THE LEGACY OF SURREALISM IN THE ELECTRONIC DESIGN STUDIO

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We examine how Surrealist themes are evident in the world of information technology, and in the electronic design studio. We show that much of the current popular appeal of the computer in design schools is attributable to the computer's apparent surrealistic possibilities rather than the potentialities traditionally put forward by exponents of formalism, design methods and systems theory. We discuss developments on Surrealism, including the application of Freud's concept of the uncanny and Lacan's understanding of the image, before concluding that Surrealism and its developments support a "hermeneutics of suspicion," which is one way of interpreting what occurs in the design studio.

Surrealism began as an art movement in art and literature in the 1920s. The movement was formally disbanded in the 1960s with the death of its founder, Andre Breton. But Surrealism has left a strong legacy in three areas pertinent to design. First is the design studio tradition, particularly where pedagogy incorporates abstract exercises and explorations, the appropriation of found objects, strange juxtapositions of elements, objects and materials, montage, collage, and the language of shock, reversal, dialectic and deconstruction. The second area is popular culture. Although initially a movement of the avant garde, many of the tenets of Surrealism have found expression in the mass media, particularly through the early "commercialisation" of Surrealism by Dali, the films of Alfred Hitchcock, the comedy of Monty Python's Flying Circus, certain genres of television commercial and music videos. Surrealism also informed the psychedelic cults of the 1970s, and it is easy to find links between the Beetles in the 1970s and the avant garde. Third, the tenets of Surrealism seem to pervade aspects of what is loosely termed "IT culture" or the "discourse of cyberspace," particularly in the way some cultural critics present the mass media, computing, and the medium of the Internet and the World Wide Web.

Surrealism does not feature prominently in architectural discourse, but the Surrealist legacy is advanced through the reflections and critiques of cultural theorists influenced by the Frankfurt School, such as Baudrillard, and poststructuralists, particularly those influenced by Derrida. Some commentators argue that the influence of Surrealism, and its developments in the late modern age, has eclipsed, or perhaps subsumed, those of other art movements, such as abstract expressionism, cubism and functionalism.

Surrealism in turn draws on several traditions, including the culture of the absurd and the carnivalesque. According to Esslin's (1961) study of the absurd in theatre the behaviour of the clown "arises from his inability to understand the simplest logical relations." (p.235) In such plays the unities of time and place were violated, and the
workings of dreams, hallucinations, and paradox prevailed. Then there is also the tradition of "verbal nonsense" as exemplified in the writing of Lewis Carroll, which, according to Esslin, aims at the destruction of language by naming things in an arbitrary way, which in turn expresses a mystical yearning for unity with the universe. (p.248) There is also the influence of the theatre of the absurd, which called on sources as diverse as vaudeville and Nietzsche.

The cyberspace discourse inherits the legacy of Surrealism in popular culture, but also amplifies it. People seem to be rediscovering and reinventing Surrealism in a new medium. We outline some of the Surrealist themes here, and show how they are realised in the IT world. A cursory browse of the Web reveals a plenitude of overtly Surrealist imagery. We give examples of how these concepts interact with the work of architectural designers using computers. Work shown here is by students involved in the design of a museum. The projects encouraged students to address the changing notions of exhibition, participation, the mass media, and the body. Students inevitably used the WWW in gathering information and exploring precedents, and used image processing, 3d modelling, rendering and multimedia tools, as well as manual media. The Surrealist theme did not occur to us until after the projects were completed, and the concept was never raised with the students. The Surrealist influence pertains to the presentation as well as the design of buildings. Clearly, the computer is caught up in a field of influences that includes Surrealism, and this field interacts with the program, the emphasis of the school, and the architectural culture in which the designers participate.

1. Surrealist Themes

(i) Some IT commentators claim that when immersed in the Web we are barraged with data from various sources juxtaposed in apparently random ways. The Web is formed much as the Surrealists considered montage or collage-as the juxtaposition of objects out of their normal contexts. For the Surrealists these included the juxtaposition of the torso of a woman, a tuba and a chair depicted as clouds floating above the ocean (a painting by René Magritte), or a gramophone with legs protruding from the horn in Dominguez''s Never. Surrealism shares with structuralism the Hegelian appropriation of difference, realised through the juxtaposition of image against image. According to Chenieux-Gendron (1990, p.65), Surrealists eschewed the literal expression of comparisons (the use of "like," "such as," "just as"), preferring the enigmatic, "grammatical indeterminacy" of phrases such as "the hand holds the night by a thread," or "the ruby of champagne." As invented and explored by Max Ernst, collage functions in much the same way, involving "irrational" juxtapositions of ready-made elements. Such theories resonate with the tenets of structuralism, and of metaphors as creators of meaning. The concept of juxtaposition is a celebrated feature of studio teaching and practice, which finds ready amplification through computer imaging tools (Figures 1 and 2). Studio commentators such as Novak (1995) claim that "morphing" has replaced collage as the operative mechanism in the electronic design studio: "True to the technologies of their respective times, collage is mechanical whereas morphing is alchemical." (p.46) Both concepts belong within the Surrealist repertoire, including the concept of alchemy, particularly the transformative, alchemical function of words and images.
Figure 1. A "site study" exploiting collage, by Adrian Shilliday

Figure 2. The appropriation and juxtaposition of elements from around the site, including cranes and other hardware of the waterfront, by Nico Warr.
(ii) The Web involves a juxtaposition of media: text, sound, images, and movies. Surrealism was concerned with art in all its manifestations: poetry, painting, sculpture, photography and film, and Surrealist exhibitions would include all of these, combined in diverse ways. The concept of networked multimedia further animates this theme (Figure 3).

Figure 3. Mixed media presentation and exploration of a design concept involving line drawing, 3d modelling, physical model making and digital video, by Claire Robertson.

(iii) To search the web is to explore a vast "city" within which one stumbles across strange objects and encounters surprise. The Surrealists were excited by this aspect of vibrant cities such as Paris, as evident in Walter Benjamin's Arcades Project and Andie Breton's novel Nadja. The artist is to be in a state of active expectation. This theme of discovery pervades computer games, such as Myst, though one of the ultimate sources of dissatisfaction with such media is the finitude of discoveries, all of which have to be pre-planned. The Web offers no such limitations. The Surrealist legacy already informs concepts of the architectural manipulation of space and the invocation of a sense of place, and even alienation. Working with computers seems to bring these issues to the fore in design (Figure 4).
(iv) In accord with the Surrealists' interest in the world of imagination and dream, the computer (the Web, computer games, and electronic role playing) seems to provide opportunities to celebrate the marvellous, dreams, fantasy, and the labyrinthine. The Surrealists saw correspondences between the production of art and the dream state, valorised the imagination, fairy tales, and the state of childhood. Surrealist art was inspired by the symbolism of dreams, the latent content of which could be revealed through psychoanalysis. But according to Alexandrian (1970), in all this: "Surrealism cannot accurately be described as fantasy, but as a superior reality, in which all the contradictions which afflict humanity are resolved as in a dream." (p.49) The task of the Surrealist writer, painter and sculptor was that of "calling existence into question." (p.50) In his Manifestos, and quoting Baudelaire, Breton (1972) claims that Surrealism "acts on the mind very much as drugs do. It is true of Surrealist images, as it is of opium images, that man does not evoke them; rather they 'come to him spontaneously, despoticly.'" (p.36) In a similar vein, some IT commentators report that in virtual reality: "There is both a fluidity and speed of movement that are more akin to dreams than waking life." (Franck, 1995, p.20) Computer imagery provides opportunities for the exploration of transparency and ephemera, which can also feed into the design process. The designs in Figures 5 and 6 were animated by notions of narrative and personal journey, and resonate with the Surrealists' reverence for dream.
Figure 5. A building that places store on unreal glowing surfaces and the effects of light, by Dulcimer Taylor.

Figure 6. A design around the theme of a journey of discovery in the first person, by Asrul Sani Abdul Razak.
Designers can use ray tracing and radiosity software for creating synthetic photorealistic imagery, and image manipulation software is used for presenting and experimenting with the photographic image. Computer imagery brings the tension between the real and the imaginary into sharp relief in ways that would have delighted (or horrified) Salvador Dali (Figures 7 and 8).

Figure 7. A photorealist/surrealist interior by Simon Hamilton.

Figure 8. A familiar plan view in an unfamiliar orientation and in photorealistic mode, by Max de Rosee.
Aspects of IT culture, cyberpunk and the Web, seem to trade in the carnivalesque (Figure 9) and "unreason." At the very least, the Web treats information and imagery in a fluid and non-deterministic way.

The Surrealists were explicitly interested in the emergence of creativity from random behaviour, as exemplified in early experiments in automatism (automatic writing): the generation of random streams of words to gain access to the subconscious. The Surrealists were also interested in the machine as a means of generating chance occurrences. Designers who use computers commonly report that they have been constrained or enabled by what the computer allows them to do, and some, as in Figure 10, exploit the chance occurrence of forms and configurations presented by the idiosyncrasies of the computer interface, data structures and so on. Of course, the use of the computer to generate form has a long history, though the formalist and systems approaches generally deny the value of randomness. Recent generative experiments that may be construed as surreal are reported by Novak (1995) and Frazer (1995), and we show a design student's generative approach in Figure 11.
(vii) According to many IT commentators, and certainly the advocates of cyberpunk, IT is thought to challenge various empiricist "conventions," including our sense of identity, subjectivity, and the nature of reality. According to Frazer (1995, p.76), "Virtual reality has caused us to reassess reality ... the transcendence of physicality in the virtual world allows us to extend our mode of operation in the physical world," a theme illustrated in Figure 12. Surrealism was founded on similar radical ambitions.
The Surrealists were intrigued by the character and state of the human body, and appropriated Freud's use of the body in his theories of the psyche. In Surrealist art the body is placed in unusual situations and juxtapositions. For example, in one of his paintings Salvador Dali arranged the elements of a room to make up the features of Mae West's face. There is Vitor Brauner's strange use of the eye in The last journey, featuring a man sitting on a giant eye, and René Magritte's Philosophy in the boudoir, featuring a night dress with breasts attached and a pair of high heeled shoes with fleshy toes. For Surrealism, the body provokes, and it is highly sexual. Similarly, the human body regaled in a data suit has informed contemporary cultural commentary. Harraway's (1991) concept of the "cyborg" is a provocation for radical action, and spawned the critical genre known as "cyberfeminism."

Giving little thought for surrealism at the time, we organised one of the design projects around the theme of a "Corporium," a museum for the exhibition of body technologies. The theme of the body seemed to fit very comfortably with the emerging surrealist themes of the design work. The design of Figure 13 treats part of the building as a prosthetic arm that reaches over the water and mirrors the "prosthetic" nature of the port of Leith, the site of the project. Figure 14 hints at the ambiguity of the body as the site of the visual sense and the body as object of display.
Figure 13. Building as prosthesis, by James White.

Figure 14. Body, gaze, reflection, image, by Eleanor Egan.
Surrealism also adapted the methods of mediums and spiritualists, and played with the Neoplatonic concept of ecstasis, the out-of-body experience, which also resonates with the cyborg literature. The design in Figure 9 was informed by this theme, involving the metaphorical progression of the museum visitor from a state of sensory awareness to a state in which they were "out of their bodies" in a virtual reality environment.

2. Computers and Romanticism

Surrealism, of its own admission carries the trappings of the romantic movement. There is a contempt for the strictly logical, an emphasis on individual genius, a focus on the subject, the power of the imagination, and so on. It broke away from, and outlived the anti-art movement known as Dada, which sought simply to shock and scandalise. Surrealism had a political edge. According to Alexandrian (1970), Surrealism declared the rights of fantasy against "a world racked by war, with boring dogmas, with conventional sentiments, with pedantry, and the art which did nothing but reflect this limited universe." (p.29) It was a highly politicised, inflammatory movement which had a radical concept of freedom. It aimed to liberate the resources of the unconscious mind through art.

In spite of its claims to radicality, aspects of IT culture seem to be as firmly grounded in the romantic movement as Surrealism. The WWW is currently populated with home pages in which individuals assert themselves as dreamers, free spirits, and fountainheads of original ideas that can at last be published to the world. People also claim that they can assume and experiment with different identities in elaborate electronic role games, such as MUDs.

Engagement with computers as a Surrealist enterprise is one of many factors at play as designers use computers, which is also informed by the design methods movement, systems theory, formal geometry, empiricism—architectural terms the trappings of functionalism and modernism. But the Surrealist influence presents itself as at variance with this "rationalism." In 1995, the journal Architectural Design published a special feature edition entitled Architects in Cyberspace. This publication has probably done more to advance the enthusiasm for computers amongst training architects than any of the scholarly books and articles published on CAD, 3d modelling, computer methods and formal systems. The surrealistic rhetoric of cyberspace seems to have greater purchase amongst many designers than the systems approach, though it is no doubt parasitic upon it.

3. Cyberspace and the Uncanny

Much of the "philosophy" of Surrealism has been eclipsed by its progeny, including neo-Freudianism and poststructuralism. Freud was no admirer of Surrealism, but his account of the uncanny resonates with Surrealist themes. His concept of the uncanny influenced Surrealism in part, and offers an account of it. The theme of the uncanny also contributes further to the Surrealist understanding of design on the computer.

The uncanny (the unhomely) is the feeling of not being at home, an impression easily conveyed through computer imagery (Figure 16) and Surrealist art. As with many aspects of mind, Freud was able to link the sense of the uncanny with the Oedipus
complex and early childhood development. He removed the uncanny from the notion of
dolls and other machines that may behave as if alive. According to Freud, since
childhood we are readily able to attribute life to inanimate objects through the power of
the imagination. So we need to look for how computer narratives reveal the Oedipus
myth rather than to the computer as autonomous or intelligent entity if we are to
appreciate how it presents to us as uncanny.

Freud, posits several sources of the uncanny. He identifies an encounter with one's
"double" as uncanny, as when you see someone who looks just like you, or even see
your own picture. An image can instil a sense of longevity, as in the case of the
Ancient Egyptians making images of the dead in lasting materials. For Freud this
reverence for one's image reflects an early stage in childhood development or of
primitive society, namely that of self love, narcissism. But when we surmount the
narcissistic phase, in early childhood, the significance of the "double" takes on a
reversal. Whereas it was initially an assurance of immortality, it later becomes "the
uncanny harbinger of death." (Freud, 1990, p.357) At an earlier stage the double wore a
more friendly face, but later, the "double' has become a thing of tenor, just as, after the
collapse of their religion, the gods turned into demons." (p.358) In this light, the fact
that a designer can place himself and his colleagues in the picture, as in the right of
Figure 11, presents to us as uncanny, as is any exercise in which we see ourselves in
the machine.

Figure 15. Museum interior by Peter Maxwell, inhabited by friends wary
of the avant garde.
A second instance of the uncanny is where seemingly random events exhibit a pattern, as when the number on a theatre ticket turns out to be the same as the seat number on the train. For Freud, repetition itself is uncanny, as in the child's apparently obsessive repetition of simple games. According to Freud, "whatever reminds us of this inner 'compulsion to repeat' is perceived as uncanny." (p.36) The computer trades in obsessional repetition, in its internal functions and in the modes of practice that develop around its use. This could help explain the strength of opinion that gathers around computers amongst designers. It is not the threat to creativity that intrigues us but the obsessive modes of repetition it demands.

A third case of the uncanny is where we take what is imaginary for reality, as when old, discarded beliefs in ghosts, death wishes, animism, and so on present themselves as confirmed after all: "As soon as something actually happens in our lives which seems to confirm the old, discarded beliefs we get a feeling of the uncanny." (p.371) For Freud, an uncanny effect is often produced when the distinction between imagination and reality seems to be removed: "as when something that we have hitherto regarded as imaginary appears before us in reality ..." (p.367) For Freud, we encounter the uncanny "when infantile complexes which have been repressed are once more revivified by some impression, or when primitive beliefs which have been surmounted seem once more to be confirmed." (p.372) By this reading the play between the real and the imaginary made possible through computer imagery presents to us as uncanny, and therefore disconcerting (Figure 16).

![Figure 16. The presentation of a museum design that deliberately denies its context, demonstrating the ability of computer imagery to evoke the uncanny. No one is at home. The work is by Adrian Shilliday.](image)

4. The Refracted Image

Surrealism played on the theme of the image, including the interreferentiality of images, that one image refers to another, that images are reflections of each other, and the ambiguity of image and reality. The mirror provides a potent metaphor of the Surrealist concept of the image. Mirrors feature prominently in absurd (Alice Through the Looking Glass) and Surrealist iconography: the eye, the mirror, the look, the gaze, aperture, window, frame, mimicry, perspective. Such metaphors also resonate with the IT world, which purports to present openings into worlds, presenting windows and
hyperlinks that can return to themselves, and that suggest the interreflections of a chamber of mirrors. For IT commentators such as Chaplin (1995), Alice's looking glass is a "precursor of cyberspace" (p.32) in which the fundamental laws of physics, logic and language are inverted. It functions as a "substitute reality." (p.33) For others the mirror also suggests a divided self, subject to surveillance. According to labor (1995): "Each form filled, card swiped, key stroked and barcode scanned, replicates us in dataspace-as multiple shadows or shattered reflections." (p.17) Computer imagery also presents copies of other images, modified and distorted, and renders the concept of an original uncertain or ambiguous.

The image, particularly the minor image, features prominently in the theories of Lacan, who was a leading psychoanalyst and controversial interpreter of Freud. As for Freud, Lacan's ideas now provide a potent resource for cultural critique (Zizek, 1992). Lacan's interpretation of Freud is informed by structuralist language theory and Surrealism. Surrealism influenced Lacan's view of language but also his use of it, as he exploited puns and word games, and used language to provoke, shock and even confuse. According to Bowie (1991), Lacan steps forward in the company of the Surrealists "as a writer and demonstrates his prowess in a self-conscious parade of puns, pleasantries, conceits, learned allusions and whimsical etymologies." (p.67)

For Lacan, biology is imbued with concepts of mimicry, which is even more basic than concepts of fitness and survival. Lacan was impressed by Caillois account of mimicry in nature, particularly the form assumed by the praying mantis, which exemplifies a creature being captivated by the image, that is, assuming the form of a twig. As Sarup (1992) summarises Lacan's position: "the human being, like the praying mantis, is captivated by the image . . . we are dominated by a structure of images and that this has a toxic, poisonous effect on the human subject." (p.25) For Lacan (1979) this concern with the image eventually expresses itself in terms of consciousness, which trades in the "illusion of seeing itself seeing itself." (p.82) which is based on the "inside-out structure of the gaze." (p.82) Lacan constructs a theory of human development at variance with Freud's and that builds on the concept of a child's first encounter with a minor, the first moment when the child realises that she is other than her parents and the world around her. Lacan implicates language in this encounter, attributing the concept of identity with the separation between signifier and signified, which is also the separation between self and world, as encountered in the minor. For Lacan the essence of self resides in rift and division. In this light the seduction of computer imagery and the production of designs in the context of computer graphics touches at the core of selfishness and identity, even unsettling it.

5. Surrealism and Suspicion

We can regard the Surrealists, Freud and Lacan, as practitioners of the "hermeneutics of suspicion." They purport to probe beneath the surface, which is a process of "a tearing off of masks, an interpretation that reduces disguises," according to Ricoeur (1970, p.30). It even ends with suspicion about the very process of reflection, as there are things about ourselves hidden from introspection. They dwell in the unconscious, and we do not really know ourselves. The tenets of Surrealism encourage us to "psychoanalyse" ourselves, and our designs, or at least the narratives we construct.
An alternative mode of interpretation engages a "hermeneutics of trust," which is at variance with Surrealism. This is a discourse that preserves the notion of truth and meaning, and recognise the role of community, context and history. It is a discourse that engages with the issue of metaphor, and the social situations in which we construct them. It presents design and design critique as richly dialogical activities, informed by the technologies we use, and the practices we are engaged in, or that engage us. It also adopts Gidden's (1992) criticism of Lacan and deconstruction: "Meaning is defined through difference, certainly; not in an endless play of signifiers, but in pragmatic contexts of use. There is absolutely no reason why, on the level of logic, acknowledgement of the context-dependent nature of language dissolves continuity of identity." (p.114) However, the "trusting" kind of interpretation acknowledges the role of discourses such as Surrealism and the language of provocation. The Surrealist artist does not have privileged access to creativity or radicality, but is caught up in particular modes and communities of practice, sometimes parasitic on the concept of the norm. If this is so of art then it is certainly true of design. From this point one can embark on further readings of computers in the design studio, that focus on metaphor, technology, narrative, and practice (Coyne, 1995).

References