



A white right hand

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Pervasive interactivity between people and computers is fast becoming the zeitgeist and even the rallying cry of our age. Specific sequences of interactivity engage users across the globe in many types of highly repetitive extranoematic activities – finger-clicking on a mouse, full bodily gesturing with Kinect, stylus and finger tapping on tablets and touch-screens, foot-stepping on sensors and swiping with RFID cards. Central to the most conventional screen-based interactivity is the now classic pointing-finger hand icon that appears on desktop and laptop screens to signal the presence of a hyperlink. In my view the very normalcy of this icon calls for a closer scrutiny of its palpable yet relatively unnoticed contribution to the semiotics of mouse interactivity.

The physical delineation of the pointing-finger hand is familiar in the sequence of rollover and click when using a mouse. This anchorage in people's everyday computer usage is what makes any meanings associated with the hand so interesting and important. As the adage inveighs: "question everything" (attributed to Euripides and Marx amongst others) and nothing seems more questionable than a humble piece of graphical art that alerts people to commence a literally unforeseeable and unseen series of events performed in real-time by complex technologies both infinitesimal and planetary. Software may shimmer on our screens and yet we are bidden by the vision of a small white hand to enter the realm of the electronic. It is a vision neatly framed for us in the conception of McLuhan's rear-view mirror (McLuhan and Fiore, 1967) – and how he would have mocked this particularity of our retro-future.

According to Jakob Nielsen's usability components the precise physical appearance of the hand must surely attract high ratings. Nielsen's concerns famously require an alignment of function with appearance (2003). The hand is immediately identifiable as such and is clearly the same part of the human anatomy required for clicking a mouse. Based on a design by the legendary

Susan Kareⁱ who developed most of the iconography for Apple's hypercard system, the hand is white with black outline, it sports four fingers and a thumb, its index finger is outstretched with the three others bent at the main knuckle. It is about 3.5mm high and wide, small, unobtrusive and yet perfectly formed. Whilst this description is more or less common to both the Microsoft and Apple versions of the hand, in Apple's icon the hand additionally sports three black lines in the centre – tendons perhaps.

There is more denotative detail to consider. The icon is evidently a right hand. This is deduced from the fact that we are viewing it from the front with the palm behind and invisible – otherwise fingers bent inwards would be seen, and there would be no logic in adding tendon-like markings. And so the hand's usability credentials rest on the depiction of a right hand with its index finger on the point of clicking a mouse. This is not only a close intuitive relation with, but also an indexical connotation of the activity to be undertaken. Such attributes, resonating as they do with hand metaphors buried in the English language, make for an unusually efficacious icon that draws little attention to itself. Jakob Nielsen (2003) is always ready to congratulate what appears evident to people as regards design on the net. What works is good and inconspicuous. In this sense the hand works.

The perceived position of the hand is important. For the most part people using a mouse do so on a flat surface with their hand horizontal. However they view the pointing-finger hand icon on the near-vertical surface of their laptop or desktop computer screen. The icon's spatial ambiguity is interesting precisely because people probably never think about it – even though embracing both the horizontal and vertical involves a continuous 90° flip. I would suggest two reasons for the ease of this dual configuration: one is that people may have a predisposition to allow screen-based icons some poetic license; and two that the hand can function equally effectively as a straight-forward pointing-finger hand, in other words not one that is cradling a mouse ready to click, but one at any angle that

points as part of a command or invitation, recognized in most parts of the world, for the viewer/user/receiving person to respond. This insight sets the icon more firmly in a wider system of semiosis and starts to beg much bigger questions.

The genre of the hand icon requires definition. It is clearly neither photo-realist nor figurative. Its most fitting category is that of clip art, the name of small pre-made images used in the publishing industry, and now associated almost exclusively with computer images – see <http://www.clipart.com/en/>. Thumbnail pixellated pieces of clip art are widespread on the net with no doubt discrete sub-genres. Some clip-art looks more knowing and techie than others. A large slice of the genre is taken up by renditions of popular cartoon characters, including of course Disney characters. This cartoon-based clip art offers a sub-genre for the pointing-finger hand. And furthermore, despite its tininess the Apple version of the hand has an air of Mickey or Minnie Mouse about it. After all, where else have we seen the three black lines to indicate what look like tendons? Where else the white hands with black outline and rounded edges to the fingers and thumb? Evoking such towering figures of American popular culture must surely consolidate the hand icon's normalcy, and bring into sharp relief its basis in ideology.

In western entertainment culture the Mouse couple enjoy a pre-eminent role. Thanks to the overwhelming success of the Disney Corporation since its foundation in 1923, their 1928 creation and company mascot Mickey Mouse, has dominated cartoon media aimed at the children's market for the last 83 years. A pioneer in the design and ownership of cross-media assets, Walt Disney himself ensured a near universal exposure for his most successful cartoon characters across many different formats, now including strip cartoons, comics, animated films, television series, video and electronic games, CDs, children's books, soft toys, decorations on household goods, clothing, accessories, key-rings, and costumed appearances by actors in theme-parks and many other official Disney locations (Epstein, 2006). Mickey and Minnie Mouse have secured the most

remarkable longevity and are instantly recognizable by children of all races in 2011. As such it can be said that they form a norm of western cultural experience, and one that is entrenched in most western people's childhoods.

As regards the wider world it seems that Mickey's fate is closely allied with that of the USA itself. Nobody would dispute the super-power status of the USA in the mid to late 20th century. Unlike other super-powers of the same era, the military prowess of the USA has been outstripped by the impact of its cultural industries (Ritzer, 2004). Coca Cola, McDonalds, Nike, Hollywood, countless TV series, baseball caps, hip-hop and so on have penetrated almost every corner of the planet. Microsoft and Apple now promote the conventions of this culture via graphical user interfaces (GUIs) on computers throughout the world, and Facebook, YouTube and Google marshal on behalf of global users almost limitless quantities of data at the click of a finger. Meanwhile Mickey Mouse remains one of the most popular cartoon characters in the networked world of 2011 - even Hamas recently used a Mickey Mouse lookalike on al-Aqsa TV to teach Palestinian children defensive military skills (Spiegel Online, 2007). Proof enough, that as with many of the USA's cultural exports, Mickey and Minnie Mouse have become successful international icons.

Similarity of the pointing-finger hand to Mickey and Minnie's hands reveals a further significant detail that has arguably passed into the invisibility of the norm. Mickey and Minnie are well known to be wearing gloves. White gloves. According to the official Disney site, the three black tendons on the back of the characters' hands are in fact the three darts sewn into the fabric of kid gloves popular in the 1920s and '30s (Disney, n.d.). At the time it was explained that with the use of black and white film white-gloved hands were needed to distinguish Mickey and Minnie's hands from the black skin of their bodies. Other white areas of Mickey and Minnie are the parts of their faces immediately surrounding their eyes, nose and mouth. A brief foray into the cultural resonances of white gloves and white facial marks on black skin turns up a disturbing antecedent: the black and white

minstrel, or in US parlance, the blackface minstrel. Again some rhetorical questions – where else have we seen white-gloved hands on black arms? Where else have we seen white surrounds to eyes and mouth? Where else have we seen the singing and dancing, wisecracking, humble man from the country?

Many scholars have written about the links between early animation and racialism in the USA. Christopher P. Lehman asserts: “The influence of blackface minstrelsy is especially evident in the earliest cartoons starring Disney’s most popular character, the jet-black, white-mouthed Mickey Mouse. Years before Mickey’s falsetto voice became such a recognizable aspect of his characterization, Disney used songs commemorating African American bondage so frequently that they became the ‘Mickey Mouse’ sound” (2007:16).

Recognition of Mickey Mouse’s basis in racist characterization serves to make it all the more remarkable that Apple’s tiny white-gloved icon echoing this racist heritage has not become infamous. African-American scholar Brandi Wilkins Catanese of Berkeley writes about how “the physical and intellectual labors required to produce virtuality are enacted by individuals who are acculturated products of the racialized society in which they live,” (Catanese, 2005:4) an observation that surely confirms the racial importance of the white gloved hand. Its wide unchallenged acceptance seems to be a simple triumph, in Roland Barthes’s terms (2000 [1993]), of a myth made to seem natural.

Just as the hand icon shares the foundational history of Mickey and Minnie Mouse so too we can suppose it shares whatever contemporary view pertains of the Mouse couple’s representation. A level of political and cultural complexity abounds here perhaps best personified by Michael Jackson’s adoption of a single white glove in the 1983 television performance of his song *Billie Jean* – Evan Roth’s art workⁱⁱ on Rhizome provides an interesting meditation on this. Many people on the web acknowledge the hand icon’s debt to the Disney characters; the Apple hand icon is sometimes referred to “Mickey’s hand”, and a number of products promote the three darts splashed with confident minimalism

across the surface of bespoke computer mice. Indeed so naturalized are the Disney characters that they seem no longer to be taken as flagrant signs of racism in popular culture in the way that for example golliwogs are in the UK. However the historical context of Disney's introduction of Mickey Mouse as a blackface minstrel in the 1920s is part of the hand icon's ideological legacy; the hand's apparent innocence is compromised but only to the extent that Mickey Mouse's innocence remains compromised over 83 years after his first appearance.

A number of theories concerning human to computer interactivity help us account for how the hand icon's ideological roots have not been widely discerned. Take first the work of Jay David Bolter and Diane Gromala who write about the transparency and reflectivity of digital representation on all forms of digital display, especially screens (2003). Transparency is described as a kind of window onto the system whereby whatever the user requires (a data search, a calculation, a purchase, some form of navigation), the actual functioning of the system is concealed by simple visual aides providing just enough information for the user to understand how to interact effectively – thus deflecting attention away from the system itself what with its mind-boggling complexity and potential for malfunctioning. Reflectivity refers to a more self-conscious mode whereby the user's attention is deliberately drawn to the oddity and particularity of digital technology often in order to celebrate its unique capacities for expressiveness. Interestingly, in these terms the pointing-finger icon can be discussed as both transparent and reflective.

Discerning the illusion of transparency in modern computing, Bolter and Gromala refer to the tricks of a magician's trade:

The task of the GUI [graphical user interface] is to convince the user that the computer is her desktop. To convince her, the interface must function like a smoothly running magic trick, where all the elements of the magician's hands, voice, and physical props conspire

to distract the viewer from what is really happening. The interface must function smoothly, regularly, and with a seeming predictability.

(Bolter and Gromala, 2003:43-44)

The smooth running transparency of the GUI is seen as illusory because beneath the reassuring graphics on screen lurk indescribably opaque computations. Perhaps it is no accident that the magician's dress code, harking back to amongst others the French magician Jean-Eugène Robert-Houdin who in 1845 wore evening dress to present his act (California Science Center, n.d.). Hence the appearance on the GUI of a white-gloved hand at the moment when electronic circuitry and software perform an unimaginable series of processes, re-inscribes the classic illusionism of stage magic. At the one and the same time the white-gloved hand (whether icon or garb of the magician) is both extremely expressive, and a form of trickery that renders real underlying events invisible. The white hand's association with visibility and invisibility thus continues an already established acceptance of their co-existence.

Reasons why the white hand can achieve invisibility, or be simply unnoticeable, take us to the fundamentals of human existence. The tactility and sensitivity of hands give them a primary importance to the interaction of human beings with the physical world. Many parents observe that babies point their fingers to indicate objects at an early stage of development. Anthropologists and cognitive psychologists debate whether index finger pointing is hard-wired into human physiology and so entailing a precise universal meaning in all human cultures. David Wilkins, a cognitive psychologist working in northern California is keen to establish the basis of index finger pointing in the specific semiotic systems of individual cultures. His point is not to deny the universality of the gesture but to locate its nuanced meanings and particular configurations (angle of hand, body posture, movement of hand, typical contexts, possible interpretations) in socio-cultural terms. Using data from speakers of Arrernte, a central Australian Pama-Nyungan language, his conclusion is clear: index finger pointing is indeed subject

“to some degree of social and semiotic shaping that must be socially transmitted” (Wilkins, 2003: 80).

This insight comes with a further implication for the role of finger pointing in wider semiosis. Once it is accepted that the physical gesture is determined by social context then its nature as a sign yields more complexity. Not only is it indexical (in the Peircian sense) i.e. the hand is standing in for whatever it is pointing at, but it is also iconic, i.e. it has the physical orientation of a directive probe largely because in that position it looks like one. These semiotic functions lend the hand gesture to absorption within written and spoken language (Chandler, 2009). Consider the very words “digital” and “index” which have often been used in this article. Many words, turns of phrase and idioms in English are based on hand signs, for example we refer to: “pointing out” a problem, “handling” a difficult child, “drumming” sense into someone, “indicating” a problem, “fingering” an issue, “fumbling” towards the truth, and so on. The use of these metaphors to encapsulate our more abstract apprehensions serves to separate them from their origin in bodily referents, thus recommending the hand as an icon in the computer age with an effective yet seemingly invisible cognitive association.

Here McLuhan’s notion of a ‘non-literate society’ (1962: 23) that naturally deploys the whole human sensorium comes startlingly to life. McLuhan sees in the introduction of electronic media (he died before its blooming in the 1990s) a reintegration of the human sensorium, previously co-opted by visual sensibility since the introduction of print (1962: 31). With its various representations of the visual and the tactile, the pointing finger hand icon can be seen to have a place in the alleged reintegration of the aural, oral and haptic. Index finger-pointing as a process of identifying things in the physical world orchestrates the senses: the supremely tactile hand commands the visual field, it specifies in space the source of a sound or a smell, it has its own proprioceptive authority, much like a conductor’s baton it orientates the active senses in directing human consciousness to efficacious ends. This role dating from pre-history makes it less

surprising that we may assimilate so unquestioningly the pivotal image of a hand in our electronic web of text, image and sound-based knowledge and communication. After all, human beings have always used their hands in the context of cognition, and many human beings use hand-based metaphors to describe cognitive states, “oh yes I can get a handle on that idea”.

Going deeper into the relationship between cognition and human-computer interactivity offers more evidence for the white hand’s continuation of an established semiotic function. Espen Aarseth identifies the effort and commitment required by the user of any cybertext (1997:1). The computer user must make a path through a multitude of choices in order to move on the text. Necessarily the user negotiates the text’s topological structure, surveying and choosing, often over and over again. In the vast global cybertext that is the web, users’ extranoematic struggle to locate the best or most suitable product, or to reach a higher level in a game, or to research a topic of interest, is considerable. Endless clicking through pages, continuous manoeuvres into and out of blind alleys, repeated negotiations with levels of security and constant assessments of risk, all demand an intelligent involvement with the mechanisms of the text. It is this type of absorption in the medium that provides a familiar and important context for the appearance of the pointing-finger hand icon. Depending on the type of text, the hand is often there when we need to know what to do.

Alan Peacock’s forensic semiotic study of the micro process of rollover and click (2004) helps expose the integral role of the white hand. He reveals the signing changes that occur in the nano-seconds of locating a hyperlink, then pressing on and releasing it, using a mouse. For Peacock the semiotics of the process relate to a representation of human thought itself.

The move – locate – click process of mouse use becomes a sign for a mental model of decision making and even thought itself. It signs think – decide – act and requires this of the reader. Without this process, meta-signed in the use of the mouse, then, much of the time in the interactive nothing happens. This sign of process is not merely denotative, it

does not simply sign the process as process. It is connotative of that process, signing the process with the values of rational mind, decision making, trustworthiness, agency, presence, power. The process of signs and of syntagmurgy means that mouse use, the movement of cursor on screen and the hand behind it, becomes a kind of embodied probe for our thinking process. The movement of the mouse signs mental processes, the cursor becomes the point of our concentration, an outbodiment of the hermeneutic syntagmurgy.

(Peacock, 2004:7)

Now we have a direct identification of the interactive process with cognition, indeed according to Peacock the signs of the interactive process are connotations of thinking. My addition to this analysis would be to emphasise the importance of the pointing-finger hand in its service as a prominent and centralizing sign. The hand sign unifies the haptic, the visual and the noematic within the combined process of what happens on screen, around the mouse, and in the human brain; it appears when the first engagement of thought occurs (rollover), then disappears as the decision and the interactive sequence finish (release). This synchronicity is so deft that it is easy to see how the hand icon itself may be unacknowledged.

This passing between human subjectivity and objective function is also echoed by Marie-Laure Ryan whose work concerns the involvement of users in digital narratives; Ryan sets out two pairs of binary opposites that she uses to discuss the interaction between users and different types of computer games (2001:7). These binary opposites equally apply to other cybertexts – the two pairs are “ontological/exploratory” and “internal/external”. As regards ontological and exploratory she contrasts an ability to change the terms of the game with the experience of operating within the terms of the game. For internal, as opposed to external, we can read a first-person involvement leading to felt consequences rather than the greater detachment of a third-person perspective.

It is a telling virtue of the hand icon that it can work successfully in all combinations of these pairings. An interesting question to ask of the icon is:

whose hand is it? Its interpellation clearly invites users to identify with it in the first-person mode. Central to the hand's efficacy is people's recognition of it as their own hand; the icon is after all an indexical sign convincing users of an active synchronicity with her, or his, own hand movement. And yet considerable evidence calls this identification into question. After all most people in the world are not Caucasian and do not possess skin described as 'white'; moreover 12 per cent of people are left-handed, and hence do not primarily use their right hand to interact with computers. In apparently overcoming these odds against its authority as a sign, the hand, along with its ideological baggage, can be placed squarely in Ryan's internal category.

Of course the pointing-finger icon primarily highlights the location of a hyperlink. This conforms to the third-person mode of Ryan's external category. If the hand is to be followed by the user, it must appear before the action it urges is made. Any effective alert must originate from outside human consciousness because it requires something to be done that otherwise may not be cognitively self-evident. In this sense the icon belongs to the text being explored (rather than even in an illusory sense being seen as part of the user). It is a textual emanation representing helpfulness and authority necessarily outside a user's own sense of self. Hence we can see that the hand icon operates seamlessly in both of Ryan's internal and external categories. Such duality enables us to appreciate how the hand icon feels appropriate whether the user enjoys a heightened subjectivity when altering rules of engagement within a cybertext (ontological), or is simply exploring a terrain mapped out by a cybertext (exploratory). The crucial point is that what feels appropriate can go unnoticed.

My exploration of the pointing-finger icon is one that intends to indicate the rich seam of meaning hidden in a graphic that has been little examined. The hand's very concealment of its ideological and semantic resonances has prompted a consideration of various theories that provide insight into how such a potent sign arises from previously accepted norms that render its presence unremarkable.

The ancestry of hand-signing in human cultures; the graphical hand's almost imperceptible flipping between the transparent and reflective (as defined by Bolter and Gromala), its various semiotic modes segueing effortlessly amongst Ryan's binary pairings, and its particular role in making manifest the minutia of the mouse signs identified by Peacock; all shine light on how we have collectively taken the hand for granted whilst managing to ignore some of its less palatable ideological associations.

It is Peacock's work that nudges us closer to recognizing the cultural agency (of whatever degree of deliberation) involved in the delineation of the hand as a sign; he writes about the signing of the cognitive process in the specific mouse conventions so familiar to us, stating that "this need not be so" (2004:8), meaning that the cognitive processes of interactivity could be signed differently. It is the choice of a hand icon, and particularly of Apple's icon that looks like Mickey Mouse's hand, from a vast range of other possibilities that surely confirms the right white hand as a culturally and ideologically charged sign deserving of our full attention.

References

Aarseth, Espen (1997) *Cybertext, Perspectives on Ergodic Literature*, The John Hopkins University Press

Barthes, Roland (2000) 'Myth Today' in *A Roland Barthes Reader* (ed.) Susan Sontag, Vintage, 2000

Bolter, Jay David and Gromala, Diana (2003) *Windows and Mirrors, Interaction Design, Digital Art and the Myth of Transparency*, Massachusetts Institute of Technology

California Science Center, *Magic the Science of Illusion*,
http://www.magicexhibit.org/story/story_hist_1930.html accessed 2 September 2009

Catanese Brandi Wilkins (2005) "How Do I Rent a Negro?": Racialized Subjectivity and Digital Performance Art, *Theatre Journal* 57, The Johns Hopkins University Press, p.4

Chandler, Daniel (2009) *Semiotics for Beginners*, Signs,
<http://www.aber.ac.uk/media/Modules/MC30820/> accessed 28 August 2009

Clipart web site <http://www.clipart.com/en/> accessed 6 July 2009

Disney web site
<http://disney.go.com/vault/archives/characterstandard/mickey/mickey.html>
accessed 17 June 2009

Epstein, Edward Jay (2006) *The Big Picture: The New Logic of Money and Power in Hollywood*, Random House

Kare, Susan (2009) www.kare.com accessed 11 May 2009

Lehman, Christopher P. (2007) *The Colored Cartoon, Black Representation in American animated Short Films 1907-1954*, University of Massachusetts Press

McLuhan, Marshall (1962) *The Gutenberg Galaxy: The Making of Typographic Man*, University of Toronto Press

McLuhan, Marshall and Quentin Fiore (1967) *The Medium is the Massage: An Inventory of Effects*, Penguin

Nielsen Jakob (2003) Alertbox <http://www.useit.com/alertbox/20030825.html>
accessed 29 May 2009

Phlipa Jones, University of Hertfordshire, A white right hand, 2011

Peacock, Alan (2004) *if mouseSign then: Semiosis, Cybernetics and the Aesthetics of the Interactive*, University of Hertfordshire, http://www.cosignconference.org/downloads/papers/peacock_cosign_2004.pdf,

Spiegel Online International (2007) 'The Islamist Mouseketeers, Hamas Mickey Mouse Teaches Jihad', 5th September 2007, <http://www.spiegel.de/international/>

Ritzer, George (2004) *The McDonaldization of Society*, Pine Forge Press revised New Century edition

Ryan, Marie-Laure (2001) 'Beyond Myth and Metaphor -The Case of Narrative in Digital Media', *the international journal of computer game research*, volume 1, issue 1, July 2001, p. 7

Wilkins, David (2003) 'Why Pointing With the Index Finger Is Not a Universal (in Sociocultural and Semiotic Terms)' in Sotaro Kita ed., *Pointing, Where Language, Culture, and Cognition Meet*, Psychology Press, p. 80

ⁱ See her portfolio on www.kare.com (Kare, n.d.)

ⁱⁱ Evan Roth has compiled data visualization s of Jackson's white glove appearances (Roth and Engebret, n.d.).