

Multivalency and Socially Performative Meaning Making

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Abstract

Valency is a concept that has been appropriated from linguistics and chemistry, to describe the associative paths formed by viewers through art objects. 'Multivalency' is used to denote the many potential readings of an object within different historical eras, or from different cultural perspectives, and is developed here as a useful way of approaching the design of palpable computational artefacts for expression and significance. How the choice of paths is reduced through social interaction, is explored through a case study of a networked jewellery project, and a potential evaluative methodology devised around performance is suggested. The multivalent art object is proposed as an essential tool for cultural meaning making, beyond the delivery of this or that emotion or aesthetic, and the act of social meaning making found in discourse surrounding the designed object or system is presented as its correlative criteria for success.

Multivalency and Mixed objects

Layers of ambiguity as a rich resource for subjective meaning making within an artefact lead to a relationship of significance between owner and object. Initial subjective responses become a part of an extended social narrative as patterns of consumption are read, and the individual becomes a hybrid of him or herself, plus the objects he/she is associated with (after Latour, see Ihde 2002). Ownership can be said to implicate 'face' (after Goffman, see for example, Goffman 1982). Art regularly makes use of ambiguity through multivalency, but more directly relevant to the development of rich interactive artefacts, particularly for the 'everyday', is the ability of the craft object to straddle the functional and the conceptual, the domestic and the provocative (Mazanti 2004). The multivalency of the contemporary craft product is thus especially interesting in allowing interaction designers to consider frameworks for the mixing of spatial and temporal aspects of their designs, and for combining functionality, conceptual goals and sensual expression within a single system. How contemporary crafts practitioners actually approach their work has been explored by the author through a small-scale survey, and the key principles are given in table 1. A fuller explanation of these can be found in (Kettley 2005).

- the risky non-predetermined process embodies its own political and metaphorical values, and results in original visual language
- internalisation of material – both source material and the material being worked – is essential for the development of original visual language
- this internalisation is achieved through action – techniques include drawing, direct manipulation of material, and repeated exposure to the material
- ‘material’ may include traditional materials, technologies, processes and methods, each having their own affordances and constraints
- signifiers of craft are not to be confused with the original visual language which emerges only from the internalisation of material
- control over formal expressive elements at diverse effective ranges is dependant on an embodied understanding of the process of production

table 1

principles for a contemporary craft approach to design

Extended objects

Further, it is proposed that an object does not stand as meaningful in itself, but that it is a potentially potent player within the wider systems of meaning production, systems which include the consumer and their social networks, and the developer or designer, together with the cultural networks of the marketplace. Greenhalgh (2003) has described the craft object as a meeting place, while Findeli places it at the centre point of converging and emerging practices of production and consumption (Findeli 2004), and Latour implicates it as an actor alongside human agents in ‘socio-technical assemblages’ (Latour, discussed in Ihde 2002). Here, Findeli’s model is modified to suggest the object as only one of many potential meeting places within a cultural world that is created through its existence (*figures i and ii*).

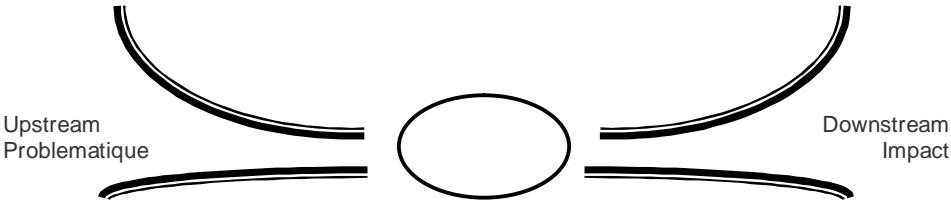


figure i

Findeli’s ‘complexification of the design project’

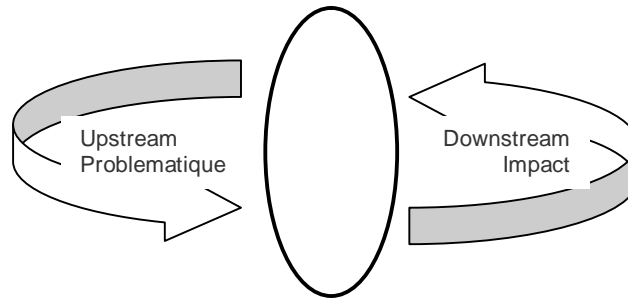


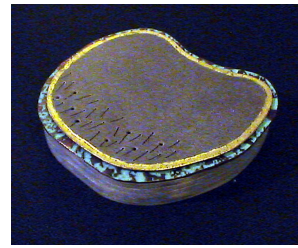
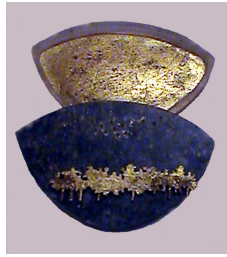
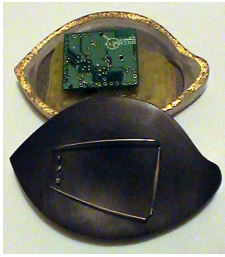
figure ii

the socio-cultural design project

This modification to the model places the object at the centre of the extended process, and does not accept its disappearance at all. Instead it seeks to show the object as an actor in everyday life, and in social meaning making. It also places the designer in the same sphere, or culture as the user, and takes account of linear iteration in design processes; through the explicit need for socially based meaning making, it allows the object to act as both artwork and functional system.

Networked jewellery case study

The author is currently engaged in the second collaborative design iteration of a suite of wirelessly networked jewellery implemented using ProSpeckzII prototypes from the Speckled Computing research project (www.specknet.org). These use Perspex, Formica and other mixed materials in the build of neckpieces and brooches containing the ProSpeckz and batteries. To date, the author has been involved only marginally with coding, and almost negligibly with hardware design. Interesting issues with the application of such principles in collaborative projects are being raised around where the expertise is situated, and how common craft knowledge might be generated and retained. The work is currently somewhat reminiscent of early modernist design, when radio or mechanical engine parts were hidden in sleekly styled casings, a metaphor for progress, and there is a need for a deeper integration yet of the light output and social functionality into the expression of the pieces. There is a certain feeling that the work is about the author's struggle with the technology (and the sociology), as much as about any other expression or concept, and there is a growing respect for the scale and depth of the design task when its goals are so comprehensive and intertwined. It is important to note that openness (in expression, also for reading and meaning making) in crafted objects needs to be controlled, and not a result of a lack of skill. The jewellery is illustrated below. Figures *iii* to *vi* show the first set of three pieces, while figure *vii* shows the design process of the second iteration. The light output of all pieces is designed to reflect the proximity and identity of friends met; while the information maps to social interaction, its meaning is ambiguous, allowing for subjective meaning making within the group of friends. Interaction is mapped immanently, as well as in a decay function.



figures iii – vi
two brooches and a pendant with Speckled Computing prototypes
2004



figure iv
the three pieces in demo – video stills

Socially performative meaning making

Evaluation techniques for multivalent and mixed systems and objects such as these, need to be correspondingly comprehensive. To date, the jewellery has been evaluated as a collection of static designs in the manner of regular contemporary jewellery. The participants in the design project, a friendship group of five retirement aged women, have reacted to the pieces at the 'out of the box' moment, and in reflection as a group, demonstrating their development of shared meanings surrounding the jewellery in a relatively short space of time from individual readings. A deeper analysis of the jewellery in use as a peer-to-peer network, mapping social interaction, is planned for August 2005. A novel evaluation technique drawing on the socially motivated performance techniques of Boal (1992) and Johnstone (1989) is being developed, in which the participants will take part in a semi-staged session in a public place, for example, a museum setting, over the course of a morning. This is intended to allow the participants to act in a manner approaching 'real life' while constraining their interactions enough that they may be meaningfully analysed. The women will be asked to spend time in the museum, collecting 'postcards' of visits to designated spots within the setting. In this way their personal journey through the space over time can be captured, and the likelihood of meetings increased. It is these meetings that are mapped by the LED displays of the jewellery, and the women's reading of that ambiguous information that is of interest. In individual and group debriefing discussions, some key themes are anticipated. These include the individual affect of wearing such overt pieces of jewellery in public, and as part of an identifiable group; the reading of the information, and individual meaning constructed as a result regarding the status of group members; and the subsequent construction of common meanings with other members. It is hoped that in this way, the 'look and feel' evaluations

done earlier will be layered with the experience of interaction with and through the jewellery, pointing towards a coherent evaluation methodology for multivalent, palpable computational systems.

Conclusion

Craft is a design process which can deliver aesthetic experiences unavailable by any other means. The enduring myth of the inarticulable nature of craft, while useful in explaining the expertise of practitioners in many disciplines, is now, however, holding interaction design back at a point when understanding craft practice would be beneficial in dealing with a range of new issues, such as the increasing consumer demand for 'authenticity', the challenge of designing for distributed systems, and the development of design and evaluation methodologies which take account of the performative nature of interactive systems. The principles presented here suggest a deep and complex approach to the design space, which should allow designers to re-conceptualize their processes and outputs, while the thoughts towards an evaluation technique predicated on performance are outlined in order to stimulate discussion in this potentially fruitful direction.

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