Abstract: This paper examines the issue of attitude, as when we inquire about peoples’ attitudes to the computer, as a matter of bodily comportment. The theme is illustrated through a recent design studio project that focused on the issue of the body and the computer through the design of a museum of body technologies.

1. Posture and opinion

What is the attitude of architects, students and teachers to the computer in the design studio? The question of attitude is interesting in its own right, but the computer also provokes reflection on what is an attitude, particularly if we take "attitude" away from the language of mood, opinion and mental states, and into the realm of the body.

In Paradise Lost, John Milton [Milt75] claimed that human beings have an advantage over animals in that we can stand upright and so look to Heaven. Milton was challenging the conventional Neoplatonic view that we have a material part, the body, and a spiritual component, the soul. Milton implies that human aspiration, reverence and even intelligence are primarily inscribed in the body. They are marked by posture. What would otherwise be accounted for in terms of transcendence, spirit and feeling can be explained in terms of transformations within the body. The inquiry into the body and its transformation seems to cut across the 18th and 19th century controversies of the romantics and the rationalists over the ideal versus the real, the spiritual versus the material, emotion versus reason. The apogee of this "embodied" tradition is to be found this century in the Heideggerian concepts of "corporality" [Heid62], Merleau-Ponty’s concept of "flesh" [Merl68], Foucault’s notion of "bio-power" [Fouc77] and Lakoff and Johnson’s concepts of the embodiment of thought [Lako80].

Under the influence of the romantic tradition we commonly assume that the posture of the body can correlate with inner emotional states: that stooping correlates with sadness, contrition, submission or ignorance, and that reaching upwards is a sign of elation, confidence, defiance or acumen. Contemporary reflections on the body (Heidegger, Merleau-Ponty, Foucault and Lakoff and Johnson) attempt not to presuppose a correlation between mental state and posture, but rather to unsettle the categories on which the idea of correlation itself is founded—mind and body, inner and outer, signified and signer—inviting and expanding on new terms such as "corporality," "flesh," "bio-power" and "embodiment." It would be rash to say that mental states or emotions do not exist, but it is accurate to say that the concepts of emotions, feelings and states of mind are contingent, as is posture. The concepts have authority in different contexts of use, and this authority is changing. For example the issue of mental states has presented a problem for architecture, aesthetics and value theory generally. That architecture can or should influence or alter mental states—that you can be moved by a work of architecture, that there are spaces that make you sad, happy or inspired, and that one evaluates a work of art on the strength of the feeling it evokes—has foundered as a basis of aesthetic theory. Directing attention to the body, and avoiding the language of emotions and mental states, moves us into other modes of inquiry, that I will elaborate through examples provided by a design studio project.

The project was for the design of a museum of body technologies as a remote annexe to a major science museum. The museum would house multimedia installations pertaining to the emerging technologies of the body, such as prosthetics, nanotechnology, smart drugs, gene technologies, robotics, and cosmetic surgery. As the site was a long way from the main museum there were also opportunities to explore relationships between architecture, communications networks
and information resources. There was also the possibility that many "visitors" would never attend the museum in person, but only electronically through the Internet, or its successor.

The romantic legacy suggests that architecture can inspire, that is, induce a mental state of awe, a view that commonly features in the design justifications of architecture students. Figure 1 shows a design motivated by such an idea, but later transformed by concepts of posture. The building was to take visitors through successive stages of evolutionary development or "enlightenment," not only in terms of what was on display, but in terms of the museum "experience." To experience the building was to be involved in the successive unfolding towards a state of exaltation. But as the design developed the concept of inspirational progression gave way to a metaphoric excursion into successive stages of posture.

![Figure 1. A design in which the language of inspiration was transformed into that of posture, by Sarah Bradley.](image)

The concept of inspiration can be treated in bodily terms. Inspiration pertains to animation, invigoration, arousal, inhaling, and rising to a height. Darwinian diagrams showing progression from walking on all fours to standing upright are "inspirational" in so far as they depict postural transformation. When we see the issue of inspiration as such it transforms the critical language of art and architecture that lays claim to inspirational intent (in expressionism for example), transforming the exaltation of the sublime to matters of bodily comportment. The question of what makes exultant architecture becomes a question of what does this architecture do with and to the body?

### 2. Architecture and attitude

The body featured as the main theme of the project, a theme that was progressively transformed to become one of *attitude*. As well as suggesting a mental view or opinion, "attitude" suggests a bodily posture, pose, disposition or orientation. To have an attitude to something is simply to orient one’s body in relation to it, often to face it. Also, in vernacular terminology a person or thing can have "an attitude," or simply "attitude" in its own right. A person "with attitude" is opinionated in a way that is unselfconscious. "Attitude" also relates to the vernacular term of "cool." "Attitude" connotes impudence and audacity, presented in a way that is calm, relaxed, unexaggerated, undemonstrative and self possessed. The terms "cool" and "attitude" participate in terminologies that have been variously applied to concepts of objectivity and subjectivity, even descriptions of Protestantism (sober) and Catholicism (enthusiastic), aspects of military drill [Fouc77], the theatre (striking an attitude), aestheticism, and the mass media (cool and hot media) [McLu64].

The theme of attitude is well illustrated in a design by two students who started by identifying different locations in the city of Edinburgh, in which attitude is foregrounded, and trying to project an appropriate architecture for a distributed museum of "body attitudes." So they identified a grave yard, night club, art gallery, market place, and so on, to be linked together by electronic communications. They began by thinking of emotional responses to each location, but
soon transformed the language of subjectivity into concepts of bodily attitude, a move that allowed them to establish the distance required to develop an architecture "with attitude." The result was a highly "opinionated" architecture exploiting various erotic and "club" themes, presented through sloganised multimedia graphics (Figure 2).

![Figure 2. Excerpts from a multimedia presentation on a museum of body attitude by Paul Barnes Hoggett and James Taylor.](image)

The theme of hot versus cool is illustrated in the designs of two of the students who elected to develop their respective buildings on the themes of two major "variables" to which the body responds, namely heat and cold (or summer and winter). Both students started with the motif of the spine which they developed differently in response to the variables of hot and cold. The hot (summer) building starts out, conceptually, as a cluster of spaces compacted along the spine, but it then opens up from the spine to produce a loose configuration of rooms and courtyards (Figure 3). The cold (winter) design is also open (has a large perimeter), but as a means of exposing the occupants to the impressions of winter (Figure 4). Both designs play on the theme of active and passive. The hot building opens up, so it is active. The cool building becomes a passive receptacle to the movement of people, particularly in its receptivity to the shadowy and distorted images of people skating across an ice rink. In subjectivist terms, hot and cold are sensations, pertaining to feelings and mental states (feeling hot or cold). The students attempted to break away from subjectivist notions by regarding hot and cold as "variables," but their designs also betray that hot and cold are matters of bodily positioning. In this context heat is about opening up, exposure to the sun and breeze, being active; cold is about passivity, receiving the impressions of movement. These observations resonate with McLuhan’s concepts of the mass media. For McLuhan hot media such as the radio and books require an active imagination, which is to say the listener or reader has to do some work. They also incite action. Cool media such as the television and comics induce soporific responses. The high bandwidth and constant flicker and spectacle of movement and imagery induces inaction before the television set. The action is all on the screen so the body does not have to do any work. Such reflections promote the concepts of hot and cool in terms of bodily posture and movement, further developing the play between body attitude and "cool."
Figure 3. Successive unfolding of a building based on a response to the variable of heat, by Susann Carson.

Figure 4. A building exploring the bodily theme of cool, by Susan Russell.

A further instance of "cool" is the body in repose. A third member of the team produced a building based on how the "variable" of darkness (the night) impinges on the spine, developing a "night club" museum, the night club being an arena in which the vernacular of "hot" and "cool" find ready application (Figure 5).
The relationship between inanimate objects and attitude was developed early in the studio. As an introduction to the brief and the modelling software (to provide an orientation) the programme for the project required students to produce computer models of objects on and around the site that clearly bore some relationship to the body. The site was adjacent to docklands, and objects selected included street furniture, a lighthouse, telephone box, rope ties, an iron bridge and winch frame. Once the element was modelled students were required to copy the model file and create a variant of the element. The variant was to be something that is hostile to the element’s normal relationship with the body (Figures 6 to 9).

The elements of the site respond to the comportment of the body. They are also understood in terms of the body. A bench invites you to sit down. A telephone box stands as a sentry. A bollard bars your way. A lighthouse stands guard. A wall obstructs and protects. This bodily comportment becomes even more apparent when you try and violate this "attitude" in some way, so that the seat repels, the bollard gives way, the lighthouse becomes a perpetrator of danger.

The body-object relationship works in many ways, in street furniture as in architecture. Such objects are designed, manufactured, installed and maintained through processes that involve the body. The body comes in contact with them in various ways. They can bear resemblances to bodies. They are part of dimensioning systems that involve bodily ratios. Certain objects participate in symbol systems that implicate the body. If we adopt Lakoff and Johnson’s concept of the bodily basis of metaphor then our understanding of the properties of such objects to stand, restrain, constrain, protect, and support present as variants on the bodily themes of containment, force and weight [Lack80].

3. Docile bodies

Under Foucault’s analysis, such hardware is further implicated in the objects and practices by which the body is rendered "docile." Foucault’s famous example is of the Panopticon (as developed in the 19th century by Jeremy Bentham) as a means of encouraging civilised behaviour in prisoners, where prisoners and guards alike apparently behave themselves because they are part of a system of surveillance. For Foucault, in the modern era, we organise our architecture, and other hardware, to accommodate transformed power relations. Rather than exercise power by inflicting
violence, torture or forced restraint on bodies, modern society has developed institutions, practices and architectures that replace the spectacle of violence with other bodily spectacles, well represented by the military drill, codes of classroom behaviour, systems of confinement, gymnastics, and even handwriting.

In some cases built spaces seem to determine one’s bodily position, as in requiring you to stoop to pass under an opening, or remain standing due to an absence of seats. But spatial configurations also resonate with certain bodily postures, simply by virtue of architecture being an embodied process. This is not to embrace environmental determinism. We do not behave ourselves because architecture is organised so that others can see us. It is more accurate to say society has ordered itself in ways that implicate institutions, practices and architectures through the theme of the body under surveillance. Architecture is implicated in the transformation of power relations through the ways it deals with the body. So telephone booths are sheathed in glass, public outside spaces are exposed to view, museum foyers are within view of the ticket office, in ways that clearly implicate surveillance. But more interestingly, in the art museum, there is the spectacle of reverence. Not only is the work on show but so are the patrons. The size of the spaces, the lighting, the finishes and the furniture, or lack of it, work in tandem with attitudes towards the work on show, evident in the postures of the patrons, postures that may be pensive, critical, adoring, indifferent, engaged or exhausted. This is where unconventional museums, displays, and art works present a challenge. What postures (attitudes) do they work in with, particularly when we move into the realm of digital interactions and displays, and the electronically dispersed museum? The museum of the night described above plays on the theme of the spectacle of the body. Buildings used at night can present a spectacle to the outside world (Figures 10 and 11).

Figure 10. A museum that works with the theme of the body in view. A series of glass boxes at ground level provides glimpses of activity above and below ground, by Claire McDonagh Sa.

Figure 11. A building that plays on the variable transparency of planes, by Sam Harvey.

It is a simple step from a discussion of the body to the erotic, no doubt fuelled by subjectivist notions that the mind pertains to reason and abstraction, whereas the body pertains to pleasure and pain, sensuality, the irrational and the erotic. But the students who developed the erotic theme saw that concepts of the sensual, and seduction have architectural correlates. Seduction is a game of revealing and concealing, as much in evidence in the way architects deal with surfaces and materials as in the hiding and exposing of the human body (Figure 12).
The issue of scale clearly develops from notions of the body, ratio, proportion, the human body as the determiner of scale. Computer models also provide opportunities for distorting scale. But scale is also a matter of one’s point of view. Some students identified scale as an issue early on in their design (Figure 13). In terms of body technologies, there is the social scale, the human scale and the nano (microscopic) scale. Here the building was organised following these three levels of scale, and around a surveillance tower. From the higher reaches of the tower you have the overview, you see the social scale, in the middle is the human scale, and at the lowest reaches one is involved in the nano-level. The body is under view at three levels, that also constitute scales of detail.

The idea of "virtual architecture" also participates in the issue of attitude, not least in its attempts to find release from the constraints of the body, ecstasis [Coy99]. The metaphors depicting the ephemerality of cyberspace commonly invoke notions of flying, floating through space, progressing through successive layers of "enlightenment," as commonly depicted in cyberspace fiction. Two students developed their museum in "virtual space," a space that one visits through putative virtual reality equipment in one’s own home or elsewhere. The first space the students developed consisted of an expanding scaffold of information, that grows as the network expands. The initial concept was of a space that one could fly through, but it soon became apparent that the posture befitting such a space involved curling up on one of the precarious platforms, a common response to vast and vertiginous spaces. These reflections induced the construction of a second space accessible through "gateways" in the matrix of the scaffold. Unlike the expanding nature of the first space, this space is built up of grafts of mechanical components, accretions that increasingly hem one in, analogous to accretions of information and knowledge (and also bodily grafts and prosthetics). This space is confined and cramped, pertaining to bodily comportments of breaking out and resistance. Of course the features of each space can be found in the other, and the museum design is effectively a play between the two: the agoraphobic and the claustrophobic.
As we have seen, the body metaphor in the design studio is productive. It opens lines of inquiry that would otherwise be concealed by subjectivist concepts of mood and mental states. It is also the case that the computer’s presence in the design studio still serves to exaggerate and provoke, much as the objet of surrealism, rendering certain issues strange by virtue of a clash of contexts. The computer re-animates the body theme in architecture.

4. Posture and the computer

The computer does certain things to the body. Attitudes to computing in the design studio are also bodily attitudes, such as squinting, constrained movement, cowering, shrugging, neck strain, spying and fleeing. A Foucauldian history of computing in terms of transformations of disciplinary practice and posture has yet to be written. Such a history would include an account of the discipline of manual card punching, the use of card punch machines, mechanical typewriter interfaces, VDUs, electronic keyboards, and LCD displays, each with their own attitudinal correlates. There is also the posture of the cybernaut stooping under the cumbersome load of wires, sensors, headset, and dataglove, grasping at space. Contrast this with the reconstructed heroic iconography of Vitruvian man, popular in cyborg imagery, and the imaginary postures of floating, flying, and digital coitus. By this Foucauldian reading, the computer is implicated in various transformations of power, and not only because now we are all being watched (the Panopticon model), but in the way the computer has been invented and developed to inscribe in our bodies certain postures we deem appropriate to our ways of being in the digital age. What are our students attitudes to the computer in the design studio?: cool, undemonstrative, with the full participation of the body.
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References


