



## EMOTION-DRIVEN DESIGN

### INTRODUCTION

This special dossier consists of four articles covering various perspectives in relation to the theme of 'emotion-driven design'. The field of design and emotion has drawn much attention in recent years, with a steadily growing list of conferences, seminars, international networks, and specialist books and articles.

In a broad sense, we may define emotion-driven design as a tool and approach to increase the desirability, meaning, affection, endearment, and other such qualities that people may attach to the presence, ownership and use of products. On an operational level, emotion-driven design is concerned not just with the realm of basic affective responses such as liking and disliking, but more importantly with specific emotions such as anger, fun, wonder, anxiety, and so forth. Principally this leads us largely to the domain of product aesthetics and appeal, but this is not on a superficial or solely visual level. Although the visual domain dominates, emotion-driven design also extends to include emotional affectation brought about by, for example, qualities of interaction, choices of materials and surface textures, ease of use and many other dual functional-aesthetic elements of product design.

So why is it important to pay attention to this emerging field of academic research and professional practice?

Two broad perspectives can be taken. The first is humanistic, for which the chief motivation is to improve people's wellbeing and contentedness with their material goods. The second is commercial, where the fundamental objective is to increase sales within crowded product marketplaces and amongst increasingly discerning customers. Not surprisingly, these two facets do not sit together especially harmoniously and can be a cause of

dissonance within new product development. Tensions can arise between offering people genuinely enticing and exciting products and interactions, against a marketing-push of relatively phony emotional labels that come from commoditizing emotion-driven design.

Against this backdrop, this special dossier for the *METU Journal of the Faculty of Architecture* has the aims of: i) making a fresh and stimulating contribution to the ongoing debate on the role of emotions in design; and ii) promoting and encouraging young Turkish academics working in the area. The dossier comprises four papers selected from amongst contributions made to the ongoing International Conference series on Design and Emotion, the fourth of which was hosted by the Department of Industrial Design, METU, in 2004. The contributing authors were asked to reappraise their conference papers and bring them up-to-date with a balance of theory, criticism and revised prior art review.

### MAPPING THE DOMAIN OF DESIGN AND EMOTION

Erdem Demir presents the world of academic research into design and emotion as having reached a landmark in its growth and collective understanding: in being transformed from an embryonic specialist field of study in 1999, when the first International Conference dedicated to the subject was held, to what is now a more defined and strongly underpinned research area, although still very much work-in-progress. Demir alerts us to the diverse phenomena, techniques, terminology, concepts and perspectives that contribute to theoretical bases and practical application of emotion-driven design. His paper maps out currently known territory, and identifies the areas that have not yet been explored. In doing so, the paper alludes to both designers' and researchers' roles and contributions.

The notion of 'experience' is argued to be at the heart of design and emotion studies and applications. Its dimensions can be articulated by adopting both psychological and philosophical standpoints. We learn from Demir that a fundamental consideration in design and emotion studies and constructs is a timeframe, and from this the concomitant issue of personal learning, familiarity and behaviour towards, and with, our products. These matters are inextricably linked with explanations found in the literature for the processes by which we become emotionally attached to products: from initial contact with raw sensorial information imparted instantaneously by products, through everyday use and acquaintance, to the more complex and deeper personal affectations, attachments and meanings that are brought about by longitudinal use. As explained:

“...emotional experiences and emotional relationships can relate to each other within a hierarchical structure, where the single emotional moments may accumulate into an experience, and where the accumulation of those experiences yield an emotional relationship. (...) Within a context of rapid technological advances and quickly adapting user needs and values, a product that aims to satisfy or conform to particular user concerns may cease to deliver the initial experience in the later stages of the relationship.”  
(Demir)

Another important matter that we learn about is intentionality: whether designers can actually construct or determine specific experiences that products will generate, or more realistically, the less deterministic objective of setting probability boundaries within which a given experience is likely to unfold. There is no accounting for people's use and abuse of products, or of intentional and adapted usage, and it is naïve to think that experiences can be directly designed, rather than more modestly facilitated and

fostered. Associated with these matters is the potential of mass-produced products to deliver an intentionally pleasurable experience, in the same vein as handcrafted bespoke objects.

Demir also introduces the tools and techniques employed to deliver emotion-driven design, and alerts us to the need for evaluative tools and techniques to be developed beyond their current status and to match the level of application afforded to their generative counterparts. The undercurrent to Demir's paper is that attention should now be extended to developing and applying research tools and methods for predicting and testing long-term (time-based) affectivity of products. This would allow the domain of design and emotion to reach into interaction-based product experiences, rather than surface appearance-based experiences, which is where the majority of efforts have so far been concentrated.

### **PRODUCTS FOR EMOTIONAL EXPRESSION AND COMMUNICATION**

In his paper, Gökhan Mura discusses a growing area of technology known as 'wearable technologies' or 'wearables', referring to garments and accessories embedded with what we refer to as 'smart technologies'. These have capability to connect to electronic networks and to change and adapt to sensed physical phenomena emanating from one's body (e.g. changes in heart rate, blood pressure, perspiration, trembling, and muscle tensions) or one's immediate environment (e.g. room temperature, lighting, humidity). Wearables are presented as designed objects intended to deliver complex and effective means of non-verbal emotional communication.

We are reminded that clothing and fashion accessories such as jewellery offer strong but static means of non-verbal communication: to change the message, we must change what we wear. In contrast, wearables enable new ways of expressing emotions that are inherently dynamic, interactive and customisable. Wearables find use in augmenting our emotional communication and self expression, freeing us from the limitations of our physical bodies. They become portals for our moods, feelings, sentiments, emotions, values, reactions and other such personal traits. Furthermore, wearables provide opportunities to 'act out' or take on new personas by playing with or manipulating sensorial messages, rather than adhering just to our true feelings. Mura points out that these new garments and accessories open up communication possibilities that can overcome shyness or reluctance to show emotions that can be a trait of conventional physical channels. Thus, we can see that wearables are at once very personal and very social media.

Mura reviews the product architecture, functionality and features of products that can communicate emotions. Technologically this is achieved by advanced sensors, miniaturised audio-visual multimedia electronics, new materials, and local area or internet-based computational networking, each of which is described in Mura's paper. The practical challenges of creating effective devices for emotional communication and expression however should not be underestimated:

*"Face to face communication benefits from the expressiveness of facial or vocal cues and visual, auditory or olfactory channels of communication. However, for remote communication through electronic networks, comprehensible multimedia signs should be developed for affective communication." (Mura)*

A complementary dimension to wearables is the integration of functional computing, for example music playback, mobile telephony, global satellite positioning, solar energy panels, and health monitoring. Thus wearable technologies unveil new ways of combining sports, fashion and lifestyle with current trends of the electronics and materials industries to create new modes of portable communication. It should be noted that many of the developments in wearable technologies are state-of-the-art and realised as working prototypes rather than commercialised products. As such, agreement on common languages and expressions used in wearables are yet to be established and are expected to become a focus of attention in the coming years.

### DESIGN AND EMOTION RESEARCH AND ITS DISCONTENTS

The idea of 'necessary' represents the zero degree of any research undertaking. Mapped upon the denotative level of signification, 'necessary' is relegated to the status of the base upon which varied meanings are superadded. Hence it is assumed to be literal and not to be questioned any more. Instead, questions are addressed and attention is paid to the level of connotation, which displays a wealth of meaning and affords diversity of positions. Denotation, however, is dull and factual - everybody seems to agree on an idea inasmuch as it is part of the realm of denotation. Necessary is to political economy what denotation is to semiotics. However, as Barthes (1974) indicated, denotation is the ultimate connotation, masquerading as literal. Even denotation is to be questioned primarily as ideological. In a similar vein, Özlem Savaş's article cleverly foregrounds necessary as a point of departure for a discussion on product emotions by analyzing attitudes of low income groups to their belongings. Her study is against the grain of much mainstream design and emotion scholarship in that she questions fundamental assumptions and presumed audience of the movement.

Savaş's article begins with these two correlated questions: Can we observe emotional responses towards products on the level of subsistence, at which only basic necessities can be afforded? If so, how do these product emotions differ from those of higher income groups?

Most answers to this question would yield important insights into the epistemological-ontological premises of design and emotion scholarship. For if people still develop emotional bonds with products even at the level of necessities, why is their life excluded from design and emotion research? Does it reflect a social bias of the design and emotion scholarship in favour of high income groups? Or simply, can we conclude that design and emotion scholarship has not yet developed tools and methods capable of procuring data about emotional responses towards products in all sectors of society?

Drawing on Bourdieu's work (1984) on distinction and taste, Savaş places 'product emotions' firmly within the context of social differentiation. Perhaps the most tenacious argument of design and emotion studies is that since all products have achieved perfection with respect to their utilitarian aspects, product benefits are now being sought at the level of emotional satisfactions they offer. According to Savaş, however, "economically deprived people tend to consider emotional relationship with products in the context of satisfaction of necessities. They *still* derive pleasure, confidence and happiness from a product which offers "only" functionality." Design and emotion studies presume that where

products are equally able to satisfy our basic necessities, we will begin to demand satisfaction at the level of emotions. Savaş observes that “this idea that people no more seek for functionality, utility, usability, etc., but rather demand emotional benefits such as pleasure and enjoyment from products is the starting point of most of the design researches concerned with emotions.” Quite the contrary, her surveys of people from low income groups suggest that these people too develop strong emotions about products, which are not necessarily couched in a symbolically rich, metaphorical, non-utilitarian language. Rather, they seemed to express their emotional relationships with their world of objects through narratives of utility and necessity. Nevertheless, design and emotion studies fail to consider these ‘emotions for the necessary’ as worthy of attention, because these studies are based on a divorce between function and emotion.

According to Savaş, this omission of function and utility as sources of pleasure and emotional investment has inevitably led to an imposition of an implied dualism between function and emotion upon design discourse. Without jumping rashly to conclusions, we can still argue that this dualism between function and emotion is being further encoded as a sign of social distinction. As each dualism also institutes a relationship of dependence and hierarchy between the terms of the opposition, emotion ceases to be an added-value of a product and becomes, rather, the key element that determines value. In a sense, emotion assumes the ultimate leisure form that signifies liberation from necessity. It becomes an index of a conspicuous abstention from work by indulging in products that are functioning so perfectly well that their function and utility cease to be the owner’s primary concern and become invisible. This exnomination of function from product experience is consummated in the market place where the myth of emotionally rich but functionally unobtrusive experiences with products are offered for consumption. In Savaş’s words,

“It will not be wrong to argue that design and emotion movement introduces one of those oppositions to be utilized for affirming distance from the world of necessities. Regarding emotion as a designed quality and offering products to the market with the label ‘emotion’, it reduces emotional relationship with products to a question of consumption preference, i.e. whether to buy an emotionally valuable product or not. In this way, ‘design and emotion’ seems to transform emotions towards objects into a sign which can be employed as a means of social differentiation.”

However, Savaş also points to the possibility of a more favourable use of emotions in design theory. Emotion as a recent category of social thought has been embraced in sociology because it is a concept that can overcome most of the fundamental dualisms that have thus far dominated western thought. Likewise, emotions in design theory “have a potential to cross-cut and negotiate dualities and boundaries constructed between form and function, between utility and pleasure” (Savaş). However, this cannot be achieved unless design research counter-appropriates emotions from the hegemony of market logic. Rather than reducing emotions to a set of distinct attributes that can readily be applied to this or that product, and rather than using it to rationalize the person-object relationship in its present, dualistic mode, we should employ the emotions to its full potential, that is to reflect on emotions “in understanding the richness and complexity of both objects and [our] relationships with them”, to discover “what objects do and might offer to people”.

In his article, Harun Kaygan too identifies a similar undercurrent of marketing logic in most of the theoretical and methodological outputs

of design and emotion studies. When examined against the backdrop of the motivational studies of the 1950s and the 1960s and the visual-verbal discourse of the experiential mode of advertising that increasingly dominated the last century, design and emotion studies reveal an interesting affinity with marketing research and discourse whose primary aim is to stimulate purchase.

Although both Savaş and Kaygan attack design and emotion research for its alignment with the logic of consumption, their aims and points of departure are quite different. While Savaş threads a more sociological path to foreground the privileging of certain social groups in design and emotion studies, Kaygan confronts the entire body of work as an accomplice to the most developed form of consumer capitalism, which has begun to market experiences rather than mere products.

According to Falk (1997), contrary to the pre-modern advertising that utilized a rational mode of argumentation in product display, the basic pattern of modern advertising has increasingly shifted towards representation of the satisfactions that result from the use of a product. In other words, "product-centred argumentation and representation" was superseded by "the thematisation of the product-user relationship and the depiction of scenes of consumption which emphasise its *experiential* aspect" (Falk, 1997: 68). But how does advertising achieve this tie-in between an emotional experience and a certain product? According to Williamson (2004), the semiotic structure of advertising produces a reversal in which the product begins to appropriate the meanings and emotions that are attached to it and consequently becomes a signifier of them. In changing from a signified to a signifier, the product itself becomes those meanings and emotions. This indicates a tautology in reverse: those images, ideas and feelings that are used to represent a product become an intrinsic quality of that product to the extent that the product is seen as the embodiment of these meanings. Henceforth, "the product not only represents an emotional experience, but *becomes* that experience and *produces* it: its roles as sign and referent are collapsed together" (Williamson, 2004, 38). Back to Kaygan's article, it is precisely the same way in which a particular emotion is connected to a product by design and emotion studies. Analogous to the advertising syntax outlined above, the source of an emotional experience is sought within the product itself, arising from its intrinsic qualities. Yet, these studies, according to Kaygan, fail to acknowledge the role of the system of objects within which any product experience becomes meaningful.

For example, in discussing product experience, Desmet and Hekkert (2007, 59) recount the feeling of enjoyment triggered by hearing the sound of the "fragile porcelain lid" of a Chinese teacup that was bought in a visit to China and the subsequent attachment of the author to the teacup as it was a reminder of the days spent there. Here, the emotional experience with this product is seen as a result of its intrinsic properties (i.e., the particular sound of the lid) and its metonymic connections with China, or rather things that are Chinese. Yet Kaygan aptly remarks that "the sound of the porcelain cannot be appreciated without understanding its difference from ordinary ceramics, or the exotic/orientalist experience, of which it is not only a proof but also a tangible manifestation". As a matter of fact, this obvious neglect of the differential logic of the system of objects and the role of cultural knowledge invested in each object is an outcome of an uncritical adoption of advertising logic with all its attendant reversals and naturalizations. Petrified into advertising logic, the product becomes the

essential cipher of those emotions and meanings that were once evoked to make sense of it:

“[T]he touristic discourse acts upon the teacup in a way quite similar to the advertisements: The product is turned into the promise of a particular experience, to the extent that it becomes the oriental experience itself. The sound is bound to become *the* sound of Chinese teacups, as the pleasure of driving becomes *the* pleasure of driving Saab Aero.” (Kaygan)

Kaygan concludes that this affinity of design and emotion studies with the advertising logic contributes towards “rendering the consumption economy natural and a historical”. In passing, he also points to the naturalization of ‘desire’ as a consequence of the reversal mentioned above as well as its inclusion, on an equal footing, among the list of other emotions in Desmet’s taxonomies. Though not fully elaborated in Kaygan’s article, this naturalization of desire by the mediation of emotions warrants an explication at some length.

As we mentioned above, advertising is an open-ended system that functions by attaching a set of predetermined images, ideas, or feelings to a certain product. The source of these images, ideas and feelings is not the product being advertised. Rather, they are transferred out of other systems and attached to the product within the semiotic structure of advertisements. In other words, the link between the feeling of ‘confidence’ and a bottle of ‘Chanel No15 perfume’ is arbitrary rather than objective and necessary. Yet, the semiotic structure of advertising makes this transferred meaning or emotion appear as an intrinsic quality of the product. Hence, it is crucial to discover ever new systems of meaning in the external world, whose signs are available for use in advertising a product. The more open-ended and variable these external references are, the smoother the functioning of the advertising mechanism becomes. Having the product as a point of departure, the advertising work continues to form a chain, whose links are only held in place with a semblance of essential unity with the product. Now this ‘floating’ chain of signifiers formed by advertising is in effect the endless path of desire in consumer societies. It perfectly coincides with the arbitrariness and insatiability of desire, which can only recognize an object in its inverted form. When disguising this arbitrariness through a reversal that articulates the product as the embodiment and the agent of these meanings and emotions, both advertising and design and emotion research contribute towards the naturalization of desire in our consumer society.

The psychologism of design and emotion studies also leads it to treat the subject as an interiority with a definable set of emotional needs. While the products are endowed with a magical power of eliciting certain emotions in the subject, at the same time the subject too is assumed to possess emotional needs, whose satisfaction depend on finding and purchasing the appropriate product that is capable of eliciting that particular emotion in h/er. In this sense, the movement can be seen as the latter episode of “the series of strategies (modernism, ergonomics, product semantics etc.) developed to fit” the subject to the object in the modern history of design (Kaygan). Referring to the early works of Baudrillard (1981, 1970), both Savaş and Kaygan highlight the ideological role of needs in explaining away the workings of political economy by offering a scheme of adequation between the subject and object. However as Savaş proposed above, a critical and deconstructive use of the concept of emotion might help us explode these false categories, initially separated and magically unified by the logic of consumer capitalism. We suggest there will be a

struggle in these lines, over the use and meaning of the concept of emotion in the near future.

Bahar ŞENER and Aren KURTGÖZÜ, editors

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