how they *behave*: while most of them describe photos as permanent records of their lives, their behaviour reveals a preference for photography as social communication (Schiano et al., 2002). Showing pictures as part of conversation or reviewing pictures to confirm social bonds between friends appears more important than organizing photos in albums and looking at them – an activity they consider their parents' domain. Photos are shared less in the context of family and home and more in peer-group environments: schools, clubs, friends' houses. Other studies note how teenagers regard pictures as circulating messages, an interactive exchange in which personal photographs casually mix public images, such as magazine pictures, drawings and text (Liechti and Ichikawa, 2000).

Part of this change is reflected in the popularity of new technologies. In terms of hardware, the single-purpose camera for taking still pictures gives way to multifunctional appliances, combining the camera function with the personal digital assistant (PDA), the mobile phone, MP3 players and global positioning devices. These emerging digital tools substantially affect the way people socialize and interact and, by extension, the way they maintain and consolidate relationships. The so-called cameraphone permits entirely new performative rituals, such as shooting a picture at a live concert and instantly mailing these images to a friend. But we also see this change reflected in terms of software.³ In the past three years, photoblogs have become popular as an internet-based technology – a type of blog that adds photographs to text and hyperlinks in the telling of stories. A photoblog, rather than being a digital album, elicits entirely different presentational uses: college students use it to keep their distant loved ones updated about their daily life but individuals may also use a photoblog to start their own online photo gallery. Photobloggers prefer to profile themselves in images rather than words (Cohen, 2005).

Whereas their parents invested considerable time and effort in building up material collections of pictures for future reference, youngsters appear to take less interest in sharing photographs as *objects* than in sharing them as *experiences* (Kindberg et al., 2005). The rapidly increasing popularity in the use of cameraphones supports and propels this new communicative deployment of personal photography. Pictures circulated via a cameraphone are used to convey a brief message, or merely to show affect. 'Connecting' or

'getting in touch', rather than 'reality capturing' or 'memory preservation', are the social meanings transferred onto this type of photography. Whereas parents and/or children used to sit on the couch together flipping through photo albums, most teenagers consider their pictures to be temporary reminders rather than permanent keepsakes. Cameraphone photography gives rise to a cultural form reminiscent of the old-fashioned postcard: snapshots with a few words attached that are mostly valued as ritual signs of (re)connection (Lehtonen et al., 2002). Like postcards, cameraphone pictures are meant to be thrown away after they are received.

In this way, the cameraphone merges oral and visual modalities – the latter seemingly adapting to the former. Pictures become more like spoken language as photographs are turning into the new currency for social interaction. Pixellated images, like spoken words, circulate between individuals and groups to establish and reconfirm bonds. Sometimes pictures are accompanied by captions that form the 'missing voice' explaining the picture. For instance, a fan at a concert of her favourite band takes a picture of the band's performance, adds the word 'awesome' and immediately sends off the message to her friends back home. Cameraphone pictures are a way of touching base: 'Picture this, here! Picture me, now!' The main difference between cameraphones and the single-purpose camera is the medium's 'verbosity' – the inflation of images inscribed in the apparatus's script. When pictures become a visual language conveyed through the channel of a communication medium, the value of individual pictures decreases while the general significance of visual communication increases. A thousand pictures sent over the phone may now be worth a single word: 'see!' Taking, sending and receiving photographs is a real-time experience and, like spoken words, image exchanges are not meant to be archived (Van House et al., 2005). Because of their abundance, these photographs gain value as 'moments', while losing value as mementoes.

Clearly, we are witnessing a shift, especially among the younger generation, towards using photography as an instrument for peer bonding and interaction. Digitization is not the cause of this trend; instead, the tendency to fuse photography with daily experience and communication is part of a broader cultural transformation that involves individualization and intensification of experience. The emphasis on individualism and personhood at the expense of family is a social pattern with roots that can be traced back as far as the late 1960s and early 1970s. The intensification of experience as a turn-of-the-millennium economic and social force has been theorized most accurately by American economists Pine and Gilmore (1999); commercial products are increasingly marketed as memorable experiences engaging all five senses – sight, sound, touch, taste, smell – and packaged in snappy themes so that they prolong the contact zone between product and consumers (Pine and Gilmore, 1999). Digital photography is part of this larger transformation in which the self becomes the centre of a virtual universe made up of informational and spatial flows; individuals articulate

their identity as social beings not only by taking and storing photographs to document their lives, but by participating in communal photographic exchanges that mark their identity as interactive producers and consumers of culture.

PICTURES OF LIFE: PERSONAL PHOTOGRAPHY AS A TOOL FOR IDENTITY FORMATION

In addition to their growing usage as tools for communication and experience, digital photo cameras have been touted as novel instruments of identity formation, particularly as they allow users to manipulate their own images. However, it should be noted that photo cameras have always been important instruments for the shaping of self-identity. Some theorists have claimed that personal pictures are the equivalent of identities ('our pictures are us') but this claim appears to understate the intricate cognitive, mental, social and cultural processes at work in identity formation (Chalfen, 2002). Roland Barthes (1981[1980]: 80) emphasized the close interconnection, in the late 1970s, between identity formation and memory: pictures of family and friends are visible reminders of former appearances, inviting us to reflect on 'what has been' but, by the same token, they tell us how we *should* remember our selves as younger persons. We remodel our self-image to fit the pictures taken at previous moments in time. Memories are created just as much as they are recalled from photographs; our recollections never remain the same, even if the photograph appears to represent a fixed image of the past. And yet, we use these pictures not to 'fix' memory but to constantly reassess our past lives and reflect on what has been as well as what is and what will be. Recollecting is not simply a revisionist project; anticipations of future selves inform retrograde projections and these mental image maps, in turn, feed a desire to have an impact on 'external' (camera) visions of ourselves (Rose, 1992).

The role photographs play in the complex construction of one's identity has been reflected upon in cognitive theory as well as in cultural theory, particularly semiotics. Cognitive psychologists have investigated the intriguing question of how photographs can influence our personal memories (Strange et al., 2005). The human mind actively produces visual autobiographical evidence through photographs, but also modifies it through pictures – cutting off estranged spouses or throwing away depressing images of oneself when seriously overweight. Research has shown that people are also easily seduced into creating false memories of their pasts on the basis of unaltered *and* doctored pictures. In the early 1990s, researchers from America and New Zealand persuaded experimental subjects to believe false narratives about their childhood, written or told by family members and substantiated by 'true' photographs.⁴ Over the next decade, these findings were corroborated by experiments in which doctored pictures were used; more than 50 percent of all subjects constructed false memories out of old

personal photographs that were carefully retouched to depict a scene that had never happened in that person's life.⁵ There is a continuing debate whether it is narratives or photographs (or a combination of both) that triggers most false memories, but the conclusion that people's autobiographical memories are prone to either self-induced intervention or secret manipulation is well established (Garry and Wade, 2005).⁶

The close interweaving of memory, imagination and desire in creating a picture of one's past life has also been subject to theoretical probing by cultural theorists, most notably Roland Barthes. When exploring the intricacies of the camera lucida, Barthes (1981[1980]) testifies to this complex loop of images–pictures informing desire–memory when describing the discomfort he feels the moment he succumbs to being the camera's object. Having one's photograph taken, as Barthes observes, is a closed field of forces where four image-repertoires intersect: 'the one that I think I am' (the mental self-image); 'the one I want others to think I am' (the idealized self-image); 'the one the photographer thinks I am' (the photographed self-image); and 'the one the photographer makes use of when exhibiting his art' (the public self-image or *imago*) (p. 13). Whereas the first two levels represent the stages of mental, internal image processing, the third and fourth level refer to the external process of picture taking and presentation – the photographer's frame of reference and cultural perspective. In contrast to psychological theory, Barthes' semiotic perspective emphasizes that cognition does not necessarily reside inside our brains, but extends into the social and cultural realm.

Barthes' exploration of analogue photography elucidates how the four image-repertoires of self intersect and yet never match up. They collide at various moments: at the instant of capturing, when 'evaluating' the outcome or photographed object, or while reminiscing at a later point in time, reviewing the picture. When a picture is taken, we want those photographs to match our idealized self-image – flattering, without pimples, happy, attractive – so we attempt to influence the process by posing, smiling, or giving instructions to the photographer. At a later stage, we can try to encroach on the outcome by selecting, refusing, or destroying the actual print. A photographed person exerts only limited control over the resulting picture. The photographer's choice of frame and angle defines the portraiture while the referent can still be further modified at the stage of development by applying retouching techniques. Roland Barthes obviously feels powerless in the face of the photographer's decisions, lacking control over the image which he wants to equal his idealized self. Its fate is in the hands of the photographer who is taking the picture and of the chemical, mechanical and publishing forces involved in its ultimate materialization. Barthes' discomfort signals a fundamental resentment about his inability to fashion pictures 'in his own image'. Since the four levels never coincide, photographs that depict oneself are profoundly alienating, even to the extent of giving the French philosopher a sense of being an impostor.

Paradoxically, Barthes perceives a lack of control over his photographed image and imago and yet he feels confident he can exert power over the mental and idealized images entering his mind. Although the experienced powerlessness over the photographer's perspective and the 'black box' of the camera vis-à-vis the assumed autonomy over his mental images and memories appears entirely plausible, neither perception can go undisputed. The photographed image – the desire to manipulate the public imago – has never been outside the subject's reach; on the contrary. Since the late 1840s, commercial portrait photographers succumbed to their patron's desire for idealized self-images the way painters did before the advent of photography: by adopting flattering perspectives and applying chemical magic. In contrast, the subject's power over images entering the mind may not be as manageable as it appears. Cultural ideals of physical appearance, displayed through photographs and evolving over time, often unconsciously influence the mind's (idealized) images of self (Lury, 2002). Control over photographic images is hence not inscribed in the machine's ontology, nor does the mind have full sovereignty over the (cultural) images it allows to enter memory. Instead, control over one's 'self-portrait' is a subtle choreography of the four image-repertoires, a balancing act in which photographic images 'enculturate' personal identity.

Now, if we replace the analogue camera with a digital one, and laminated photos with pixellated shots, how would this affect the intertwining of mental–cognitive and cultural–material image processes in photography? In seeking to answer this question, we are confronted with the conspicuous absence of interdisciplinary research in this area. None of the cognitive studies discussed earlier pay attention to the ways in which individuals use digital photography to manipulate their own personal pictures and memory; the cultural, material and technological aspects of memory morphing appear strikingly irrelevant to cognitive science. 'Striking' because scientists often mention how their academic interest in manipulated pictures gains relevance in the face of a growing ubiquitous use of digital photography and its endless potential to reconstruct and retouch one's childhood memories; skills once monopolized by Hollywood studios and advertising agencies are now within the reach of every individual who owns a 'digital camera, image editing software computer, and the capacity to follow instructions' (Gary and Gerrie, 2005: 321).⁷ *Mutatis mutandis*, when turning to cultural theorists for enlightenment, their disregard of psychological and cognitive studies in this area is rather remarkable; semioticians and constructivists typically analyze the intricacies of technological devices to connect them to social and cultural agency.⁸ Yet without acknowledging the profound interlacing of mental, technical and cultural levels involved in digital photography, we may never understand the intricate connection between identity formation and photography.

It may be instructive to spell out a few significant differences between analogue and digital photography in terms of their (cognitive and technical)

mechanisms. At first sight, digital photography provides more access to the imaging process between the stages of taking the picture and looking at its printed result. Only seconds after its taking, the picture allows a 'sneak preview' via the camera's small screen. The display shows a tentative result, an image that can be deleted or stored. Since a sneak preview allows the photographer to instantly share the results with the photographed subject, there is room for negotiation: the subject's evaluation of his or her self-image may influence the next posture. A second moment of re-viewing takes place at the computer, in which images, stored as digital code, are susceptible to editing and manipulation. Besides selecting or erasing pictures, photo-paint software permits endless retouching of images – everything from cropping and colour adjustment to brushing out red eyes and pimples. Beyond the superficial level, one can remove entire objects from the picture, such as unwanted decorations, or add desirable features, such as sharper cheekbones or a background of palm trees.

Let's be straight about one thing: digitization never caused manipulability or artificiality. Although some theorists of visual culture have singled out manipulability as the feature that distinguishes digital photography from its analogue precursors, history proves the opposite (Mitchell, 1992). Retouching and manipulation have always been inherent in the dynamics of photography (Manovich, 2001; Ritchin, 1999; Wells, 1996). What is new in digital photography is the increased number of possibilities for reviewing and retouching one's own pictures, first on a small camera screen and later on the screen of a computer. When pictures are taken by a digital camera, the subject may feel empowered to manipulate its outcome (the photographed or public image) because he or she may have access to stages formerly 'black boxed' by cameras, film roles and chemical labs. Previews and reviews of the pixellated image, combined with easy-to-use Photoshop software, undoubtedly seduce viewers into pictorial enhancement. But does this increased flexibility cause the processes of *photographic* imaging and *mental* (or cognitive) editing to become further entwined in the construction of identity? In other words, does image doctoring become an integral element of autobiographical remembering?

Of course, we have already become used to the prevalent use of the 'camera pictura' with regards to the creation of *public* images. Since the 1990s, people no longer expect indexical fidelity to an external person when looking at photographic portraits, particularly those in advertising; almost by default, pictures in magazines, billboards and many other public sources are retouched or enhanced. Digital 'stock photography' uses public images as resources or 'input' to be worked on by anyone who pays for their exploitation (Frosh, 2003). Companies like Microsoft and Getty have anticipated the consequence of this evolution by buying up large stocks of public images and selling them back to the public domain by licensing their 're-creation'. From the culturally accepted modifiability of public images, it is only a small step to accepting your own personal pictures as mere 'stock' in

the ongoing remodelling project of life's pictorial heritage. The impact of editing software on the profiling of one's personal identity is evident from many photoblogs and personal picture galleries on the internet. Enhancing colour and beautifying faces is no longer the department of beauty magazines: individuals may now purchase Photoshop software to brush up their cherished images. A large number of software packages allow users to restore their old, damaged and faded family pictures; in one and the same breath, they offer to upgrade your self-image. For instance, VisionQuest Images advertises its packages as technical aids to create a 'digital masterpiece to your specification'; computer programs let you change everything in your personal appearance, from lip size to skin tint.⁹ There are numerous examples of individuals who use these programs on the internet.¹⁰ These instances reveal that the acceptability of photographic manipulation of someone's personal photographs can hardly be separated from the normalized use of enhanced idealized images. Digital doctoring of private snapshots is just another stage in the eternal choreography of the (mental and cultural) image repertoires once identified by Roland Barthes.

The endless potential of digital photography to manipulate one's self-image seems to make it the ultimate tool for identity formation. Whereas analogue photographs were often erroneously viewed as the 'still' input for 'static' images, digital pictures more explicitly serve as visual resources in a life-long project to reinvent one's self-appearance. Software packages supporting the processing of personal photographs often bear witness to the digital image's status as a liminal object; pixellated photographs are touted as bricks of memory construction, as software is architecturally designed with future remodelling in mind. As Canadian design scholar, Ron Burnett (2004), eloquently writes:

The shift to the digital has shown that photographs are simply raw material for an endless series of digressions . . . As images, photographs encourage viewers to move beyond the physical world even as they assert the value of memory, place, and original moments. (p. 28)

I am not saying, though, that with the advent of digital photography, people suddenly feel more inclined to Photoshop their personal pictures stored on their computers. Nor am I arguing that mental imaging processes change as a result of having more access to intermediate layers of photographic imaging. My point is that the condition of modifiability, plasticity and ongoing remodelling equally informs – or should I say 'enculturates' – *all four* image-repertoires involved in the construction of personal memory.

The condition of plasticity and modifiability, far from being exclusive to personal photography, has a resonance in diverging cultural, medical and technological self-remodelling projects. Ultrasound images of foetuses – sneak previews inside the womb – stimulate intervention in the biological fabric, turning the foetus into an object to be worked on (Van Dijck, 1995).

Cosmetic surgery configures the human body as a physical resource amenable to extreme makeovers; before-and-after pictures structure not only subjective self-consciousness but, upon entering the public image repertoire, they concurrently 'normalize' intervention in physical appearance. The most remarkable thing about the before-and-after pictures that are in abundance on the internet and on television these days is that they do not promote perpetual modification of our *pictures* to portray a better self, but advertise the potential to modify our *bodies* to match our idealized mental images. Contemporary notions of body, mind, appearance, identity and memory seem to be equally informed by the cultural condition of perpetual modification; our new tools are only in tune with the current mental flexibility for refashioning self-identity and morphing corporeality. The question as to whether changing concepts of identity have followed from evolving technologies or the other way around is beside the point. What is more important is to address how the new choreography of image-repertoires operates in a social and cultural climate that increasingly values modifiability and flexibility, and whether this climate really does allow more individual control over one's own image.

PICTURES FOR LIFE? MEMORY AND PHOTOGRAPHY IN THE DIGITAL AGE

From these observations we are tempted to draw the conclusion that digital cameras are becoming tools for communication, experience and identity formation, moving away from their former prime functions as memory tools. But even if we accept that photography is increasingly regarded as an instrument for identity *construction*, rather than one for recollection or reflection, this new role does not annihilate photography's traditional commemorative function. Indeed, digital cameras give rise to new social practices in which pictures are considered visual resources in the 'micro-cultures' of everyday life (Burnett, 2004: 62). Yet in these microcultures, memory does not so much disappear from the spectrum of social use as take on a different form. In the networked reality of people's everyday life, the default mode of personal photography becomes 'sharing'. Few people realize that sharing experience by means of exchanging digital images almost by definition implies *distributed storage*: personal 'live' pictures distributed via the internet may remain there for life, turning up in unforeseen contexts, reframed and repurposed. A well-known example may clarify the meaning of distributed memory and demonstrate the intertwined meanings of personal and collective cultural memory: the Abu Ghraib pictures.

In May 2004, a series of most horrific, graphic scenes of torture and violence against Iraqi detainees perpetrated by American guards stationed at the Abu Ghraib prison appeared in the press, and were subsequently disseminated through the internet.¹¹ Most photos were taken by prison guards and frequently featured two lower ranked members of the armed

forces, Charles Graner and Lyndie England; they often posed thumbs up in front of individual or piled-up prisoners who invariably showed signs of torture or sexual assault. The hundreds of pictures of detainees taken by prison guards communicate a distinctly casual attitude to the act of photographing. Clearly, these pictures were taken by digital cameras (or cameraphones) deployed by army personnel casually while on duty – perfectly in tune with the popular function of photography as a ritual of everyday communication. As Susan Sontag (2004: 26) poignantly describes in her essay on the case:

The pictures taken by American soldiers in Abu Ghraib reflect a recent shift in the use made of pictures – less objects to be saved than messages to be disseminated, circulated. A digital camera is a common possession among soldiers. Where once photographing war was the province of photojournalists, now the soldiers themselves are all photographers – recording their war, their fun, their observations of what they find picturesque, their atrocities – and swapping images among themselves and e-mailing them around the globe.

Intentionally taken to be sent back home as triumphant trophies or to be emailed to colleagues, the pictures were a social gesture of bonding and poaching. Some pictures allegedly served as screensavers on prison guards' desktops, another sign of their function as 'office jokes' to be understood by insiders only. The casualness and look-at-me-here enunciation of the Abu Ghraib photographs, conveyed by the uniformed men and women whose posture betrayed pride as if they had just caught a big fish, connotes the function of these pictures as symbolic resources for communication. The last thing their makers expected these pictures to be were objects of lasting memory.

And yet, this is exactly how they ended up in the collective memory of the American people. Once they had been intercepted and published in newspapers and on television worldwide, they were reframed as evidence of the army's abhorrent behaviour as torturers posing triumphantly over their helpless captives. The Abu Ghraib pictures became evidence in a military trial that incriminated the perpetrators responsible for the abuse shown in the pictures, but acquitted the invisible chain of command that obviously condoned such behaviour. Perhaps most telling was the military's response to the Abu Ghraib debacle. Rather than condemning the practice depicted by the images, the military subsequently banned personal photography from the work floor; pictures made for private use could no longer be distributed outside penitentiaries. The 'incident' resulted in stricter communication regulations as well as a prohibition against taking and distributing personal photographs on military premises.

Ironically, pictures that were casually mailed out as ephemeral 'post-cards', meant to be thrown away after reading the message, became

permanently engraved on the consciousness of a generation; pictures sent with a communicative intent ended up in America's collective cultural memory as painful visual evidence of its military's hubris. The awareness that any picture let loose on the internet can be endlessly recycled may lead to a new attitude in taking pictures: anticipating future reuse, photographs are no longer innocent personal keepsakes, but potential liabilities in someone's personal life or professional career. The lesson learned from the Abu Ghraib pictures – beyond their horrendous political message – is that personal digital photography can hardly be confined to private 'grounds'; embedded in networked systems, pictorial memory is forever distributed, perpetually stored in the endless maze of virtual life.

CONCLUSION

The digital evolution that has shaped personal photography is anything but an exclusive technological transformation. Rather, the shift in use and function of the camera seems to suit a more general cultural condition that may be characterized by terms such as manipulability, individuality, communicability, versatility and ease of distribution. This cultural condition has definitely affected the nature and status of photographs as building blocks for personal identity. Even if the functions of capturing memory, communicative experience and identity formation continue to coexist in current uses of personal photography, their rebalanced significance reverberates in crucial changes in our contemporary cultural condition. Returning to the issue of power, it is difficult to conclude whether digital photography has led to more or less control over our personal images, pictures and memories. The interaction of image repertoires, blending mental and cultural imaging processes, not only seems to reset our control over 'pictorial memory' but implies a profound redefinition of the very term.

Photographs could never be qualified as truthful sources of personal memory; yet, since the emergence of digital photography, pictorial manipulation seems to be a default mode rather than an option. To some extent, the camera allows more control over our memories, giving us the tools for 'brushing up' and reinvigorating remembrances of things past. In this day and age, (digital) photographs allow subjects some measure of control over their photographed appearance, inviting them to tweak and reshape their public and private identities. As stated earlier, digital photography is not the cause of the transformation of memory; the digital camera derives its revamped application as a memory tool from a culture in which manipulability and morphing are commonly accepted conditions for shaping personhood. Flexibility and morphing do not apply exclusively to pictures as shaping tools for personal memory, but more generally to bodies and things. Memory, like photographs and bodies, can now be made picture perfect; memory and photography change in conjunction with each other, adapting to contemporary expectations and prevailing norms. Our photographs tell us

who we want to be and how we want to remember; it is hard to imagine how the wide availability of editing tools will *not* affect our desire to brush up our past selves. Personal photography may become a lifelong exercise in revising past desires and adjusting them to new expectations. Even if it still serves a purpose as a memory tool, the digital camera is now seen as an instrument for identity construction, with more power to shape autobiographical memories.

And yet, this same manipulative potential that empowers people to shape their identity and memory may also be used by others to reshape that image. The consequence of digital technology is that personal pictures can be retouched without leaving traces and can be manipulated regardless of ownership or intent of the 'original' picture, evidenced by the anecdote at the beginning of this article about the student who was unpleasantly surprised to find a doctored picture of herself mailed around to (anonymous) recipients. Personal photographs are increasingly pulled out of the shoebox to be used as public signifiers. Pictures once intended to remain in personal archives increasingly enter the public domain, where they are invariably brushed up or retouched to (retro)fit contemporary narratives. It is quite plausible that personal pictures might emerge in entirely different public contexts, either as testimony to a criminal on the run, as a memorial to a soldier who died in the war, or as evidence of a politician's excessive alcohol use in college (Sturken, 1999). Like the pictures shown to subjects in psychologists' experiments, we have no way of deciding whether they are true or false: is it memory that manipulates pictures, or do we use pictures to create or adjust memory? The digital age will set new standards for remembrance and recall: the terms 'true' and 'doctored' will no longer apply to pictures, nor will we be able to speak of 'true' and 'false' memories.

As shown in this article, the function of personal photography as an act of memory is increasingly giving way to its formative, communicative and experiential uses. Pictures taken by a cameraphone, meant to be expendable souvenirs shared with co-workers, have a distinctly different discursive power from that of our wall-mounted and framed black-and-white photographs of our ancestors. We may now take pictures and distribute them to a number of known and anonymous recipients. Networked systems define new presentational contexts of personal pictures as sharing pictures becomes the default mode of this cultural practice. In many ways, digital tools and connective systems increase control over individuals' image exposure, granting them more power to present and shape themselves in public.

However, the flipside of this increased manipulability is a loss of control over a picture's framed meaning: pictures that are amenable to effortless distribution over the internet are equally prone to unintended repurposing. But since the framing of a picture is never fixed once and for all, each re-materialization comes with its own illocutionary meaning attached, and each reframing may render the 'original' purpose unrecognizable. So, even if taken with a communicative use in mind, a picture may end up as a perpetual object of (collective) cultural memory – as evidenced by the Abu

Ghraib pictures. The consequences of reframing and repurposing are particularly poignant when pictures move seamlessly between private and public contexts. Of course, this risk is never the direct implication of photography's digital technology, but it cannot be denied that digital media have made reframing much easier and smoother. Distributing personal pictures over the internet or by cameraphone, which is now a common way of communication, intrinsically turns private pictures into public property and therefore diminishes one's power over their presentational context.

Anxiety over an individual's ability to control his or her self-image and public imago has not abated since the analogue days of personal photography. On the contrary, image control is still a pressing concern in the debates over personal photography in the digital age even if the parameters for this concern have substantially shifted, adapting to new technological, social and cultural conditions. We may hail the increased manipulability of our self-image made easier by digital photography while at the same time resenting our loss of power over how these images are framed in public contexts. The enhanced versatility and multi-purposing of digital pictures facilitate the promotion of one's public image, whilst diminishing control over what happens once a picture becomes part of a networked environment, which changes its performative function each time the picture is accessed. Due to this networking environment, the definition of personal memory is gravitating towards distributed presence. Our 'live pictures' and 'pictures of life' may become 'pictures for life' – even if unintentionally.

NOTES

1. This article deals with current socio-cultural practices of western photography. Although the different uses of (digital) photography in various parts of the world would be an interesting topic of comparison, this is beyond the scope of this article. See, for instance, Wright (2004) and Chalfen and Murui (2001).
2. I prefer the term 'personal photography' over commonly used terms such as 'amateur photography' or 'family photography'. The word 'personal' is used to distinguish it from professional photography, but also avoids the troubling connotation of 'amateurish' in relation to camera use. Family photography mistakenly presupposes the presence of a familial context, whereas photography has always been, and is increasingly, used for personal identity formation. For an extensive discussion on 'personal photography', see Wells (1996) and Lury (2002).
3. Software engineers are becoming more aware that the design of picture management systems requires a profound understanding of why and how users interact with their pictures: storing pictures in a shoebox or sticking them into albums cannot simply be transposed onto digital platforms (Rodden and Wood, 2003).

4. There is a large number of research groups reporting on the issue of false memory in the case of both narrative and visual evidence. For example, see Intraub and Hoffman (1992); Lindsay et al. (2004).
5. Research by cognitive psychologists focusing particularly on the role of doctored photographs in relation to false memory is also widely available. See, for example, Garry and Gerrie (2005); Wade et al. (2002).
6. Not surprisingly, these scientific insights are gratefully deployed in marketing and advertising departments in order to advance sales by manipulating customers' memories about their pasts and thus influencing their future (buying) behaviour. What customers recall about prior product or shopping experiences will differ from their actual experiences if marketing campaigns refer to those past experiences in positive ways (Zaltman, 2003).
7. Indeed, without digital photo enhancement equipment, cognitive psychologists would have a hard time conducting their research on manipulated autobiographical memory in the first place; only with the help of computer paintbrush programs can they make doctored photographs look immaculate.
8. In recent years, there has been an explosion of theory on the semiotics and ontology of the digital image but it is beyond the scope of this chapter to review the literature in this area. As a general introduction to the digitization of visual culture in general and photography in particular, see Lister (1995) and Mules (2000). A more philosophical introduction to ontology of the image can be found in Rodowick (2001).
9. See, for example, the software offered by VisionQuest Images at <http://www.visionquestimages.com/index.htm> (consulted 8 April 2006). A package called Picture Yourself Graphics [www.pygraphics.com] encourages playful collages and manipulation of personal pictures.
10. Asian-American student Chris Lin, for instance, admits in his photoblog that he likes to picture himself with brown hair; he also re-colours the faces of his friends' images to see if it enhances their appearance. See Chris Lin's photoblog at <http://a.trendyname.org/archives/category/personal/> (consulted 8 April 2006). Nancy Burson, New York-based artist and a pioneer in morphing technology, attracted a lot of media attention with her design of a so-called Human Race Machine, a digital method that effortlessly morphs racial features and skin colours in pictures of people's faces. For more details on the work of Nancy Burson, see http://www.nancyburson.com/human_fr.html (consulted 8 April 2006). Her Human Race Machine featured in many magazines and television programs in the spring of 2006, most notably in the Oprah Winfrey show.
11. The pictures were first made public in the press by journalist Seymour Hersh (2004).

REFERENCES

- Barthes, Roland (1981[1980]) *Camera Lucida: Reflections on Photography*, trans. Richard Howard. New York: Hill and Wang.
- Burnett, Ron (2004) *How Images Think*. Cambridge, MA: MIT Press.
- Chalfen, Richard (1987) *Snapshot Versions of Life*. Bowling Green, OH: Bowling Green State University Press.
- Chalfen, Richard (2002) 'Snapshots 'R' Us: The Evidentiary Problematic of Home Media', *Visual Studies* 17(2): 141–9.
- Chalfen, Richard and Murui, Mai (2001) 'Print Club Photography in Japan: Framing Social Relationships', *Visual Sociology* 16(1): 55–73.
- Chambers, Deborah (2001) *Representing the Family*. London: Sage.
- Cohen, Kris (2005) 'What Does the Photoblog Want?', *Media, Culture & Society* 27(6): 883–901.
- Frosh, Paul (2003) *The Image Factory: Consumer Culture, Photography, and the Visual Content Industry*. Oxford: Berg.
- Garry, Maryanne and Gerrie, Matthew (2005) 'When Photographs Create False Memories', *Current Directions in Psychological Science* 14(6): 321–5.
- Garry, Maryanne and Wade, Kimberley (2005) 'Actually, a Picture Is Worth Less than 45 Words: Narratives Produce More False Memories than Photographs Do', *Psychonomic Bulletin and Review* 12(2): 359–66.
- Harrison, Barbara (2002) 'Photographic Visions and Narrative Inquiry', *Narrative Inquiry* 12(1): 87–111.
- Hersh, Seymour (2004) 'Torture at Abu Ghraib: American Soldiers Brutalized Iraqis. How Far Up Does the Responsibility Go?', *The New Yorker*, 4 May. URL (consulted 8 April 2006): <http://www.notinourname.net/war/torture-5may04.htm>
- Hirsch, Marianne (1997) *Family Frames: Photography, Narrative, and Postmemory*. Cambridge, MA: Harvard University Press.
- Holland, Patricia (1991) 'Introduction: History, Memory, and the Family Album', in J. Spence and Patricia Holland (eds) *Family Snaps: The Meaning of Domestic Photography*, pp. 1–14. London: Virago.
- Intraub, Helene and Hoffman, James (1992) 'Reading and Visual Memory: Remembering Scenes that Were Never Seen', *American Journal of Psychology* 105(1): 101–14.
- Kindberg, Tim et al. (2005) 'I Saw This and Thought of You: Some Social Uses of Camera Phones', *Proceedings of the Conference on Human Factors in Computing Systems*, 2–5 April, pp. 1545–8. Portland, OR.
- Lehtonen, Turo-Kimmo, Koskinen, Ilpo and Kurvinen, Esko (2002) 'Mobile Digital Pictures – The Future of the Postcard? Findings from an Experimental Field Study', in V. Laakso and J.O. Ostman (eds) *Postcards and Cultural Rituals*, pp. 69–96. Korttien Talo: Haemeenlinna.
- Liechti, Olivier and Ichikawa, Tadao (2000) 'A Digital Photography Framework Enabling Affective Awareness in Home Communication', *Personal and Ubiquitous Computing* 4(1): 232–9.
- Lindsay, Stephen et al. (2004) 'True Photographs and False Memories', *Psychological Science* 15(3): 149–54.

- Lister, Martin (ed.) (1995) *The Photographic Image in Digital Culture*. London: Routledge.
- Lury, Celia (2002) *Prosthetic Culture: Photography, Identity, Memory*. London: Routledge.
- Manovich, Lev (2001) *The Language of New Media*. Cambridge, MA: MIT Press.
- Mitchell, William J.T. (1992) *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*. Cambridge, MA: MIT Press.
- Mules, Warwick (2000) 'Lines, Dots and Pixels: The Making and Remaking of the Printed Image in Visual Culture', *Continuum, Journal of Media and Cultural Studies* 14(3): 303–16.
- Pine, Joseph and Gilmore, James (1999) *The Experience Economy: Work Is a Theatre and Every Business a Stage*. Cambridge, MA: Harvard Business School Press.
- Ritchin, Fred (1999) *In Our Own Image: The Coming Revolution in Photography*. New York: Aperture.
- Rodden, Kerry and Wood, Kenneth (2003) 'How Do People Manage their Digital Photographs?', *Computer-Human Interaction* 5(1): 409–16.
- Rodowick, D.N. (2001) *Reading the Figural, or, Philosophy after the New Media*. Durham, NC: Duke University Press.
- Rose, Steve (1992) *The Making of Memory*. London: Bantam Press.
- Schiano, Diane J., Chen, Coreena P. and Isaacs, Ellen (2002) 'How Teens Take, View, Share, and Store Photos', *Proceedings of the Conference on Computer-Supported Co-operative Work (CSCW)*. New York: ACM.
- Slater, Don (1995) 'Domestic Photography and Digital Culture', in Martin Lister (ed.) *The Photographic Image in Digital Culture*, pp. 129–46. London: Routledge.
- Sontag, Susan (1973) *On Photography*. New York: Delta.
- Sontag, Susan (2004) 'Regarding the Torture of Others', *The New York Times Magazine*, 23 May: 25–9.
- Strange, Deryn, Gerrie, Matthew and Garry, Maryanne (2005) 'A Few Seemingly Harmless Routes to a False Memory', *Cognitive Process* 6: 237–42.
- Stuhlmiller, C.M. (1996) 'Narrative Picturing: Ushering Experiential Recall', *Nursing Inquiry* 3: 183–4.
- Sturken, Marita (1999) 'The Image as Memorial: Personal Photographs in Cultural Memory', in Marianne Hirsch (ed.) *The Familial Gaze*, pp. 178–95. Hanover: University Press of New England.
- Van Dijck, José (1995) *Manufacturing Babies and Public Consent: Debating the New Reproductive Technologies*. New York: New York University Press.
- Van House, Nancy, Davis, Marc and Ames, Morgan (2005) 'The Uses of Personal Networked Digital Imaging: An Empirical Study of Cameraphone Photos and Sharing', *Conference on Human Factors in Computing Systems*, 1853–6. New York: ACM.

- Wade, Kimberley et al. (2002) 'A Picture Is Worth a Thousand Lies: Using False Photographs to Create False Childhood Memories', *Psychonomic Bulletin and Review* 9(3): 597–603.
- Wells, Liz (1996) *Photography: A Critical Introduction*. London: Routledge.
- Wright, Chris (2004) 'Material and Memory: Photography in the Western Solomon Islands', *Journal of Material Culture* 9(1): 73–85.
- Zaltman, Gerald (2003) *How Customers Think: Essential Insights into the Mind of the Market*. Boston, MA: Harvard Business School Press.

BIOGRAPHICAL NOTE

JOSÉ VAN DIJCK is a Professor of Media and Culture at the University of Amsterdam (The Netherlands) and is currently Dean of Humanities. She is the author of *Manufacturing Babies and Public Consent: Debating the New Reproductive Technologies* (New York University Press, 1995) and *ImagEnation: Popular Images of Genetics* (New York University Press, 1998). Her latest book is entitled *The Transparent Body: A Cultural Analysis of Medical Imaging* (University of Washington Press, 2005). Her research areas include media and science, (digital) media technologies, and television and culture. This article is part of a book entitled *Mediated Memories in the Digital Age* (Stanford University Press, forthcoming).

Address: University of Amsterdam, Department of Media Studies, Turfdraagsterpad g, 1012 XT Amsterdam, The Netherlands. [email: J.F.T.M.vanDijck@uva.nl]