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Design Languages in the Design Space: Silicon Valley

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Abstract: This interdisciplinary article explores the nature of language in design managers' strategic contexts. Taken-for-granted assumptions behind language influence the way cues are selected and elaborated on through actors' frames to ultimately become meanings. Language suggests and passes on cues and frames through which strategizing evolves. The design space is depicted as an entanglement of in-betweens where actors are immersed in language and materiality in their ongoing sensemaking. The hermeneutic analysis revealed that design languages partly extend managerial concepts, thus broadening horizons. Designers' sensemaking in this longitudinal research showed traits of normalising and denormalising language use balancing between frame adoption and frame extension. Normalising language risks reproducing historical assumptions easily omitting ethics or harmful consequences. Designers' denormalising language with material-linguistic strengths could trigger critical reflection on strategic assumptions. In addition, a design contribution is made to strategy and sensemaking studies.

Keywords: design space; critical theory; strategy; sensemaking language

1. Introduction

This article explores in-house design managers and external design consultants' language use in Silicon Valley-based design-driven organizations. The fourth stage of design broadens the scope of design from products to systems, environments and organizations (Buchanan, 2015) which are strategic issues. The article discusses language through which taken-for-granted assumptions might guide actors in their sensemaking pursuits of noticing, selecting and interpreting cues in strategic sensemaking contexts.

Designers are increasingly involved in strategising (Brown, 2009; Buchanan, 2015; de Mozota, 2017; Liedtka, 2015). Strategy can be understood as a situated, social activity accomplished through the actions and interactions of actors (Vaara & Whittington, 2012) or as ongoing future-oriented sensemaking which involves fantasizing (Sajasalo et al., 2016). Designers may provide actors with situated, embodied and creative means to select and elaborate on related cues. Sensemaking is triggered by cues, such as issues or events for which the

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meaning is not clear (Maitlis & Christianson, 2014, p. 70). *This research proposes that the language behind cues and frames is crucial for their selection and interpretation.* Language not only describes but changes the world (Rorty, 1970, as cited in Krippendorff, 2007).

Strategic concepts are central micro-level tools in strategic sensemaking in the language-based view on strategising (Balogun et al., 2014; Jalonen et al., 2018; Mantere, 2014). In this article, strategising is ongoing sensemaking in a design space of entangled material–linguistic elaborations influenced by languages and facilitated by designers. Strategic concepts are ‘linguistic expressions, essentially words or phrases with established and at least partly shared meanings, which play a central role in an organization’s strategy discourse’ (Jalonen et al., 2018, p. 2795). *This article thus suggests that cues are filtered through individual and collective frames (Figure 1) and negotiated into meanings through different languages* (cf. Suddaby & Greenwood, 2005).

Earlier sensemaking research mainly focused on top management (Maitlis & Sonenshein, 2010, p. 559) strategic change (Gioia & Chittipeddi, 1991) or on middle managers (Balogun, 2003; Rouleau & Balogun, 2011). Sensemaking is suggested to be an essential activity in organisations (Maitlis & Christianson, 2014) regarding strategic change, decision-making (Gioia & Thomas, 1996; Sonenshein & Dolakia, 2012), innovation and creativity (Drazin et al., 1999; Hill & Levenhagen, 1995), or organisational learning (Calvard, 2016; Gephart, 1993; Weick, 1995).

Strategising, designing and sensemaking can be understood as one phenomenon. In this view, strategising supported by design is an ongoing search for cues that are meaningful enough for actors to change course and, at times, challenge an existing strategy or clarify its content (Pääkkönen et al., 2019.) In strategic sensemaking, by being in a constant state of becoming and evolving in an iterative fashion, designers may enable participants in reframing (Dorst, 2015; van der Bijl-Brouwer & Dorst, 2017) strategic issues. According to Gadamer (1970), the actors are supported in broadening their horizons by understanding the world through conversation that may transform the viewpoints of those involved. Actors in design-driven organisations are embedded in languages that suggest or pass on cues and frames.

Figure 1 In the design space, numerous cues are available. Selected cues are filtered into meanings through frames. Languages suggest frames. (Copyright: Pääkkönen, 2020).

Individuals seek to understand unexpected or confusing events (Maitlis & Christiansson, 2014). In their search for meaning and meaningfulness, strategising takes the collective form that the actors in the design space try to understand while simultaneously creating it (cf. Maitlis & Christiansson, 2014; Pääkkönen et al., 2019). *This article suggests that cues are filtered through individual and collective frames (Goffman, 1974) evolving into meanings (cf. Benford & Snow, 2000, p. 614) not only through concepts but additionally through denormalising design languages.* Thus, the research was directed to answering the following questions:

RQ1: What are the kinds of language used by design managers when they discuss their work in the context of Silicon Valley-based design-driven organisations?

RQ2: How might languages affect the selection of cues and frames and their interpretation in the design space of sensemaking?

The sensemaking of the design managers is entwined with that of the organisation and other actors in the broader context, *the design space*. Various entangled in-betweens (Ventres, 2016) are suggested as being integral to the forming of the design space where languages emerge. These in-betweens are areas of sensemaking where designers interact with strategic, organisational or user-related issues, society and ecosystem concerns and other challenges. A critical perspective (Burrell & Morgan, 1980; cf. Johansson & Woodilla, 2017, pp. 461–479) is suggested.

2. Methodology and philosophical considerations

This interdisciplinary article used Weick's (2005) sensemaking perspectives for studying the languages and frames amongst designers through critical reflection (Burrell & Morgan, 1980; cf. Constantinides et al., 2012) and hermeneutic interpretation (Tomkins & Eatough, 2018).

An ontology of becoming (Hernes, 2014; Tsoukas & Chia, 2002) is enacted in practice. Sensemaking processes are ongoing and, at least, partly anchored in material settings (Bakke & Bean, 2006, p. 1). Sensemaking, designing and strategising are jointly enacted through material–linguistic entanglements and conversations in organisational becoming.

For Gadamer, 'language leads its tension-filled life in an antagonism between conventionality and revolutionary awakening' (Gadamer, 1970/2006, pp. 18–19). However, Gadamer's hermeneutic philosophy stresses the open and dynamic nature of horizons (Barthold, n.d.; Gadamer, 1992) in line with design principles to see reality as pliable.

The in-depth interviews (Johnson, 2002) were conducted during benchmarking visits to professional designers holding middle or senior managerial positions in Silicon Valley-based organisations (Table 1). Most of the participants worked with or within large technology-driven international manufacturers or design consultancies. The term 'design manager' or 'designer' refers to these participants who had 10 to 20 years of experience. Snowball sampling (Saunders & Townsend, 2018) was utilised through existing networks and partners who, in turn, provided access to sufficient relevant contacts in Silicon Valley. The anonymous participants were selected from organisations that had acknowledged a role for design in their innovation processes.

Table 1 Interviews from 2013 to 2016.

Code organisation field	Position	Date
C1 design consultancy	Design Manager	17.10.2013
C2 Design consultancy	Head of Operations	26.4.2016
	Lead Designer	26.4.2016
S1 Start-up healthcare	Service Design Lead	17.10.2013
S2 Start-up IT	Chief Design Officer	25.4.2016
IT1 Information technology	Senior Design Manager	26.4.2016
IT2a	Senior Design Manager	18.10.2013

IT2b	CEO	18.4.2016
IT3	Senior Design Researcher	28.4.2016
IT4a	Innovation Lead, Design Strategist	16.10.2013
IT4b	Principal XD Researcher	27.4.2016
IT5	Strategic Project Director	25.4.2016
IT6	Design Researcher	25.4.2016
IT7	Designer	23.6.2016
M Manufacturing	Innovation Manager	23.6.2016
E Education	Design Lead	02.05.2015
U UX analysis workshop, manufacturing	Head of UX Design	02.05.2015

Altogether, 16 interviews, including one analysis workshop, from 2013 and 2016 yielded 20 transcribed recordings (from 18 minutes to 1 hour and 41 minutes) covering various domains such as service, interaction, industrial, graphic, HCI, UX and experience design.

This article presents one cycle of sensemaking in an effort to understand how these designers working in Silicon Valley-based design-driven organisations made sense of their contextual industrial settings.

The hermeneutic analysis (Alvesson & Skoldberg, 2018; Tomkins & Eatough, 2018) focused on uncovering features and assumptions in the designers' language for understanding their historically determined situatedness (Malpas, 2018, para. 3). The qualitative analysis (Berg, 2001) extracted normalising language conveying ideas behind critical success factors in business (see literature review by Saleh & Watson, 2017, pp. 710–711) and the historically developed strategy concept (Knights & Morgan, 1991). Denormalising language use was identified inductively by selecting words and phrases, as well as contexts, in which designers' language differed from that of the business-as-usual frame. This led to the identification of material–linguistic features (4.1) and contextual verbal language (4.2.) in the participants' denormalising language use, conveying assumptions and practices that differed from those of normalising language.

3. Theoretical framework: language in the design space

3.1 *The design space of sensemaking*

In the design space, sensemaking, language and materiality are not limited to specific design units, creative spaces or immersive labs. The material and cognitive are entangled and merge. The material and the embodied are embedded in the social and the cognitive (Pääkkönen et al., 2019). The design space expands the strategy-as-practice view concerned with 'the way that socio-material aspects such as tools, locations and spatial arrangements configure strategic interactions between bodies and things' (Balogun et al., 2014, p. 187; Jarzabkowski et al., 2013) as the design space is suggested to become the phenomenon itself

where strategising, designing and sensemaking unfold through languages. Interacting with the world, ‘making sense of a world’ through conversation and collaboration, moves towards action (Pangaro, 2016) becoming that which is made sense of (Weick, 2011). The frame of an organisation or ecosystem is thus opened for reflection.

The world forms the material that the designer uses in making sense of alternatives. Be it concrete facilities or digital experiences, the design space offers material–linguistic pliability, with cues flowing around and available for elaboration of frames. Also, from an interactive system viewpoint, first-order cybernetics evolves through recursion, learning and co-evolution (Glanville, 2014, as cited in Dubberly & Pangaro, 2015). Yet, designing requires second-order cybernetics which involves awareness and conversation on frames (Dubberly & Pangaro, 2015) and ethics (Chan, 2018) while language conveys beliefs and values.

From a critical viewpoint (cf. Johansson & Woodilla, 2017; Kimbell, 2011), the language of goals implies collective justification (Weick, 2011, p. 7). This is of importance regarding consequences or unintended harm (Vargo et al., 2017) for people or environments resulting from underlying strategic assumptions. Rittel, amongst the first, framed design as politics—as discussion and argumentation (Dubberly & Pangaro, 2015; Rittel & Webber, 1973).

Ventres (2016) suggested the concept of a space-in-between as a way to notice co-occurring, paradoxical truths: ‘... a creative construction in which differences are honoured while being explored for meaning. There is a genuine willingness to understand rather than a need to be “right” about polarized issues’ (p. 345). In their in-betweenness in the design space, designers try to understand other actors’ contextual frames while seeking their own, balancing between frame adoption and frame extension.

3.2 Normalising and denormalising language in the design space

The design space entails uncountable contextual frames and cues. Weick (1995, pp. 106–111) referred to minimal sensible structures. People pull words from diverse sources, such as society, organization, occupation or experiences to make sense. Frames and cues are vocabularies in which more abstract words (frames) include and point to less abstract words (cues) that become sensible in the context created by the more inclusive words (p. 110). According to Weick, the substance of sensemaking is based on a cue, a frame and a connection between them, thus causing meanings to be relational and momentary. Language and materiality merge in framing and reframing strategic issues through *normalising and denormalising languages*. These languages which shape sensemaking can broadly be considered as languages either *normalising or denormalising* current understandings. Buchanan’s (2015) description illustrates a design perspective on *denormalising*:

“The principle of design that stands behind the organizational culture reform movement in which design thinking is central is grounded in the quality of experience for all of those served by the organization. This includes the individuals who directly use the products and services of the organization, but it also includes those who are affected by the internal and external operations of the organization and by those in society at large who are ultimately affected by the vision and strategies of the organization. The search for such a principle is a dialectical task.” (Buchanan, 2015, p. 17)

In contrast, systemic power offers a view on more *normalising language*. Systemic power is present indirectly and over longer periods of time, easily remaining unnoticed in sensemaking (Schildt et al., 2019). Organisations reproduce the beliefs and institutional practices of the societies in which they are embedded (Tsoukas & Dooley, 2011, p. 731). The language of strategy may thus be present in the design space as normal and taken-for-granted. However, power might be ubiquitous and difficult to notice (Fleming & Spicer, 2014). To discuss strategy-related issues designers might be drawn towards more traditional management assumptions in which strategy is given rather than created. Strategic discourse (Knights & Morgan, 1991) forms the normalised context for proponents *and* opponents of issues related to available vocabulary, such as *competitive advantage* or *value*, easily neglecting potential harmful consequences. Past irresponsibility may be forgotten, as well (Mena et al., 2016, p. 720). Such existing frames limit or enable sensemaking through languages that may influence interpretations. Possibilities emerge within the limitations of the assumed frame. In Weickian terms (1995, p. 115) premises as suppositions made early in the sensemaking process may powerfully control subsequent steps.

Normalising language is exemplified in business language by such terms as critical success factors (see Saleh & Watson, 2017, pp. 710–711) or historical strategic concepts (Knights & Morgan, 1991). At times, the languages of design and business merge. However, when people ‘agree’ on a paradigm, they are more likely to agree on its existence than on its rules and rationalised form (Weick, 1995, p. 120; quotation marks original). Vague concepts, such as value, allow the participants to seemingly agree and proceed, without the need to be too specific (Majchrzak et al., 2011). The risk is that difficult questions, such as those involving sustainability, may become neglected. Collective justification is social and tied to the actors’ frames; as Gadamer noted:

‘Understanding and interpretation thus always occurs from within a particular “horizon” that is determined by our historically-determined situatedness. Understanding is not, however, imprisoned within the horizon of its situation—indeed, the horizon of understanding is neither static nor unchanging’ (Malpas, 2018, para. 3.2)

Gadamer expanded this as follows:

‘Only in the process of speaking, as we speak further, as we build up the fabric of a linguistic context, do we come to fix the meanings in the moments of meaning of our speaking, only in this way do we mutually agree on what we mean’. (Gadamer, 1970/2006, p. 25)

Strategic concepts develop into new meanings in different contexts despite the illusion of a shared concept (Seidel, 2007). Designers with numerous others enable this conversation towards action (Dubberly & Pangaro, 2015) as part of organisational becoming.

3.3 Material–linguistic elaborations in the design space

The language of design is often intertwined with design approaches and materials beyond verbal expressions. Design languages are rich, produced in situations where design facilitates dialogical interaction (cf. Tsoukas & Dooley, 2011) and the inclusion of participants with

social, material and embodied means. It is a productive language open for interpretations and modifications based on iteration. It is potentially powerful in involving people with their bodies, senses and minds that all work towards more intensive participation than with verbal means such as routine meetings with bullet points and speeches.

In designers' strategic contexts, 'materialization of cognitive work' facilitates the transition from individual to collective prospective sensemaking (Stigliani & Ravasi, 2012, p. 5). Majchrzak et al. (2011, p. 5) suggested that rapid co-creating of temporary 'scaffolds' allows tensions between team members to emerge, claiming that 'collective enthusiasm rather than logical argument' and knowing through action invoke collective sensemaking.

Designers might influence framing contexts by adopting surprising ways of acting. When stakeholders are surprised, sensemaking is triggered (Maitlis & Christianson, 2014; Weick, 1995). Gadamer (1970/2006, p. 14) agreed: 'So, all efforts at trying to understand something begin when one comes up against something that is strange, challenging, disorienting'. A common situated language develops when people seek understanding. Yet, Gadamer argued, human beings are played by the ritual structures of the past (Malpas, 2018).

When designers use both their verbal and specific material–linguistic approaches they remain embedded in the evolving design space in which actors seek to articulate strategic issues through collective sensemaking (cf. Weick, 2011). However, ethical consideration is part of designing (Sweeting, 2018), and power may serve socially progressive ends (Fleming, & Spicer, 2014, p. 38), diverse interests and strategic beliefs. Conventional strategies seeking the status quo (Burrell & Morgan, 1980) meet with design aiming at change (Buchanan, 2015).

4. Design languages in Silicon Valley

The language use of designers in Silicon Valley is discussed through material–linguistic features (4.1.) and through denormalising and normalising verbal language use in the design space (4.2.).

4.1 Three material–linguistic features in the language used by designers

The designers used material–linguistic elaborations for sensemaking by involving diverse stakeholders. Beyond the verbal means, the language that the Silicon Valley designers drew on may be characterised by three features: *embodiment and materiality*, *social interaction* and *enthusiasm*.

Embodiment and materiality occurred by inviting participants, for example, to use their hands, or boundary objects (Carlile, 2002; Hargadon & Sutton, 1997), rapidly co-created (cf. Sanders & Stappers, 2014) for provisional understandings or experiential learning (cf. Elsbach & Stigliani, 2018). Specific spaces were built and modified, and camps for employees were organised. One participant explained this effort:

And I think the company's getting more used to doing some more user experience and actual

service design execution, so I want them to do more of this prototyping and also some bodystorming and things like that. I think when we open up the design centre, we'll have more opportunities to do that. (Participant IT2a, 2013)

Materials might encourage playfulness, crafting and improvising for articulation and reflection. However, much is dependent on the way such events become framed. The strategy frame as usual might entail different premises (Weick, 1995) than an open frame:

So, what a probe is? It's not a prototype, it's before a prototype... They're very low-fidelity... by making and playing with these probes is when we begin to interact with these participants. (Participant IT6, 2016)

Design is social and interactive, yet aiming at empowerment or transformation.

We've always had a philosophy about teaching these new skills, that it needs to be experiential. It needs to be immersive. You need to have gone through the experience in order to be transformed. (Participant IT4a, 2013)

Most of all, one would get the impression that the designers in Silicon Valley enjoy '*the golden era of design*' (Participant S2, 2016). Transformation relates to design becoming adopted by the organisation:

They spent two years trying to develop the organisation to adopt design, so that it would be the air you breath in. (Participant IT4b, 2016)

So, then they let go of the idea of design thinking needing to be a process. There are just principles you can use anywhere. And, these three ideas were the key; empathy, ...quick prototyping... go broad, go narrow is the third part of it. (Participant IT4b, 2016)

The interviews confirmed the impression of designers' optimism (Brown, 2009; Desmet & Pohlmeier, 2013; Michlewski, 2008) and enthusiasm. However, empathy (Haag & Marsden, 2019; Holmlid et al., 2015) seemed to focus on users and (business) stakeholders. At times, the designers paid attention to the work conditions of the employees:

So it's like integrating for making the building work for all the employees as well. (Participant IT2a, 2013)

By taking different stances and reframing (Dorst, 2015; Paton & Dorst, 2011) designers may exercise power by filtering frames and cues, even unconsciously. Design languages stretch beyond dialogical or virtual communication (Baralou, & Tsoukas, 2015) strengthened by material–linguistic means that may filter or direct attention. However, all organisational actors may protect occupational or career interests; even identities can be at stake (Carlile, 2002, p. 446, 2004, p. 556; Orr, 1996). What was specific to the designers in Silicon Valley was the mandate they felt for design, built over decades of business–design cooperation in the area (cf. Katz, 2015) supporting the design community.

4.2 Normalising and denormalising verbal language in the design space

The design space entails material–linguistic entanglements in various contextual in-betweens. Five in-between contexts in verbal language were identified in the interviews

regarding the hermeneutic interpretation of different languages and the assumptions behind them.

STRATEGIC LANGUAGE IN GENERAL

The designers had adopted conventional strategic language in general. They tended to be involved in framing the organisation's strategic future, mediating between a pre-existing strategic frame and potential reframing. Yet, when explaining their ideas, the designers referred to normalised business concepts. Despite the urge to transform and reframe strategies, their verbal language repeated the assumptions behind critical success factors that aim at surviving competition by enhancing competitiveness, value, the bottom line and similar factors:

The innovation outcome is more efficient as it influences the financial bottom line of the company directly. (Participant M, 2016)

Broader consequences of strategies for environment or society remained largely opaque. Visualisations and storytelling served rather as communication methods for a set strategy. While multiple methods were mentioned, the strategic frame remained largely intact. Some designers explained they had learned business language so they would be able to work professionally. Core beliefs of organisational strategies were not directly challenged; rather, they were concretised or discovered. Sensemaking through material-linguistic elaborations thus crafts and "talks events and organizations into existence" (Weick et al., 2005, p. 413). Yet, normalising language and frames (cf. Knights & Morgan, 1991) were common:

The market is full of potential, and users might be about the same time looking at competitive landscapes. So what are your competitors doing and how can you gain an advantage? And what are your current advantages and how can we make use of that? (Participant IT6, 2016)

Competitors around and losing market share is often the starting point... and then they have heard somewhere: 'Oh, design thinking, you get some kind of innovations with that. Let's try that'. (Participant S2, 2016)

Thus, normalising language maintains the status quo supporting frames that are believed to be professional, appropriate or justified.

ORGANISATIONAL LANGUAGE

The design managers found themselves between siloed functions. Their in-betweenness meant crossing cultural, functional or other domains such as navigating and orchestrating amongst diverse groups (engineering, management, various stakeholders and customer-users) for an enhanced understanding of the issues at hand. Interdisciplinary teams were viewed as a source of innovation rather due to than despite the tensions that such diversity may cause. This cross-functional fluidity depicts designers as middle managers forming the 'hub through which most strategic information flows' (Floyd & Lane, 2000, p. 164). Beyond business or engineering language, the designers used denormalising language towards change by speaking about breaking silos, teaching design, enhancing employee experience or:

...transforming the language, mindset and the mission to include passion. (Participant S2, 2016)

Some designers stressed management support and worked closely with their boards. Their offices were located next to the board members' offices. In this way, organisational power then supported the designers' identities (cf. Knights and Morgan, 1991).

Designers who can speak to designers, but also to directors in the wardrooms, they are sought after. The terminology is quite different out there, I mean. (Participant IT4b, 2016)

At other times, the designer can face difficulties, being the only designer:

There you are, with the board, on your own. (Participant S2, 2016)

According to Beck and Plowman (2009), as middle managers, designers mediate between the managerial and other frames and may enrich the interpretations due to their proximity to the interpretations of both strategic and frontline managers. Some designers mentioned enlightened managers. Teaching others about design tools served as a catalyst for embedding cultural change in the organisation:

Big projects are cultural change projects; there are design outcomes, but quite often it is the way you act. (Participant S2, 2016)

One might interpret transformation by design either as increasing participation (cf. Sanders & Stappers, 2008; Elsbach & Stigliani, 2018) or as a means of managerial regulation (Burrell & Morgan, 1980); often, it was noted by participants, the transformation was initiated within a high level of hierarchy.

USER-RELATED LANGUAGE

The designers often felt connected with users with a genuine desire to improve their lives. A consultant redesigned employee spaces for an industrial client:

...canteens, reception ...it's like a nice hotel now. (Participant C2, 2016)

...you iterate with people ...probes ...storytelling. (Participant M, 2016; Participant U, 2015)

Business and design languages merge in vague concepts such as value. However, business value differs from user value. Many designers referred to people or human beings, rather than customers, as profit factors. Some mentioned storytelling around the brand being improved through design. Everyday lives of consumers or digital traces were explored for *customer insights* (Participant IT4b, 2016), for example through *journey maps* (Participant IT6, 2016; Participant IT2a, 2013) or *touchpoints* (Participant IT6, 2016; Participant IT2a, 2013). While, for example, brands suggested values and behaviours, one might have expected more reflection on the use of customer data or storytelling. Customer experience as a business concept was adopted (cf. Saleh & Watson, 2017) rather than doubting whether pleasure would lead to enhanced quality of life (cf. Desmet & Pohlmeier, 2013; Sanders & Stappers, 2008).

TECHNOLOGY-RELATED LANGUAGE

It was noted that, while transcending complex material–cognitive spaces, the designers needed to simplify and orchestrate both customer interactions and backstage services.

...we use these digital traces ...every single product we use, there's analytics. (*Participant IT3, 2016*)

At times, this entailed human aspects more than hardware and software:

It's more for like innovating social relationships of people, not about technology or engineering. (*Participant IT7, 2016*)

A *seamless fit* emerged when the core company brought in technology and aligned this with other aspects of the final offering. Users' lives were eagerly traced through technology:

We analyse that person's tweets and social media, and because we have their e-mail address, we can link it to other social media. (*Participant IT5, 2016*)

Yet, framing and justification of choices and the responsibilities following them (cf. Dubberly & Pangaro, 2015) were not discussed.

ECOSYSTEM AND SOCIETY-RELATED LANGUAGE

Designers navigated in the design space of organisations, networks and social actors. Some looked beyond their own industry for extracting new cues.

...your product stays in a kind of an ecosystem, so you have to understand the whole ecosystem.... (*Participant IT1, 2016*)

Participants believed that orchestration of the whole process with stakeholders was needed. Normalising language largely prevailed assuming that a business ecosystem was separated from consequences elsewhere. Stakeholders were often business clients, sometimes end-users.

The designers' language throughout the interviews related to material–linguistic elaboration methods. Critical success factors formed part of the verbal language the designers had adopted. The underlying core ideas of strategic frames were seldom questioned or reframed (cf. van der Bijl-Brouwer & Dorst, 2017). Surprisingly, ethics, a critical success factor in business (Saleh & Watson, 2017) was barely mentioned. On the other hand, concepts such as experimentation and creativity, which were often mentioned, had become part of business vocabularies.

5. Discussion on the in-betweenness of design languages

The sensemaking processes of designers entailed traits of using normalising and denormalising language that supported *frame adoption* or *frame extension* (cf. Dorst, 2015; van der Bijl-Brouwer & Dorst, 2017). In frame adoption, core assumptions behind strategies remain easily unchanged even when design methods are used.

Normalising language prevailed when strategic language in general was adopted: business vocabularies were learned by some designers consciously. To advance the conversation, the designers partly adopted the languages of those they encountered. However, potentially harmful consequences were barely mentioned.

Denormalising verbal design language appeared more clearly in organisational contexts. User or employee insights offered new perspectives. In respect to technology-related issues, social interaction enabled by technology was the focus for a seamless fit, without prejudice. Yet, designing systems requires the framing of wicked problems (Rittel & Webber, 1973), a conversation on values and the responsibility to justify them, thus including subjectivity and second-order cybernetics. Second-order cybernetics, or understanding frames, requires conversation (cf. Gadamer, 1970/2006) for learning together (Dubberly & Pangaro, 2015; Krippendorff, 2007).

Variation in the designers' language use was natural due to their occupational in-betweenness. The design principles (Buchanan, 2015; Fayard et al., 2017) guiding the designers include empathy (Suri, 2000), ethics (Chan, 2018; Sweeting, 2018) and designing for human flourishing or sustainability (cf. Desmet & Pohlmeier, 2013). The relative silence around values and ethics was therefore surprising. The designers barely mentioned the harmful consequences for the natural environment or issues such as user data transparency (cf. Betzing et al., 2019; Introna, 2007, pp. 22–23; Introna & Pouloudi, 1999) or doubtful consequences of digitalisation (cf. Morley et al., 2018; WEEE forum, 2017). Instead, there was enthusiasm (cf. Majchrzak et al., 2011) about the possibilities of design. However, questions about the consequences of automation and AI would have required more serious debate (cf. Dubberly & Pangaro, 2019).

Limitations admittedly apply to the interviews and the authors' interpretation. However, design management literature has tended to follow functionalist perspectives (Johansson & Woodilla, 2017) with innovation being the driving force. Seeking pleasure through consumption (Sanders & Stappers, 2008) is not what the aim of design has been (Buchanan, 2015).

One might expect more conversation on the taken-for-granted business ideas. For example, exposing children to branding stories requires criticality (Gunter, 2016; Jordan, 2004, p. 477). The concept of value reflects a business-as-usual perspective where users turn into profits and digitalisation becomes a cost-cutting measure. In a business-as-usual frame, genuine radical innovations are hardly likely. Sensemaking enabled by design facilitation risks reproducing (Knights & Morgan, 1991) the prevailing order. However, understood as an ongoing conversation, design and ethics can inform each other (Pangaro, 2017; Sweeting, 2018). Designers may create possibilities for others to have conversations, to learn and to act, while being explicit about values (Dubberly & Pangaro, 2015).

Designers have gained some power in strategising. As co-strategists, they might receive support from top management for critical reflection on consequences. Designers embedded in historically situated frames remain limited in the very sensemaking that is required for

change. There have been signs of denormalising language where designers have managed to broaden not only their own but some existing frames (cf. Baldassarre & al., 2017; Bocken et al., 2014). Gaining legitimation has been suggested to be about talking new ideas and interests into being (Vaara & Tienari, 2011). Designers additionally have material–linguistic strengths. By using design languages in micro sensemaking events, designers could select cues to concretise harmful consequences at early stages. They might initiate more critical reflection on strategic frames and, by doing so, broaden horizons.

6. Conclusions

This article focuses on design languages in design managers' strategising contexts. *Normalising and denormalising languages* were found to influence strategising through actors' selective noticing and elaboration of cues and frames. Designers may act as supporters and challengers of evolving strategies while mediating between *frame adoption* and *frame extension*. At times, the design managers seemed to pass on strategic concepts, thus reproducing historically developed strategic frames. Ethical issues or consequences of design were rarely discussed.

Denormalising design languages entail the possibilities for triggering sensemaking and reframing through material–linguistic elaborations and inclusion, as well as by encouraging empowerment or critical conversation on issues such as unintended harm, environmental consequences or design transparency. However, conventional strategic assumptions may prevent fully exploring broader meanings such as those for the environment or greater good. This article contributes to sensemaking and strategy research from a design perspective.

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