

CHAPTER THIRTEEN

THE 'HOUSE OF THE FUTURE' AND THE TOYOTA PRIUS (MkII): PERSPECTIVES ON SUSTAINABILITY

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Introduction

Aesthetics, image and feedback not only shape perceptions of sustainability but also influence behaviour. This has variously been referred to as the 'Prius Effect' (Wood & Skates, 2006) and 'Conspicuous Conservation' (Sexton & Sexton, 2011). Since its introduction, the Prius has received two major revisions and a facelift, and, perhaps more importantly, it has received popular support as a responsible vehicle choice for drivers who wish to minimise the impact of their driving on the environment. Leonardo Di-Caprio drives one, as do many of his celebrity friends. The Prius is no longer regarded as a small car, and a new model called the Prius 'c' has filled the gap left by the now somewhat obese standard Prius. It doesn't really look obese, as it has been streamlined further to reduce air resistance, but despite the technologically aesthetic corset it has put on weight. This effect is referred to in the automotive industry as 'The Bloat Law' (Dykes, 2012). The second version is always larger than the first. Perhaps this applies to fields other than the automotive industry, but let us continue for a moment with cars.

At the other end of the automotive spectrum is the Hummer – a behemoth sport utility vehicle (SUV) favoured by that other behemoth, Arnold Schwarzenegger. So, who costs the environment more – Leonardo or Arnold? According to a 2005 CNW Marketing Research, Leo does (CNW Marketing Research, 2005). Taking into account the full range of energy usage required to conceive, produce, drive and dispose of a car, CNW marketing concluded that the hybrid Prius consumes 1.6 times more energy over its lifetime than the 2 tonne H₃ Hummer. Toyota have since responded with their own figures to show that the CNW figures are misleading, and that the assumptions made are not accurate, but nevertheless, the report raises some interesting questions. So we may well ask the question; which mode of transport is the most sustainable? But before we do that, perhaps we should examine what lies behind the question. Do we ask the question because we want ourselves, or other people, to know that we are saving the planet when we are driving? Perceptions of sustainability are important. For the moment, let us assume that it is self-satisfaction.

Feedback is a well-recognised ingredient in regulating perceptions and hence behaviour. After all, what is the point of saving the world if no one knows you are saving the world? When driving the Prius the dashboard display tells you when you are using the electric motor rather than the petrol engine, letting you know when you are saving the planet so you can try even harder to save it more. This has also been referred to as the Prius effect, but for this paper we will define the Prius effect as the feedback that allows you to feel better when driving your car, even though driving any car can be viewed as environmentally threatening. In the popular American animated television series *Southpark*, this self-satisfying feeling has been referred to as the 'smug effect'. (In the 2006 'smug alert' episode of *Southpark*, Gerald buys a Prius, buys into the whole progressive movement and, deciding to move his whole family to San Francisco, a cloud of smug follows his move where it meets up with other smug clouds including George Clooney's own personal smug cloud to create the perfect storm of self

satisfaction [smug is defined in the episode as “the self satisfied garbage being spewed into the air to replace the other emissions not being spewed”].)

Perhaps there are other metrics for measuring sustainability rather than the car one drives. It is too easy to use the phrase ‘sustainability’ as a topical anaesthetic to dumb ourselves to the reality that almost every part of Westernised living is highly unsustainable, and that the very *raison d’être* of our civilisation has been expansion through consumption. We might hope that it is otherwise, but as Ronald Wright observed in his study on the collapse of civilisations, “Hope, like greed, fuels the engine of capitalism” (Wright, 2004, p. 123).

Sustainability, like any political movement, benefits from aesthetic or visible codes that represent its ideological motivation. These aesthetic codes elicit emotional responses, some blatant and powerful, some subtle and somewhat weaker, but they exist nonetheless, Hitler used the swastika, Stalin the hammer and sickle, Chairman Mao managed to popularise appallingly bad olive drab clothing, and the environmentally self-conscious of the third millennium drive the Toyota Prius.

The Prius Effect

Perhaps another green celebrity, Julia Louis-Dreyfus, who played Elaine Benes in the successful television sitcom ‘Seinfeld’, provides the best example of the Prius Effect. In one episode, a superficial TV executive, Russell Dalrimple, becomes so infatuated with Elaine that he joins Greenpeace in an attempt to win her affections after mistakenly overhearing that she is into environmentalists. Alas, Russell is lost at sea after being hit by a wanton whaling harpoon. By contrast, Elaine is elated to find she is free from his unwanted attentions (Griscom, 2004).

But there is more to this story. In the world that celebrities call reality, Julia Louis-Dreyfus and husband Brad Hall are outspoken environmentalists who remodeled their beach house as a case study in environmental responsibility. What began as an improvement to the living quarters ended up a tour de force of leading active and passive energy systems that are expected to pay for themselves in only 23 years. Like the Prius, this is a house that uses more and costs more in the interests of promoting the sustainable practice of others. In other words, it follows the automotive bloat law. As Brad acknowledges, “having a second home is itself an appalling excess, so we figured if we’re going to do it, we better be as environmentally responsible as we can” (cited in Griscom, 2003, p. 1). They did however, have the forethought to donate the recyclable timber from the old house to a builders’ exchange. To finish the picture they have not one, but two Prii(1) parked outside, so that Julia and Brad can maintain their independence (Griscom, 2004).

Louis-Dreyfus is a part of a group of prominent Hollywood women whose environmental concerns have brought them together as the Natural Resources Defence Council (NRDC). It may seem shallow, but the group has made much of the Prius over the Hummer as a platform for environmental responsibility. NRDC spokesperson, Laurie David (wife of Seinfeld co-creator, Larry David), recalls stopping her Prius in a School parking lot to accuse a Hummer-mum of putting children’s lives at risk with her giant car (Bagley, 2004, p. 139). In a moment that makes Seinfeld look normal, Prius owner David managed to arrange a face-to-face meeting with Hummer driving Schwarzenegger, then Governor of California, to plead her case for allowing hybrid cars on commuter lanes. Afterwards she stated with conviction that, “Getting that man in a hybrid car would be one of our great victories [and] I’m not giving up on that hope” (David cited in Bagley, 2004, p. 140). Hope, it seems, springs eternal, but Arnold for his part, bless his heart, sold all but one of his eight-Hummer fleet and converted the remaining one to run on bio-diesel.

The emptiness of celebrities arguing over hybrids or SUVs is a point well illustrated by Howard Drake, the owner of a Hummer dealership in San Fernando Valley. He recalls a well-known actress who was concerned about the environment and thought she should buy a Prius. Drake asked her how big her house was, listened to her answer, and then replied, “I don’t know what’s less correct. Having

three people live in a 20,000 square-foot house, with a pool and heaters and air-conditioning, or me driving my Hummer 500 miles a month" (Waxman, 2004, n.p.). And that, in a nutshell, is how we define the Prius Effect - the desire to appear and feel hopeful about the world even if one's actual impact on the earth is detrimental. The Prius Effect replaces guilt with hope.

Appropriately enough for their professions, Julia Louis-Dreyfus and Brad Hall are acting out a situation that in another context French philosopher Gaston Bachelard called the 'hut dream' - the desire to escape overcrowded houses and city problems to a 'real' refuge (Bachelard, 1964, p. 31). For Bachelard, that refuge was a psychological one available to all, but in an affluent society it is inevitable that the privileged replace philosophical escapes with physical sanctuaries to dilute their environmental guilt. It is the temptation to buy environmental salvation that has made the Toyota Prius the pin-up of energy efficient transportation, and it operates in at least two emotional ways: firstly, it alleviates the guilt of extravagant living, and secondly, it does not demand change. In the end, replacing a Hummer with a Prius alters the mode of transportation without challenging the rationalisation of transportation as a whole.

Automobile Society

Central to this debate is a fundamental impasse: Westernised society is synonymous with the car. Indeed, the automobile is a standard of westernised development, as the economic boom and explosion in car ownership in China is illustrating so comprehensively (Watts, 2003). Inevitably, the development of an automobile culture brings with it that other sign of westernised living - urban sprawl. As the proponents of New Urbanism have so vocally pointed out, the automobile is a mode of modern survival that makes the sprawl of the suburbs possible (Duany et al, 2000, p. 14).

In a treatise for New Urbanism, Duany, Plater-Zyberk and Speck observe that while a disproportionate number of suburban Americans visit Disneyland every year, very few of these visitors actually spend more than 3% of their Disney experience on the rides (Duany et al, 2000, p. 63). Confirming Jean Baudrillard's remark that Disneyland exists to persuade us the rest of America is real (Baudrillard, 1999, p. 34). Duany, et al., argue that the remaining 97% of their time in Disneyland is spent enjoying the qualities so lacking in the suburban neighbourhoods they live: "pleasant, pedestrian-friendly, public space and the sociability it engenders" (2000, p. 63). They conclude that in the modern suburb there is no reason to walk other than for exercise, and I might add that more often than not suburbanites find themselves driving to health clubs anyway. As one of the authors recently discovered, the availability of car parking is a major selling point in gym memberships.

Issues such as these were behind the decision of Michael Eisner, Disney CEO, to build the New Urbanist town of Celebration in Florida, so famously used as the set for the satirical movie *The Truman Show*. As Robert Beuka has shown, this film brought together the latest movements in American suburbanisation: the neo-traditionalism of New Urbanism, and the rising popularity of gated communities. He suggests that together they lead to social isolation, which in turn breeds a greater sense of fear as even more unidentifiable threats lie in the 'outside' world (Beuka, 2004, pp. 230-231). Austin has argued that in comparing Disneyland and Celebration there exists a paradox brought about by conflicting values of memory. Disneyland, he writes, works because it closes each day with fireworks, is serviced and cleaned overnight, and then starts afresh with a new group of visitors as if for the first time. By contrast, Celebration attempts to maintain an experience of timelessness with a permanent population as though memory can be made stable (Austin, 2005, p. 33).

Austin continues that Disneyland and Celebration are oppositional in this regard, but it is also possible to consider these states as examples of the Prius Effect. As conditions of occupancy, Disneyland and Celebration create internal worlds in which new rules reset the parameters for guilt free living. As another French philosopher, Maurice Merleau-Ponty, put it, the outside has certain ways of invading us, we have certain ways of meeting this invasion, and memory serves the purpose of sepa-

rating the framework of our perception of the outside from the actuality of that intrusion (1962, p. 317).

If Celebration is an example of how we might repel the assaults of suburban alienation, then Disneyland offers a temporary respite from the battle. Both are architectural examples of the Prius Effect. Following Merleau-Ponty's argument, both are instances where the creation of a new perception of reality is more important than reality itself. In Celebration and Disneyland there is a willing, indeed, wilful, forgetting of the larger world, just as the Prius owner prioritises the display of an environmental awareness over a reality of energy conservation.

Jurca has suggested that the temperament of suburbanites has long been characterized by qualities of alienation, anguish, and self-pity (2001, p. 161). A significant reason for suburban disillusionment might be the great distances suburbanites travel to link the disparate parts of their living (Duany et al, 2000). After all, what better place is there to build a persecution complex than the endless hours spent driving between the distant elements of a fractured world?

This was not something that worried Walt Disney however. One of the original rides from 1955 that is still operating today is Autopia; a miniature motorway on which Disney wanted children to learn to be better drivers. Today people drive to Disneyland, catch a shuttle from the car park to the theme park. Such paradoxes prompted Margaret J. King to describe Disneyland as traditional values disguised in futuristic form (King, 1981).

The House of the Future

Designed by MIT researchers, the House of the Future was conceived of as a genuine attempt to predict what form domesticity for future generations might be by making generous use of innovative plastics provided by the exhibit sponsor, Monsanto. The pristine white shell with its curved surfaces may not have been homely in a conventional sense but it certainly spoke of the future. There was plastic furniture, a working microwave oven, and a wall-mounted television for which actual working technology had not yet caught up. The future, Monsanto loudly declared, was synthetic.

During the 10 years that it was on display, millions toured the home touted as the archetypal house of 1987 (Scanlon, 2005). Through 1957 the exhibit was widely successful, with 60,000 people a week visiting, but while public opinion was favourable it was not enough to create a viable market. As Monsanto manager Robert Whittier recalls, "This is a pretty radical proposal for a very conservative housing market" (Whittier cited in Scanlon, 2005, n.p.).

A particularly novel feature was an air conditioning unit that offered the option of selecting a fragrance to accompany air distribution. With a choice of flowers, pine trees or sea air, the House of the Future was well equipped to banish any lingering odour from the plastic construction. Yet, beyond some new materials, and the promise of new technologies, and despite its' billing, the inside of the House of the Future was not as radical a domestic arrangement as many might have thought from the outside. Beneath the thin fibreglass shells lay regularly shaped rooms that replicated domestic conventions of the time. It may have looked unconventional, but in practice it was quite traditional.

Due largely to its association with Disneyland, the Monsanto House of the Future was never really taken seriously as a proposal. As Borden has observed, it was all too easy to dismiss it as fantasy (Borden, 2001). Tellingly, by 1967 it was deemed too 'old fashioned' to remain at the entrance to Tomorrowland despite no changes to the housing industry at large, and the decision was made to demolish it (McPherson, 2005). However, the House of the Future did have one last surprise. The wrecking ball brought in to tear it down bounced off the plastic shell and two weeks of laborious and expensive demolition was necessary to remove it. It is now known in Disney lingo as an 'extinct attraction'.

Unlike Celebration, Disney's House of the Future is not an example of the Prius Effect. While it captured popular imagination as a theme park exhibit, people did not see themselves living their lives

in it. Following Merleau-Ponty's thinking, it lacked a memory for how we have lived, and importantly, it also lacked a garage. The House of the Future was not connected – neither physically nor symbolically – to Disney's triumph of future transportation: Autopia. It was as though the world of the future had split into those who drove continuously, and those who stayed at home.

To complicate matters further, five years after the installation of the House of the Future biologist and writer Rachel Carson first published *Silent Spring* (1962), a seminal study on the systemic effects of damage caused by chemical pesticides. This book is widely acknowledged as the beginning of the environmental movement, and in it she names Monsanto (among others) as a key benefactor in the million dollar pesticide industry. It would be some years before the image of Monsanto would be muddied by its association to Agent Orange and other chemicals used during the Vietnam War, but the House of the Future does become emblematic of a conflict between the values of healthy living and modern living. Indeed, one of the greater paradoxes that can be found with hindsight in Carson's writing concerns the suburbs. More than a decade before Vietnam would be sprayed with harmful defoliants, American suburbanites had been liberally dosing their own front lawns with related chemical compounds to remove crabgrass (Carson, 2002, pp. 146-147). Disney's House of the Future did not have a front lawn, and this made it even harder to present a desirable image of suburban hope. As architectural theorist Beatriz Colomina has observed, "The lawn is a medical hazard and yet the lawn stands for health: mental and physical" (Colomina, 2007, p. 107).

Dilbert's Ultimate House

Someone not known for his optimism is Dilbert, a fictional character of the syndicated cartoon series of the same name. An engineer eternally trapped within a hopelessly ineffectual bureaucracy, Dilbert stumbles from one psychotic workmate to the next in an endless cycle of inefficiency that many find humorously familiar.

But in 2004, as though to compensate him for the desperate existence he leads, Dilbert's creator, Scott Adams, announced his intention to build Dilbert a virtual home, calling on fans to contribute ideas for its development. As Adams wrote in a latter press release: "Dilbert is single and needs the all the help he can get ... We wanted him to have a house so impressive that some woman would overlook his personality just to live in it" (Adams, 2005).

This sardonic tone was integrated into the DUH project as a number of additions to the standard house. 'Innovations' included; a storage closet for a fake Christmas tree so that it could be wheeled out every December, a urinal in Dilbert's en-suite, a basketball court in the basement, and a bathroom for children that can be hosed down. Externally, the most obvious feature of the 'unusual' is the observatory shaped like Dilbert's head. By September 2005 Dilbert's Ultimate House- known as 'DUH' was online as a fully realised digital model.

While Scott has established himself as a satirist of office life, it would be a mistake to dismiss this project as simply an elaborate joke. The original specification, issued by Scott on the Dilbert web site, made a point of emphasising zero energy usage, green building materials and healthy air quality. Its ideological framework is therefore consistent with sustainable building practices. The point of this in a virtual domain is perplexing – what gain is there from an energy saving design that does actually use any more energy than it takes to run a computer? Yet the specification is quite specific on this point. The house is orientated for maximum solar energy gain, the roof has PV panels, the walls use structural insulated panels, windows are double glazed, and so on (Adams, 2005). The full room specification goes so far as to provide hyperlinks to actual suppliers, and it is at this point that the ideological undercurrent of the DUH is visible. The DUH project is a showcase of all those features that Adams feels others should be integrating into their homes in the interests of responsible living.

Unlike Disney's House of the Future, Dilbert's Ultimate House does not rely on future technologies or lifestyles. DUH utilises current technologies that are readily available, and this is why a virtual

house is so effective – it need not prove itself. Anyone interested in some part of the proposed material fabrication of the house can follow a hyperlink to a real supplier for his or her own needs. In this way the virtual house is more a virtual shop providing information, links, and, most importantly, inspiration on available healthy home products. But we should not confuse responsible specification with responsible living. After all, DUH also contains a home theatre, three-car garaging, and a golf practice area.

Like the Prius, DUH promotes a model of responsible living that does not ask that any thing be given up, not even ones bourgeois aspirations. This is where the House of the Future got it so wrong. As a part of Disneyland, the seriousness in the MIT designed house was undermined by the fantasy environment it was a part of. Visitors had fully expected to find a home whose design and fittings were completely foreign, but the familiar aspects meant that they would return to their suburban houses comfortable in the knowledge that the future was not all that weird. The DUH project does exactly the opposite. Its sustainability message rides in on the back of a much-loved graphic character whose popularity is found in the way others identify with him. The project invited the ideas of Dilbert's fans and so presented itself as a democratic rather than autocratic approach to future living. It then integrated available rather than promised technologies, thereby making it possible for others to make smaller changes to their own homes. And finally it did all this without suggesting for a moment that it might be environmentally undesirable to have ones own swimming pool, or home gym, or a 'quiet room' where you can escape the bustle of your own home.

Conclusion

Like the Prius, Dilbert's Ultimate House makes overtures to sustainable living that do not challenge how we have been living, but while it makes the idea of sustainable practices more palatable, it also perpetuates westernised lifestyles that have been at the forefront of environmental degradation. It may be that Disney's House of the Future becomes more prophetic than anyone expected; the failure of a vision for the future to read true has about it the same hollowness as making dream homes sustainable.

In conclusion, it is suggested that architecture like the automobile is also bound by the automotive industry's 'Bloat Law' and that we continue to add more and more in order to achieve less and less. We replace ever-increasing guilt with ever-increasing hope. This we submit is the underlying driver for the Prius Effect.

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Endnotes

1. Prii is Toyota's preferred plural of Prius.

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