

Designing Meaning to Change Consumer Behaviour: An Exploration

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Abstract The focus of our research is to support designers in fostering a more sustainable behaviour of consumers by creating meaning in products and services. The paper describes the results of a literature study into the process of meaning making and the mechanisms through which meaning affects consumer behaviour. Meaning is defined as a mental representation of possible relationships. An initial model, the Meaning-Behaviour Model, is presented, integrating the mechanisms found in literature. Five possible interventions, derived from the model, show how designers can use meaning as a lever to foster enduring behavioural change. The paper contributes to the discussion of introducing meaning through design by exploring the link between meaning and behaviour.

Keywords Meaning · Behaviour · Experience · Sustainability

1 Introduction

40 years after the first report of the Club of Rome on the “Limits to Growth” humanity has to cope more than ever with numerous challenges, such as environmental degradation, resource overconsumption, climate change, and dependency on fossil fuels [1]. These challenges are caused by lifestyle and consumer behaviour, mainly in developed countries [2], but affecting the whole world. Companies need to actively address consumer behaviour during the design of products and services in order to face these challenges. The emphasis of our research is on changing the behaviour of the consumer, as buyer and as user, to decrease the

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environmental impact of their products and services throughout their entire life-cycles. First attempts have already been made by focusing on technology, behavioural economics and psychology [3, 4].

Our research follows the proposal of Oehlberg et al. [5] to foster sustainable behaviour by creating *meaning* in products and services. Motives for consumption stem “in large part from the meaning of consumption objects and the value that meaning provides” [6]. Jackson [7] examines that consumption can be seen in part as a pursuit of meaning, which is constructed to “give both our personal lives and our society a sense of significance and purpose”. But it is the consumerism, denoted as “‘excessive’ individual consumption”, which humans have to rethink in facing the global challenges [8].

Cultural psychology sees human as meaning makers, who have an actual need for meaning [9] and actively seek meaning instead of only constructing it [10]. Apart from some notable exceptions such as [11], the impact of meaning on behaviour is rarely addressed in design research.

After an introduction to the role of design in creating meaning (Sect. 2) this paper presents the results of a literature review into the process of meaning making (Sect. 3) and the mechanisms through which the meaning of products and services affect consumer behaviour (Sect. 4). The results are integrated in an initial Meaning-Behaviour Model (Sect. 5). The model allows the identification of possible interventions stimulating behavioural change by design, which are discussed in Sect. 6.

2 Meaning Creation by Design

According to Park [12], “meaning is a mental representation of *possible relationships*” connecting things, events, people, places and times and allows to get an understanding of all kind of experiences [13]. Crilly et al. [14] emphasise that people can assign different meanings to the same thing.

Describing the process of meaning creation by design we draw on the idea of design as communication [14]. The designers’ intention is transferred through the product and interpreted by the consumer, who may give a behavioural response [15]. Kazmierczak [16] speaks of *intended, constructed, received and re-constructed meaning*. Krippendorff [17] labels the reconstructed meaning as *second-order understanding* that designers must anticipate. This process highlights the difficulty of creating meaning that is reconstructed as intended. For example, while designing a laptop, the designers intend to convey high quality (intended meaning) by choosing a unibody aluminium casing rather than plastic casing (constructed meaning). The consumer could perceive this solution (received meaning) indeed as high quality (correctly re-constructed meaning) or as less sustainable due to its energy-intensive and wasteful production (incorrect re-construction, yet a possible meaning).

3 Meaning Making

In order to support designers in creating meaning, first an understanding is needed of how meaning is reconstructed by consumers. Meaning is made upon experiences through interacting with products or services. It is driven by the need of humans for meaning [9]. The processes of meaning making to cope with stressful events in life have been extensively discussed, e.g. by Park [12]. Following her broad definition of meaning (see Sect. 2), we assume that these processes can be transferred to other experiences, such as those with products and services. In this section we describe the process of meaning making, using Park as main source.

3.1 Definition of Meaning Making

Meaning making can be defined as the comparison of initially appraised and global meaning [12]. *Appraised meaning*, loosely based on cognitive appraisal, refers to situational intuitive and immediate evaluation of an experience in a particular environmental encounter. *Global meaning* “refers to individuals’ general orienting systems, consisting of beliefs, goals, and subjective feelings” and self-view, and is more stable than appraised meaning. When meaning making involves reviewing the past it can be described as a learning process [18], which everyone develops in unique ways [19].

Meaning making aims at searching for *comprehensibility*, which is described as making an event “fit with a system of accepted rules or theories”, and subsequently searching for *significance* by “determining the value or worth” of an event [12].

3.2 Process of Meaning Making

Making meaning of an event can be considered as a two-stage process: (1) appraising meaning, and (2) comparing appraised with global meaning [12]. In semiotics these two stages are called *denotation* and *connotation*, and in consumer research *identification* and *interpretation* [20].

Appraised meaning may be “instantaneously determined” by attributing why an event occurred and determining its implications through emotional and cognitive processing [12]. This stage is also called *sense-making*¹ and may be re-examined

¹ According to Krippendorff [17] “meanings are invoked by sense”.

through continuous revision [20, 21]. The second stage involves the comparison of the appraised meaning with a person's global meaning to determine if and how the experience fits the personal orienting systems.

Ultimately, meaning connects the self, people, things, events, expectations, the past, the present [12], places [22] and, things beyond them all [23].

The comparison of appraised and global meaning may result in a perceived discrepancy—also called self-discrepancy [9], violation of meaning [13], or cognitive dissonance [7], e.g. due to conflicts between attitudes, beliefs, values or goals of the self or others [7]. The potentially resulting personal distress can drive more deliberate meaning making efforts [12], also called meaning maintenance [13], in order to solve these conflicts and to stay self-consistent [24].

Proulx and Inzlicht [13] describe five ways, Five A's, of "*meaning maintenance*": *assimilation*, *accommodation*, *affirmation*, *abstraction* and *assembly*. Assimilation involves the adaptation of the appraised meaning to the global meaning; accommodation involves the adaptation of the global to the appraised meaning. The other options are: to remain at the previous understanding and avoid the source of conflict (affirmation), to find something familiar to the discrepancy in the external environment in order to obtain understanding (abstraction), or to create a completely new understanding independent of the global meaning (assembly).

DeGrandpre sees meaning making as a dialectical process, in which meaning is refined through reviewing a "behavioural episode" [18], i.e. a closed loop process. Wright et al. [25] divide meaning making of past experiences into: *reflecting* (an inner recounting); *appropriating* (relating experiences to the self); and *recounting* (involving others in the review of past experiences). Reflecting and recounting can be seen as reviewing the appraised meaning, and accordingly appropriating as reviewing the global meaning of a person.

4 The Influence of Meaning on Human Behaviour

In this section, the mechanisms underlying the link between meaning and behaviour are analysed. Referring to Holzkamp, Brockmeier states that meaning only indicates "possibilities for action" and not as a determinant [26]: one can always abandon one's efforts of making meaning. Since meaning is not a direct determinant of behaviour, it is often left out of the discussion, as Darnton's extensive overview of behavioural models indicates [27]. Therefore, the question is how meaning can influence human behaviour and which schools of thought consider the effects of meaning on behaviour.

4.1 Meaning and Motivation

According to DeGrandpre [18], the *motivational qualities of meaning* can "guide individual actions". For Quigley and Tymon [28], who investigate career

self-management, meaningfulness—next to choice, competence and progress—is one of four components of intrinsic motivation, and “the feeling of meaningfulness occurs when an individual is progressing on a path that they believe is worth their time and energy”. In view of the self-determination theory of Ryan and Deci [29] intrinsic motivation: comes from unsatisfied needs for autonomy, competence and relatedness; directly leads to according behaviour; and provides higher levels of motivation, performance and well-being than extrinsic motivation. They emphasise that meaning facilitates the internalization of extrinsic motivation, when it comes with support for autonomy and relatedness. For example, the motivational quality of meaning can be observed with bicycle lovers, diving into every detail of their bike (belief of worth the time), repairing it on their own (need for competence) and taking exceedingly care of it (relatedness).

4.2 Meaning and Adaptive Attitude

Focusing on organizational change, van den Heuvel et al. [21] describe the role of meaning making by employees, as “the ability to integrate challenging or ambiguous situations into a framework of personal meaning using conscious, value-based reflection”.

Meaning making can be considered as a personal resource, allowing employees “to remain resilient when confronted with organisational changes”. In these circumstances, meaning making forms adaptive attitudes, “such as willingness, openness and readiness to change” [30]. This can lead to “a positive behavioural intention towards the implementation of modifications in an organisation’s structure, work, or administrative processes (...)” [21]. Since the reflection upon challenging and ambiguous situations can also occur outside the work environment, we assume that these findings can be transferred to interactions with products and services. For example, consumers with affinity to new technologies are open to these technologies and adopt them quickly, as they are easily integrated into their frameworks of personal meaning.

4.3 Meaning and the Self-concept

Sirgy [24] defines the self-concept as the “totality of the individual’s thoughts and feelings having reference to himself as an object”, and distinguishes actual (present) and ideal (future) self. Drawing upon several scholars, Sirgy concludes that the self-concept directs behaviour “toward the protection and enhancement of self-concept”, which can be observed in consumer behaviour based on the symbolic meaning of products and services.

Wright et al. [31] discuss product symbolism with the consumer self-concept as the “extended self”. Consumers define themselves based on product meaning. According to Sirgy’s self-congruity theory, recognising product symbolism is the ability to draw personal meaning out of a product [31]. For example a vegetarian, discovering a new tofu variety, interprets the product as a symbol fitting one’s diet and therefore connects (assigns meaning) to it, which can lead to its purchase.

In case a discrepancy between appraised and global meaning, as described in Sect. 3.2, is only *anticipated* [32], one may act to prevent “an aversive sense of meaninglessness” [13]. For example, to avoid potential discrepancy between behaviour and the self [24] or the actual and ideal self [7], people buy products that provide an image, that is consistent with the self.

4.4 Meaning and the Social Identity

Jackson [7], drawing on symbolic interactionism [33], argues that the self-concept also has a social dimension, since the self is negotiated by social conversation. This results in shared values, attitudes and beliefs of groups. Consequently the self and the social identity cannot always be clearly separated.

Symbolic interactionism [33] also provides the ground for the discussion of a “socially oriented self” and its product relations. The social conversation is what connects people and objects, since objects can be part of the conversation [7]. In this way, objects become familiar and therefore meaningful. “People respond to material artefacts on the basis of the symbolic meanings that these artefacts carry” [7]: they become stimuli for action [33]. People not only set their actions through meaning making, they also review them in the lights of the objects, the people engaged in the social conversation, and the socially formed identity [33].

One can distinguish two social groups: the in-group, to which the person belongs or wishes to belong, and the out-group [7]. For example, driving a SUV may symbolise success for the in-group, but may be less accepted in the out-group, because of its resource intensity.

4.5 Meaning and Reviewing

The dialectical character of meaning making, as described in [18], is supported by Alea and Bluck [34], who discuss the search for meaning as reviewing one’s past. They argue that making meaning of past experiences directs present and future behaviour, by using the “directive function of autobiographical memory”. Kahneman and Riis [35] speak of two selves when it comes to memory: the experiencing and the remembering self. The first is built during immediate introspection,

whereas the second involves retrospection and is dominant in reviewing past experiences. The difference between making meaning of recent and past experiences is that the latter may be biased due to the dominance of the remembering self [35].

DeGrandpre [18] argues that the dialectic of meaning making can act as a reinforcement of behaviour, increasing the probability that the behaviour is executed. For example, the shape of the doorknob may require the reflection on past experiences in order to understand whether to push or pull.

5 Meaning-Behaviour Model

In this section, the process of meaning making and the mechanisms behind the effects of meaning on behaviour, as described in Sects. 2–4, are summarised and integrated into one, initial model, the Meaning-Behaviour Model, shown in Fig. 1.

Consumers experience products and services through interaction (Sect. 2). Driven by the need for meaning, consumers go through the meaning making process (Sect. 3), in order to get an understanding of the experience. In a first step they attribute a reason to that experience and determine its implications, which results in an initially appraised meaning. In a second step this appraised meaning is compared to the global meaning in order to determine if and how the experience fits the global meaning, which represents individuals’ general orienting systems and self-views. This comparison may lead to a perceived discrepancy between those two meanings. In case the discrepancy is not accepted, the meaning needs to be maintained by either adapting the appraised or the global meaning. The discrepancy can also be accepted, for example if someone is forced to act

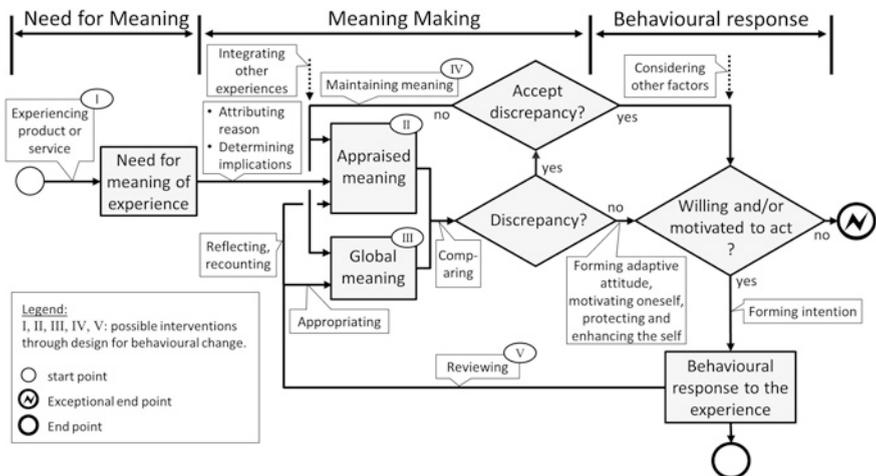


Fig. 1 Initial Meaning-Behaviour model

against his/her global meaning. Meaning making can also involve reviewing past experiences after a behavioural episode, by appropriating them to the global meaning or reflecting and recounting the appraised meaning.

As a result, the meaning, both the initially appraised and the meaning inferred from comparing appraised with global meaning, can be made of an experience or a product or service. The meaning is the built mental relationship to the self, other people, things, events, expectations, the past, the present, places, and things beyond them all.

There are several mechanisms how meaning can influence consumer behaviour, once there are no perceived discrepancies (Sect. 4):

- Regardless to what the relationship may be established, the meaning of an experience may influence behaviour:
 - As one of four components of intrinsic motivation coming from unsatisfied needs for autonomy, competence and relatedness, also facilitating the internalisation of extrinsic motivation.
 - Through the formation of an adaptive attitude towards a changing environment.
- If meaning relates an experience to the self (actual or ideal self), as part of the individuals' global meaning, consumers may want to protect and enhance their self-concepts at any time, also if a discrepancy of meanings is only anticipated, and behave accordingly through products and services as symbols.
- If the relationship is built to other people by negotiating the self through social conversation, consumers may respond to products, services or an experience based on the symbols they represent to other people.
- If meaning making establishes a relationship of past experiences, such as behavioural responses, through reviewing, it can guide present or future behaviour and even reinforce it.

Since meaning only indicates possibilities for action, the consumer may not be willing or motivated to act. Either the process ends here, or the consumer forms an intention to give a behavioural response to the experience. The process of meaning making may be repeated by reviewing.

6 Discussion

Our focus is on creating meaning for consumers in order to encourage enduring behavioural change. Following the initial Meaning-Behaviour Model, behavioural change can be the consequence of various interventions, as indicated in Fig. 1:

- I. In case of a new experience, a new behavioural response may be evoked.
- II. In case any of the relations resulting from appraising meaning is different from the usual relation.
- III. In case different beliefs, goals, subjective feelings or self-views, as part of the individuals' global meaning, are addressed.

IV. In case of intentionally caused discrepancies between appraised and global meaning, conflicts need to be resolved, potentially resulting in changed meaning through maintenance, which in turn may affect behaviour.

V. In case of reviewing past experiences, future behaviour may be influenced.

DeGrandpre [18] argues that the dialectic of meaning making can also act as reinforcement of past behaviour, when it is affirmed by meaning making. This is in line with the findings of van den Heuvel et al. [30], indicating that meaning has the potential to make a behavioural change stick, if the change was made by the person itself as this results in more stable relations. This leads to the assumption that designers can foster enduring behavioural change by creating meaning.

7 Conclusion

Seeing design as communication and therefore contributing to the creation of meaning, this paper discussed the effect of meaning on behavioural change. We explored the process of meaning making, which occurs when consumer reconstruct the meaning intended by the designer. The mechanisms underlying the effect of meaning on behaviour were examined, resulting in an initial Meaning-Behaviour Model. Literature suggests that meaning can influence behaviour in several ways, which—in our opinion—can all be addressed by designers. Hence, meaning can be considered as a high-potential lever for designers to create products and services that can stimulate lasting behavioural change.

A first attempt has been made by Lai [36], who combined symbolic interactionism with interaction design, but much more research is needed. We will focus on verifying our model, on investigating the link between types of relation and types of behavioural response, and on developing guidelines that allow the design of products and services that are effective in changing behaviour and in maintaining this behaviour.

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