

TEACHING VISIONARY THINKING TO PRODUCT DESIGNERS USING LESSONS FROM UTOPIAN SCIENCE FICTION

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ABSTRACT

This discourse asks, “How do we teach product designers to be more visionary so that, as professionals, they make decisions that have positive implications for the future?” It describes the revision of a design methodology course inspired by the genre of utopian science fiction. The skill to imagine future narratives extrapolated from contemporary trends is seen as beneficial in the education of product designers who will create artefacts that affect the quality of our lives and define our material culture. In the global commodity arena, detrimental decision-making has ecological, social, and personal ramifications. While the practice of long-range forecasting is being exploited in contemporary companies to anticipate and/or create future trends for competitive advantage, it also has the potential to forestall *dystopian* consequences of contemporary decisions. In the course revision, student teams scripted and performed video documented scenarios communicating their interpretation of food consumption in the future. While the content conveyance strategy included discussions of utopian paradigms aimed at encouraging positive design decisions, the student outcomes were either pessimistic, satirical, or they demonstrated a lack of value given to social sustainability. Hallucinogenic foods, a pill that provided all needed nourishment, and mutant meats were all seen as utopian. Though the project outcome was disappointing in terms of generating viable visionary futures, the incorporation of far-future forecasting practices is seen as a promising addition to design methodology course content because it mandates that design students question their values and aspirations for the future, before they are paid to shape it.

Keywords: Visionary design, utopian science fiction, futurology, design methodology

1 INTRODUCTION [RE: VISION]

The following discourse is both manifesto and case study. It represents a passionate call for product design educators to consider ways to reshape curriculum aimed at developing student ‘visionary thinking’ as a core competency, and suggests a model for how this might be addressed. This work is predicated on three assumptions. They are:

- 1) *The civilization we see on the horizon is not the future we want.*
- 2) *Product designers have an influence on the quality of our future.*
- 3) *In order for product designers to positively affect our future, they must be visionary.*

The notion of a continual advance (progress) towards a better future is being challenged. Some fear that technology is advancing so rapidly that it is creating more problems than we can control, let alone solve [1], or that ultimately it will diminish humanity for all of us. One might say that we are looking ahead to a dystopian existence that we are likely “not looking forward to.” And some of the gloom and doom predictions can be traced (albeit indirectly) to products—at least to those redundant, harmful, demeaning, dysfunctional commodities that waste irreplaceable resources (in their creation), cause atmospheric ozone depletion (in their use), and ultimately glut land-fills for millennia to come (in their refuse). It is logical to want to explore alternative paths, deviating from the destination that these trends are taking us.

Since 1991, the CEO of Philips Design, Stafano Marzano, has been developing a new role for designers “to anticipate and create preferable and sustainable futures through design” [2]. Thus, the new product designer needs to be *visionary*.

The term ‘visionary’ has multiple meanings. Once definitions were pejorative, considering ‘visionary’ to be synonymous with words like, ‘impractical’, ‘fanciful’, ‘idealistic’, or ‘speculative’. This has changed. Contemporary companies have appropriated the term ‘visionary’ into corporate lexicon and extol this attribute as a positive indicator of leadership [3,4]. Employees attend workshops to develop a company’s “vision statement” to be proactive in establishing corporate identity as an ideal. This in turn supports decision making aimed at achieving strategic long-range goals that sustain the corporate identity [5].

In product designers, visionary behaviour combines future forecasting (understanding where current decisions are taking us), positive thinking (believing that a desired future is possible), intuition (the ability to imagine an appropriate future condition) and innovative design (the skills to create products and systems that will take us to this desired future). If product designers need to be more visionary, in order for them to contribute products that support a future we want to live in, then educators need to rethink pedagogy and design curriculum to better develop this competency. This paper reports on the revision of a design methodology course altered to incorporate a pilot project aimed at making inroads into the task of improving the [en]visioning skills of industrial design students. The project, *Food For Thought*, challenged student teams to create digital video enactments of eating scenarios 75 years in the future. Because the focus was so far into the future, the methodology of utopian science fiction writing was used as a model for teaching far-future visioning.

Science fiction (Sf) is a literary genre whereby fictional scenarios are described that, while fantastic, must have some semblance of empirical plausibility. Sf describes a “what if...” exploration [6]. The process is what Anthony Easthope has described as “the science fiction ‘synecdoche’ (or part for whole)” in which a single feature or group of features in our present becomes extrapolated to occupy the whole space of an imagined future [7]. Utopian fictions are exercises in hypothetical sociology and political studies that describe a more perfect society when contrasted with our own. They offer a new mythology, as *philosophico-moral* treatises [8]. If they also embody some notion of scientific advancement, they qualify as utopian sf [9]. Its opposite, dystopian sf, is admonitory and pessimistic. Born from the anti-utopian fiction of the nineteenth century, dystopian sf emerged as a literary form in its own right in the early 1900’s to reflect upon the systemic causes of social and ecological evil [9].

In the *Food for Thought* project student teams addressed utopian and dystopian visions of the future. They were asked to consider design decisions that might lead us to utopian eating scenarios. They scripted, acted, and recorded their visions.

By having students participate in a project that requires visionary thinking, and by analysing the results, one begins the process of identifying key indicators of visionary thinking, deemed valuable knowledge for future curricular development.

2 CHANGES TO A DESIGN METHODOLOGY COURSE [REVISION]

“Let’s break out of the horrible shell of wisdom and throw ourselves like pride-ripened fruit into the wide, contorted mouth of the wind! Let’s give ourselves utterly to the Unknown, not in desperation but only to replenish the deep wells of the Absurd!”

F.T. Marinetti

The Founding and Manifesto of Futurism 1909 [10]

Designers need to be able to consider future conditions in their methodology [11]. Camilla Jensen, of the Department of Product Design at the Norwegian University of Science and Technology concurs and believes that “trend forecasting and future research methodologies should be a subject in the industrial design education program” [12]. The following will detail a revision of a design methodology course—a core second year requirement within the University of South Australia (UniSA) industrial design program—to include a project in far-future design forecasting.

2.1 Pedagogical Decisions

In the *Food for Thought* project student teams were challenged to depict a utopian eating scenario 75 years in the future. The required deliverables were both individual (a personal notebook containing original essays, research, a log of the student’s participation in the group, and a reflection of the group process and outcomes) and group (an edited short digital video). The individual and group components were assessed separately and the two values were averaged together for the project grade.

It was decided to make the project a collaborative exercise because team problem solving experience is seen as a valuable component of the design methodology course. Group work builds collaboration competency for industrial design students that mimics their future professional careers where many projects are sufficiently complex to require group deliberation from diverse stakeholders [13].

The project was scenario-based. Rachel Cooper & Martyn Evans have defined ‘scenario’ as, “an overall vision of a context as it might appear under certain conditions” [14]. While not a prediction methodology per se [15], scenarios are considered a necessary precondition for creating desirable futures [16], particularly as a means of modelling the socio-cultural context [17] and considering alternative futures [15]. Edgar R. Ramirez reported on eight projects at tertiary institutions that included some form of future forecasting. Six included the task of creating “future scenarios” [5].

The decision to set the project 75 years into the future is perhaps controversial. Most design firms that offer forecasting as a service are trying to help their clients anticipate and/or create future trends to secure competitive advantage, therefore, at most they use a timeframe that is considered ‘long-term’ (being four to eight years away) [18]. This more typical forecasting methodology is important for product design students, and was covered in the course lecture content, however, for the *Food for Thought* project, the goal was to make students more visionary, not merely strategic. Therefore, the decision was made to use a time frame set much further into the future to set up a vehicle for

students to consider the very long-range global, social, and political ramifications of contemporary decisions.

Because our focus was so far into the future, we used the methodology of utopian science fiction (sf) writing as a model. Sf has been discussed in future forecasting design methodologies literature as 1) inappropriate (when attempting medium range prediction) [19], 2) appropriate (as a rich resource for finding provocative visions of the future to inspire science [20], and design) [21], and 3) as a forecasting methodology in its own right (particularly as a subset of writing scenarios as narrative fictions) [15]. Sf was deemed a useful model for this project as the genre often considers far-future scenarios in their narratives [22]—evidenced by the book, *Far Futures*, an anthology of novellas set at least a thousand years in the future [23].

The project could have looked at any human activity, however food production and consumption was chosen because eating is likely not a requirement that will go away in the future (unless we evolve into trans-human cyborgs). According to the strategist and futurologist, Herman Kahn, of the Hudson Institute, the future population demographics will place a great demand on food resources, however, he considers this to be a “solvable issue” [24]. Thus, food consumption offers a viable arena for design consideration, especially as eating is more than merely providing for sustenance. Mealtime is a ritual replete in social and cultural implications, rich fodder for consideration by the design teams.

The group project deliverable was a digital video depicting the team’s vision of the future. Documenting role-play narrative enactment is seen as an important design methodology [25]. Adding filming and editing skills to the student’s repertoire has great merit, not only as an appropriate conveyance strategy for the student’s ideas, but also as appreciated skills that could be useful in other endeavours, such as recording ethnographic user observations or for enhancing design presentations.

2.2 The Process

The project progressed over a seven week period where weekly lectures were followed by tutorial group sessions. The students initially were required to individually research food consumption in the future and write essays describing one utopian, and one dystopian plausible eating scenario. Following this, students were divided into teams of five. They compared individual ideas and worked together to determine a shared goal. The teams played with found objects to stimulate thinking, created storyboards, built props, made costumes, and filmed and edited their group scenarios. This culminated with a formal showing followed by discussion, and notebook submission.

2.3 The Outcomes

The student outcomes demonstrated that this is a generation comfortable with digital media. The formats included take-offs on documentaries, commercials, news broadcasts, educational television, and even a musical. The following chart breaks down some of the solutions. It was obvious that the students could not resist a humorous take on the project and found it difficult to envision holistic positive scenarios. In addition, little attention was given to futuristic aesthetics and the pleasure of product form in association with the celebration of taste and the social rituals of eating.

To address these concerns, future iterations will consider cross-disciplinary collaboration to broaden each team’s perspective, and give more time for this project to allow for more discussion with deeper theoretical content.

Table 1 Project Outcomes

Style	Project Outcomes
Creative	-Food synthesiser that translates played music into meals; the better the musical ability, the better tasting the food. Sheet music becomes recipes. -Bodies have evolved to be more plant-like, using photosynthesis to convert sunlight to food energy, which also produces alcohol as a by-product to fuel cars and make one intoxicated.
Pessimistic	-Gas masks designed to allow for eating while wearing. -Whale meat as future food because all land is flooded.
Satirical	-Virtual eating experience (McDonalds) to make pill taking a fun activity: -Infomercial about giant suppository that contained all nutrients the body needs.
Gruesome	-Nutrients from earth's inhabitants siphoned off to feed an alien race.
Mildly sexually inappropriate	-Food evolved to be able to reproduce like humans, courtship depicted in a refrigerator disco followed by consummation and conception, then human consumption.
Derivative	-Box that produces a full meal (ala <i>The Fifth Element</i>) -Alcove that reproduces any food programmed into it (ala <i>Star Trek</i>)
Technical	-Diagnostic device to ascertain body's needs, coupled with a delivery system to inject needed nutrients into food.

3 REFLECTION AND CONCLUSION [ENVISION]

The general pessimism of the student's concepts is indicative of a larger social crisis. According to Victor Ferkiss [26], utopian thinking from Thomas More's time mandated frugality and egalitarian cooperation to share the fruits of the earth and eliminate poverty. This changed as modern societies applied technology to increase the wealth, and scarcity became less of a fear. The emancipation from need has allowed for utopian dreams of "opulence and concupiscence to be indulged" [27]. But we are now in a time of dread, fuelled by dystopian visions of technology gone amok, causing social and service systems to break-down. To counter this negative trend, the next utopian scenarios of the future must find new visionary directions, ones that harness technology to solve, rather than exacerbate ecological and social problems. Admittedly this has been shown to be beyond the ken of second year industrial design students; however, if product designers ultimately have a hand in shaping our future, it is necessary for their educators to start early conveying the importance of visionary thinking. Thus, the incorporation of far-future forecasting practices is seen as a promising addition to design methodology course content because it mandates that design students question their values and aspirations for the future, before they are paid to shape it.

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