THE ETHICS/SKILLS INTERFACE IN IMAGE MANIPULATION

Jenny Webber
School of Communication and Information Studies
University of South Australia, Magill, Australia
email: jenny.webber@unisa.edu.au

ABSTRACT

Image manipulation using computer technology has become a basic skill required in various graphics-dependent industries such as advertising, and the print and electronic media, and for specialist use in institutions for in-house and on-line publishing and the creation of Web pages. The 'seamless' alteration of photographs and other visual images made possible by computer technology has allowed misrepresentation with intent to deceive, and difficulty in establishing copyright of original images. The dilemma in teaching techniques of image manipulation is to create a basis for ethical practice. HCI in this paper refers to the ethics/skills interface in the education and work of multimedia practitioners.

KEY WORDS

Ethics, Image Manipulation

INTRODUCTION

In a recent television advertisement for an Australian Cancer Research Foundation, a message is delivered by the actor Steve McQueen, who died of lung cancer some twenty years ago. He commences his appeal by saying, 'I died in 1980. There wasn't a cure for cancer then and there isn't now, but ...' and he goes on to ask for contributions to assist cancer research. This advertisement demonstrates the technical sophistication of current, computerised, state-of-the-art imaging, but it also brings sharply into focus the question of the ethics of image manipulation. With this particular advertisement, there is no such ethical problem, for, in a recent interview (Kirwan, 1999) the representative of the Sydney advertising agency which produced the video clip described how this was accomplished technically, and, more importantly, how it was accomplished ethically.

The story is this. The advertising agency approached and readily gained approval from the executors of Steve McQueen's estate for the use of a clip from his film, *The Cincinnati Kid*, which showed the actor speaking directly to the camera. It was intended that this moving image would be manipulated to create the impression that McQueen was 'speaking' now, in 1999, in support of cancer research. To achieve this, an actor with a McQueen look-alike mouth was used, together with another actor with a McQueen sound-alike voice, and these physical features were dubbed into the old film clip, using imaging techniques similar to those used in creating the 'talking' pig and sheep, and other animals in the Australian film, *Babe*.

Ethically, the whole project was beyond reproach, from the worthiness of its intent, the prior gaining of permission to use McQueen's image, the continual involvement of the executors during the advertisement's production, and their approval of the final outcome.

However, such ethical behaviour is often lacking in the computer manipulation of photographic images. We are reminded of this in a recent case in Australia, following the tragic happenings at Port Arthur when photographs of the alleged gunman appeared on the front page of some Australian newspapers with the suspect's eyes 're-touched' to create a more sinister facial expression. This unacknowledged 're-touching' was made even more obvious when this re-touched photograph was compared with the same original (but untouched) photograph of the suspect which appeared in other Australian newspapers.

These two examples are useful in demonstrating both an ethical approach and unethical approach to the manipulation of images, and they assist the building of ethical considerations into teaching and practice.

THE LONG HISTORY OF DECEPTION BY IMAGE MANIPULATION

The long history of photographic manipulation dates back to the early 19th century when photography, while demonstrating its technical capability of making representations of reality, was always a 'combination of artistic, technical, theatrical and entrepreneurial achievement' (Slater 1995: 218-219). In these early days the concept of photography as truth was set alongside artforms such as photomontage, where doctoring photographs was used for caricature or emphasis (Evans and Gohl, 1986). Photographic manipulation then most often stopped short at retouching as the popular middle class portraiture brought requests for unflattering facial characteristics such as wrinkles and pock marks to be removed (Lester 1991; Kobre 1995).

Later there were less frivolous manipulations evident in historical war and political photography with obvious intent to deceive, and such deceptions were not obvious until much later. Some manipulations of American Civil War photographs were discovered only when similar photographs were set alongside and the comparison revealed, for example, the rearrangement of 'corpses' in different photographs of the same scene. Even the popular close-up portrait of Abraham Lincoln was a composite of the body of Southern statesman, John Calhoun, with Lincoln's head

sandwiched atop. (In more recent times the same photographic technique has been used to set Oprah Winfrey's head on the body of actress Ann-Margret on a *TV Guide* magazine cover.)

In *Making People Disappear*, Jaubert (1986) (cited in Lester, 1991:101) chronicled numerous photographic abuses, mostly by totalitarian regimes, which used retouching, cutouts and effacement techniques, to doctor historical pictures in ways which would reflect a political leader's version of the truth. Similarly in more recent times, charges of manipulation cloud famous pictures. Lester (1991:117) recounts the 'unrelenting ethical controversy' surrounding Rosenthal's Pulitzer Prize classic photograph involving the US marines' flag-raising at Iwo Jima in World War II. There were at least four photographs taken at the time, three by Rosenthal and another by a Naval photographer, which suggests that the occasion of the famous photograph was staged, and it was not the eye-witness representation of the historical event that was first believed.

What is significant about this historical record of image manipulation is not so much that it happened, but that it was so easily discovered. Easy detection was due to the clumsy techniques which allowed the discovery of alterations. As well, these earlier techniques took painstaking work which was expensive and time consuming and this deterred the practice from becoming more common. On both counts, such is no longer the case, for the application of computer technology now allows photographs to be modified seamlessly, that is, with little or no evidence of alteration, and with an ease and speed which encourages the pracitce.

Modern computerized photographic techniques now allow, as well, quick synthesis of artificial images which are not based on reality. When a photograph is taken with a digital camera, or scanned and converted to digital information, the entire image can be modified in many ways, that is, its colour, brightness and focus can be changed, and elements of the image (such as a background, or persons) can be replicated or taken out altogether. This process can be accomplished in minutes and is almost impossible to detect.

Sometimes these techniques are revealed intentionally, such as a *Science 84* cover (cited in Ritchin, 1991: 32) which used three major imaging techniques to create a 'realistic' image, that is, a simulated reality. In this case, the editor did not set out to deceive, in fact the cover carried a caption 'This Picture is a Fake'.

It is interesting to note also that at the recent wedding of Prince Edward and Sophie Rhys Jones, the royal photographer 'doctored' an official photograph of the wedding party by superimposing a smiling face of Prince William on to the sombre face of the young prince as it appeared in the original photograph. The royal photographer was at pains to report this image manipulation and made a statement to the press that this had been undertaken in the interests of recording the happiness of the event.

There have been cases, however, when the manipulation of photographs has not been so clearly revealed. Kobre (1995: 14) details a recent case where a *National Enquirer* cover photo under the banner headline 'Battered Nicole: Photos taken by her sister show how O.J. beat her up', purported to show Nicole Simpson's bloodied and swollen face. Less obvious was the smaller type under the photograph, '*Sister describes photos seized by cops - computer re-creation*'.

And not much later at the time of the Simpson trial, a June, 1994, cover of *Time* magazine featured a computer-retouched Los Angeles Police Department 'mug shot' of the former football star, now alleged murderer. The image was referred to on the magazine's contents page as a 'photo illustration'. When challenged by observers that the photographic manipulation as misleading, racist, and potentially legally prejudicial, the editor defended his action by arguing that the photographic image had been 'subtly smoothed and shaped into an icon of tragedy' (Wheeler and Gleason 1995: 8), however, under further pressure, the editor did in fact apologise to his readers for this photographic manipulation.

In an effort to counter this faked information, Kobre (p.15) makes a case for a stronger photographic access to all situations, and for a wider distribution and publication of photos, so that fakes may be countered with the truth. In the case of the *Enquirer's* faked picture, if the media had had access to the pictures of the beaten Nicole Simpson which were tendered during the Simpson trial (which were more horrendous than the faked photograph), then the *Enquirer's* fictional image would not have been necessary or, at least, it would have been countered by the publication of the authentic images.

Unfortunately for Kobre's suggestion, the control of what people see in visual news information, even in democracies, increasingly rests with a powerful few and there seems less and less chance that greater photographic access will combat the misuse of adeptly altered photographs. And, while editors must consult with news writers before making significant changes to a story, photographers' images may be manipulated without negotiation, and the photographer has little chance of recourse (Reaves, 1991 and 1995).

Editing control raises questions of copyright and ownership of the original photograph. Should photographer or photographic manipulator share the reward for the new image? How might a manipulated photograph be traced back to its source? While a book may be seen as a whole, and copying of all or part may be reasonably detectable, the easy, and mostly undetectable, manipulation of photographs and other images (including clip art) renders the ownership of this artwork difficult if not impossible to protect (Mitchell, 1994: 51).

These various examples depict newspaper and magazine editors using computers for image manipulation at the expense of truthful representation. These acts bring into question problems of image authentication not only in respect of photojournalism, but also in the use of photographs as evidence in legal cases, and for any other documentary purpose, such as the compilation of social and cultural histories.

Such dilemmas which arise from digital imaging technologies emphasize the need for an image ethics paradigm to assist the understanding of and response to moral problems caused by the use of these techniques.

PHILOSOPHICAL FOUNDATIONS OF IMAGE ETHICS

Computer ethics was proposed as a new branch of philosophy in the mid 1970s by Walter Maner of the Institute of Applied Ethics, Old Dominion University, Virginia, USA, who highlighted the special features of computers which could 'exacerbate the moral problem; and in a few cases ... even create novel moral problems in their own right' (see Fodor and Bynum, 1992, cited in Bynum, 1999). Maner developed a university computer ethics course modelled on applied ethics courses such as medical and business ethics, in which philosophical theories like utilitarianism and Kantianism were used to analyse ethical dilemmas which were 'aggravated, transformed or created by computer technology' (Maner, 1978, cited in Bynum, 1999).

In a similar approach, but one directly related to ethical problems in the use of images, Lester (1991: 29-42), has proposed a set of six general philosophical principles which could be applied to image production and distribution, and has related these to specific ethical dilemmas such as those detailed briefly below :

(1) *Categorical Imperative* in which Immanuel Kant emphasized the nature of an act or a decision rather than the result of such an act or decision. Sherer (1986: 28, 30, cited in Lester, 1991: 35) quotes a newspaper editor's application of this Kantian principle. Noting that a newspaper's role is to cover the news, even if some situations may raise issues of taste, judgement and the right to privacy, the principle of reporting the news is a universal rule which must not be broken, regardless of the consequences.

(2) *Utiliarianism* in which various consequences are considered and the impact of the consequences of one action is weighed in relation to the consequences of another. The principle of utilitarianism might be used to justify the publishing of gruesome accident photographs, like the pictures of victims of a Boston fire escape collapse, and whereafter, in some U. S. cities, fire safety codes 'were quietly reviewed ... to be certain Boston's tragedy couldn't be repeated locally' (Sherer, 1986: 28, cited in Lester, 1991: 37)

(3) *Hedonism*, or the principle of 'Act to maximize pleasure now and not worry about the future'. Aristippus, a student of Socrates, who framed the ethics of pleasure was referring to pleasures of the mind - intellectual pleasures, which required the exercise of good judgement and self control. His famous phrase is 'I possess, I am not possessed', however modern usage has transformed this principle to an 'Eat, drink and be merry, for tomorrow we die' attitude. The publication of graphically violent images appears to reflect this modern hedonist principle, that is, publication is motivated by either the images being sensational enough to sell newspapers, or aesthetic enough to gain peer approval and thus serve personal ambition (Lester, 1991: 38).

(4) *Golden Mean.* Aristotle's Golden Mean philosophy refers to finding a middle ground, that is, a compromise between two extreme viewpoints, or taking an action which fits a particular situation at a particular time. For example, a photojournalist may personally believe that all funerals should be off limits to photographers, another might judge, that, as a news event, grieving victims at a funeral should be photographed. An ethical compromise might involve a prior notification of attendance and appropriate dress and unobtrusive behaviour of the photographer (Sherer, 1986: 28, cited in Lester, 1991: 38).

(5) *Veil of Ignorance.* John Rawls (1971) outlined the Veil of Ignorance philosophy, that all are equal and none advantaged over others, that is, 'when seen through a veil, without noticing age, race and sex, all are reduced to their basic position in life'. A photojournalist required to take photographs of persons under stress may ask 'How would I feel if I were the person being photographed? If the answer is unacceptable, I look for a different way to tell the story in my photo.' (Sherer, 1986: 28, cited in Lester, 1991: 40).

(6) *Golden Rule.* The Golden Rule philosophy teaches persons to 'love your neighbours as yourself'. From the Judeo-Christian tradition, a photojournalist should try to protect subjects from harm inflicted by photographic coverage. Sherer, 1986: 25 (cited in Lister, 199: 40) notes that photojournalist Jay Mather, who won a 1979 Pulitzer Prize wrote simply 'Human kindness has always been an effective and impartial editor'.

These six principles, as well as philosophies related to privacy (see Warren & Brandeis, 1980; Benn, 1988; Miller, 1997; van den Hoven, 1999) and intellectual property (see Hughes, 1988, cited in Nissenbaum, 1999) may be used to analyse ethical dilemmas which arise in the study of image ethics. However, the principles may present an ethical dilemma in themselves, for while being instrumental in challenging practitioners to reflect on decisions regarding their use of images, the individual application of these principles to image production and distribution may also demonstrate a wide diversity of professional values and loyalties.

It appears more useful to establish a code of practice for the use of images in this digital age, and one for which there is some likelihood of gaining consensus and adherence.

TOWARDS A PROTOCOL FOR IMAGE ETHICS

Wheeler and Gleason (1995) suggest an ethical protocol in respect of the digital manipulation of images which, by a system of icons, would enable a reader or consumer to ascertain whether or not an image had been modified. However, whilst a system of labelling of photographs and other artwork is commendable, there is need for a more encompassing protocol for image ethics in view of the myriad of new communications technologies developed in the 1990s, and others which are anticipated in the next millenium.

These technologies include satellites, fibre optics, faxes, the internet and virtual reality, each bringing social effects and ethical issues which arise before society can assimilate these rapid changes, Cooper (1998: 71). A hidden effect of the new technologies is that deception has been made easier by seamless image manipulation, as is evident not only in the accidental and deliberate substitution of illusion for reality by editors of newspapers and magazines, but also in false and persuasive advertising (Messaris 1997), and infringements of the moral rights of subjects in photographs (Gross et al. 1988; Lester 1991, 1995 & 1996 and Powell, 1998).

Documents and photographs can now be altered from a distance without detection, and realistic, yet artificial, images can quickly be synthesized. As Cooper (1998: 74) suggests 'Theoretically, a presidential candidate may now be computer generated, credentialled online, and elected without ever being publicly seen (other than via a human stand-in)'. In similar vein, Powell (1994) has predicted totally synthetic news events.

When invasion of privacy occurs with old technolgies such as camera with telephoto lens capturing snapshots of personalities, such invasion has very different qualities than 'cyvacy', (computer privacy invasion) (Powell, 1998: 93). This new invasion of privacy is remote, undetectable and impersonal. And 'cable, satellites, and internet all amplify existing problems, (such as) obscenity and indecency by making controversial and criminal (in many cultures) images available to much larger, different, and younger audiences'.

A protocol for image ethics in the next millenium must encompass the issues outlined above and be proactive rather than reactive to the ethical problems created by the unique features of the new technologies, which are exacerbated by their rapid rate of invention and implementation, and their often unpredictable effects.

THE HUMAN COMPUTER INTERFACE: LINKING ETHICS AND SKILLS IN A PERSONAL PROTOCOL FOR COMPUTER IMAGING

In higher education the teaching of ethics is mostly left to philosophers or to specially designated courses. This is a missed opportunity, for research shows that integrating ethics in discipline-appropriate ways embellishes the study of ethics (Roberts 1994 & 1995; Lisman 1996). This view has led to the integration of image ethics in the Multimedia program of the Bachelor of Arts award at the University of South Australia.

This image ethics program relies on the model of ethical decision-making outlined by Rest and Narvaez (1994: 23-24) which involves a continuum of four distinctive stages of ethical development, that is, moral sensitivity, moral judgement, moral motivation, and moral character. It is a particularly useful model in the context of the university's 'Graduate Qualities', which are a set of personal and professional qualities which are anticipated outcomes for its graduates, and underpin its educational programs. One 'Quality' involves the development of the graduate as an ethical citizen and professional.

Naturally in a Multimedia program, course subjects have a main focus on visual arts in communication which involves the construction and manipulation of images. Each course subject includes an integrated image ethics component which is appropriate to the particular level of study and its technical content.

The overall aim of this ethics program is that students establish a personal protocol for image ethics which they will apply in their personal and professional lives. This may be briefly summarised as follows:

- An image should be identified as 'original' or 'altered' and labelled accordingly
- An image should not infringe copyright or another's intellectual property
- An image should not be used to deceive or persuade
- An image should not infringe the moral rights of its subject(s) in relation to privacy and stereotyping
- An image should not breach ethical and legal standards in relation to obscenity and decency
- An image professional should anticipate that new communication technologies may carry with them unpredictable and unwanted effects for society, be prepared to research and debate these effects, and work towards society's control of technology
- An image professional has an individual responsibility for vigilance and action to defend the visual truth of information.

CONCLUSION

Too often ethical issues in computing are studied only after serious problems have arisen. With the benefit of hindsight, it can now be anticipated that each new technology will bring both benefit and disturbance to society, and that in order for society to gain control over technology and to be able to influence its effects, evaluations of

technologies must include not only the performance of their technical properties, but their effects on organizations, societies and individuals.

Such is the requirement when teaching imaging techniques to future users and industry practitioners who will work in a variety of contexts. There is a vital task here for all educators to prompt awareness of the scope of ethical issues which arise from the use of this technology, and the need for moral responsibility in its use.

How do we get these budding professionals to look beyond the seductive power of computer technology and the aesthetic appeal of working with images? The ethics/skills interface is all important in this task, an interface which requires that students are made aware of the ethical dimensions of working with images at the same time as they learn the skills of image manipulation.

Students are now fully aware of the issues of plagiarism of text in their academic work, and universities have policies in place which require students to acknowledge the intellectual property rights of others, by referencing quotations and ideas from original work. The same respect for artwork and photographs has been ignored, and a similar system of referencing which applies to a scholarly essay should be applied to the production of graphic images in a student's computing projects.

But the wider issue of an ethical approach to the presentation of visual information has great importance for a society which turns increasingly to computer technologies and a reliance on pictorial communication. The challenge is to 'integrate computing technology and human values in such a way that the technology advances and protects human values, rather than doing damage to them' (Bynum, 1999). And, as Ritchin (1991: 37) warns:

'As readers we must remain vigilant. Otherwise, what as a society, and among societies, are we going to be left with as a form of communication that can be trusted? What information will people be able to rely upon to make decisions? Or most precisely, what will the role of the press in a democracy be worth? ... Undoubtedly, we will all be told that what has happened is the computer's fault, and we will then be even more isolated in our own media bubbles than ever before.'

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