Beyond the Scope of Design thinking: DesignCommunication

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Design thinking as an everyday tool in managerial practice provides a systematic framework for generating new and creative ideas, therefore opening up the practice of design not only to designers (educated in art schools) but anyone who intends to create something with a purpose in an organization. The purpose of current paper is to enrich the design-related academic and managerial discussion with the concept and methodology of designcommunication, DIS.CO, which provides an intuitive and emphatic frame of thought for solving open, ill-structured problems. Designcommunication = communication integrated into development. The authors use the compound noun 'design communication' as 'designcommunication' written in one word as by DESIGNCOMMUNICATION they want to refer to the phenomenon: 'communication integrated into development.' Designcommunication is not merely a function or a form, but it is also content, message, style and culture together. It is an approach that strives to connect design, everyday economies, strategic communication and their real status. Communication in this form is not an additional frippery, but communication is created simultaneously with research and problem solving and is coded into the development of the given product, service or process. While thinking implies a conscious human activity to solve, interpret things around us, communication is an evolutionary necessity – which immediately describes a core difference and relation of design thinking and designcommunication.

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In the current paper the authors describe designcommunication and design thinking according to Dorst's (2011) schemes of closed and open problem-solving situations and Johansson-Sköldberg et al.'s (2013) framework. Participant reflections on designcommunication that took place in an educational training setting in a regional development project is presented. The authors' argumentation is supported by participant narratives (n=171). Findings show that solving design tasks for non-designers, especially in management areas, help opening up new perspectives, give a new point of view of leadership, and increase self-knowledge. Designcommunication is an alternative to design thinking, which facilitates the solution of ill structured problems (Simon, 1973).

Keywords: Designcommunication, design thinking, ill-structured problems, leadership training

Introduction

Life-long learning is an evidence for today's leaders and designers. If leaders would approach emerging problems like designers, many products, services and procedures would become more functional, and would be able to create long-lasting values for the organization and society. Such an approach has to be learned and steadily trained. The act of authentic learning takes place by only leaving one's comfort zone.

Designcommunication is built on the interaction of different disciplines and the collaboration of different professions, and places business professionals into designer and artist roles, while designers and representatives of the creative disciplines are enforced to become leaders. Purpose of present article is to enrich the design-related managerial discussion with the concept and methodology of designcommunication, DIS.CO , which provides an intuitive and emphatic frame of thought for solving open development problems.

Designcommunication - DIS.CO

Designcommunication by definition is communication integrated into development (HIPO, 2018). The authors use the compound noun 'design communication' as 'designcommunication' written in one word as by DESIGNCOMMUNICATION they intend to refer to the patented expression and phenomenon: 'communication integrated into development.'

Designcommunication is compounded of two inseparable notions: design and communication. Design is not equal to form-giving. Form-giving is one component of the holistic human constant that we call design. Design in this case implies design art, creative planning and creative behavior (Papanek, 1971). Planning and establishing a business activity is designing a business. As Herbert Simon states 'engineering, medicine, business, architecture, and painting are concerned not with the necessary but with the contingent – not how things are but how they might be – in short with design' (Simon, 1996, p. xii). A leader's responsibility is not to discover the rules of the universe, but to act with responsibility, so as to turn current situations and capabilities better or preferable. In that sense, a leader is a form giver, who shapes the organization and its economic processes. If leaders approached emerging problems as the best designers, many products, services and procedures would become more functional, and would be able to create long lasting values for the organization and society (Boland and Collopy, 2004, p. xi). More briefly: DESIGN = DO GOOD (Cosovan, 2009).

Design is complemented with communication, which is a creative way of connecting both at the level of self-reflection (inner conversation) and the human interaction phenomenon. Therefore, DESIGNCOMMUNICATION represents such an initiative for connection that serves as a BRIDGE between different disciplines and discourses, phenomena of society and economy. Designcommunication creates a real-time connection among classroom learning, research and entrepreneurship. It takes the time factor into consideration with respect of the apparently multidimensional and objective digital and expectedly later conceptual age.

Designcommunication is not merely a function or a form, but it is also content, message, style and culture together. Designcommunication is an approach that strives to connect design, everyday economies, strategic communication and their real status. Communication in this form is not an additional frippery, but communication is created simultaneously with research and problem solving and is coded into the development of the given product, service or process. In a brief expression: COMMUNICATION = SAY GOOD.

Each object, product, service, procedure is information itself, but formulation of the problem in the first phase of the design process does not communicate, and usually, most think the right moment of communication will come after all at the end. However, this may not be right. The act of

formulating the design problem already comprises essential communication codes. Imagine a good joke teller. We all like those joke tellers who are funny from the beginning of the joke, not only at the punch line. A good object, product, procedure is also able to show this communication evolution.

It is the formulation of a new domain through which creative behavior becomes the general approach. Design is a job, a profession, — while in reality, it should be and also could be more, if design as an information node was in line with its communication (Cosovan, 2015, p. 98).

Designcommunication (DIS.CO) is a design process approach. It is at the same time a philosophy and a methodology (theory and praxis) – communication integrated into development: it is an approach that builds on intuition and empathy in the exploration of design problems.

Designcommunication as an alternative to design thinking

Design thinking is a widely spread creative tool not only in the domain of design, but also in management and management education as well (Johansson-Sköldberg, Woodilla & Çetinkaya, 2013). In the general managerial practice the expression of design thinking not always referred to the actual stepwise process of design thinking (i.e. Brown, 2008), but to associations of creative problem solving tools. In an ill-structured problem solving case design thinking (Dorst, 2006) and designcommunication as an alternative could be the applied design approach.

Design thinking is an approach for enhancing systematic creativity by offering consecutive planning steps, an applied research based methodology. Design thinking in all its alternative models is composed of successive linear planning steps. The simplest of all is the three planning steps of *inspiration, ideation and implementation* (Brown, 2008), this steps are further unfolded to more phases i.e. defining, exploring, interpreting, ideating, prototyping, iterating, implementing, enhancing (Feher & Varga, 2017). These linear planning approaches serve as efficient tools in managerial planning situations (Johansson-Sköldberg, et al., 2013).

One of humans' capability, opportunity and at the same time obligation is to plan or to create with respect to the interaction of societal *invariables* (permanent elements) and *variables*. Our capability to design since the

existence of the human race determines the triplicate of *survival – subsistence – development*. The act or process of creation is the coefficient of societal invariable (permanent) and variable elements (Cosovan & Horvath, 2016). Therefore, design, communication and their business alternative - design management is a result of a differentiated and integrated, in other words, complex design thinking process (Csikszentmihalyi, 1998; Brown, 2008). Instead of describing consecutive planning steps, designcommunicaiton offers a holistic view for finding the optimal solution by taking maximum and minimum requirements into consideration through the complementary and opposing notions of: material – immaterial, survival – subsistence – development, constant (invariable) – variable.

These complementary notions, opposites increase the boundaries of creative thought and also serve as metaphorical guiding principles and evaluation criteria during the design process. For illustration authors describe designcommunication notions in the case of RedDot Design Award winner Inhalo DSI dry natural salt inhaler[f] (Figure 1). The notions of *constant (invariable) – variable* may be interpreted at the level of form, which in this case is a natural archetype (a universal code), it is like an oval flat gravel that is thrown on water for multiple jumps. It is an ellipsoid shape on the one hand, a very simple shape cliché on the other. The design team elevated this simple shape cliché and gave a new meaning to it through DSI. The notions of subsistence-survival-development mean that this archetype of shape will exist as long as nature and gravels will exist, therefore this code of shape is independent of time, sentenced to eternity. The notion of material-immaterial in this case has a spiritual aspect, the oval, flat gravel shape resembles mediation pebbles (mediation tools) at the same time it also holds simple everyday stories like throwing stones into a river.

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[f] http://www.inhalodsi.eu/blog-en/news/red-dot-design-award-winning-product

Figure 1. Natural archetype, a universal code: the oval flat gravel shaped DSI salt inhaler

Source: http://coandco.cc

Design thinking as a broadly accepted design methodology is one aspect of designers' creative behavior, recognition and solution of the essence of an actual problem (Johansson-Sköldberg et al., 2013). Complexity and integrity of the design process have been already mentioned a lot earlier i.e. 'wicked problems in design thinking' (Buchanan, 1992). According to Dorst (2011) problem solving in the design process is to be approached as ill-structured and clearly structured situations. Basic problem-solving may described as

WHAT (thing) + HOW (working principle) -> RESULT (observed).

In this case a clear vision of the expected result and a working principle such as the consecutive steps of design thinking are available. In this case 'we know the 'what' (the 'players' in a situation we need to attend to), and we know 'how' they will operate together.' (Dorst, 2011, p. 523.)

Many of the classic education situations are about preparing learners for closed problem solving cases by providing tools and frameworks that are applicable in different conditions – as Thomas & Brown (2009) states it is 'learning about'.

If the outcome is conceived in terms of value and the working principle is established – this is a routine case for designers and engineers, within a set scenario of value is created:

??? + HOW (working principle) -> leads to VALUE.

There are cases where only the aspired end value is known (Dorst, 2011). This as an open-problem solving situation where only the intended end value is known. This 'open' form of reasoning is more closely associated with (conceptual) design (Dorst, 2011, p. 524) that is the essence of designcommunication:

??? (thing) + ??? (working principle) -> leads to aspired VALUE.

In this situation the thing (aspired solution) determines the working principle which is communication integrated into development.
In the authors' view, design thinking and designcommunication may be connected and compared. Authors believe that design thinking is more efficient in well-defined problem situations, where the planning process is structured, and rules are well-known. Designcommunication on the contrary would be a considerable approach for situations where boundaries, domains are unclear. Therefore authors would argue that design thinking be described by the notions of systematic creativity, inquiry and exploration, routines. Designcommunication approach would further facilitate identifying and discovering new domains that lead to exponential progression (Figure 2, Table 1).

Figure 2. Complementary and interrelating notions of design thinking
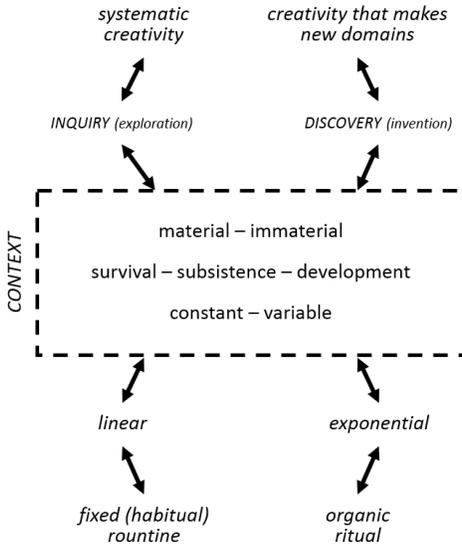
Source: own elaboration

The role of designcommunication in leadership and management education

DESIGNCOMMUNICATION represents such an initiative for connection that serves as a bridge between different disciplines and discourses, phenomena of society and economy. Designcommunication creates a real time connection among classroom learning, research and entrepreneurship. It takes the time factor into consideration with respect of the apparently multidimensional and objective digital and expectedly later conceptual age. TIME has a ruthless impact on our lives, especially this is the case for generations Y and Z. The multitasking generation painfully have to experience that they have to study at the expense of work practice and work at the expense of their study time, so we have to admit the time factor is not yet multitasking compatible. Aspiring to gain a degree and working experience at the same time generations Y and Z are under a big pressure, in certain cases close to burnout.

Our objective is not to increase today's pace of living, instead we strive to optimize career paths of the Y and Z generations, where we do not make a quality difference between differentiated and integrated ways of thinking, where there will be time for studying, research, work (career and entrepreneurship), cooperation, building one's own individual identity, there will remain time for relaxing, taking inside and outside perspectives. In sum, having time for as many things as possible, which we all need in the age of renaissance complexity concerning the relations of permanent and variable, survival-subsistence-development, material and immaterial. (Cosovan & Horvath, 2016).

Thomas and Brown (2009) expressed that the classical education format could not keep up with the fast economic, societal and technological changes. While the 20th century education is about '*learning about*', that is acquiring sufficient information, which in the 21st century turns '*learning to be*' that today becomes '*learning as a as a practice of becoming over and over again*'. In the age of new media, learning and education develop its new formats accordingly: i.e. *making* and *playing*. The authors describe new forms as (1) hanging out, (2) playing/knowing/messing around, (3) playing/knowing/making: geeking out (Thomas & Brown, 2009, p. 10). Designcommunication in an education setting where participants solve ill-structured problems may be described as learning as a practice of becoming over and over again in a playing/knowing/messing around setting.

Education today is to decrease hierarchy and control and to increase autonomy and responsibility, by extending collaborations (Jerald, 2009). Education is to make learners capable of coping with ill-structured problems. According to (Hackman, 2002; 2009) small learning groups are less efficient than undefined big working groups.

Participant reflections – the role of design experience in learning

Students were tasked at multiple instances to solve a group project in the *form of full cooperation* and in a designcommunication perspective at a master's course (Design management) at Corvinus University of Budapest. At the end of the course, participants were asked to write a short essay about their experience of the process, what difficulties they had perceived, what they had considered as a success, achievement, and pleasurable

experience throughout the process. The sample of 171 participant essays thus gathered results from 8 such courses organized between Fall 2016 and January 2018 (4 regular courses, held on a weekly basis throughout a semester, and 4 block seminars, that took place over the course of a one-week period) (see Annex).

One of the most important aspects in training future leaders is to make students live through situations that foreshadow the tasks they will be led to solve as leaders, and make them learn how to create a more favorable situation (Boland-Collopy, 2004), how to embrace available opportunities (Simon, 1996), and how to become designer-leaders (Cosovan-Horvath, 2016). The task of instructors in executive programs is to create a framework for learning, where participants can face their own leadership skills, their unexpected reactions – and learn from these. A wikinomical cooperation (Tapscott & Williams, 2008) within the classroom is unique in the sense that instructors do not set the framework of cooperation in advance, and full cooperation is established in full agreement between all participants. This way, they can experience the meaning of change without control:

> *The course was, in fact, a process of learning and development. This process was different for all of us: we did not start from, nor did arrive to the same position, everybody made something different out of it. This was probably one of the best things in it. [LLL, 2017]*

> *The distance covered mattered and matters a lot more, that is, the ways we went through to achieve the goals we had set. It was also important to feel that [the project] belongs to us, and that we be able to describe it in our own words, without which we wouldn't have been able to throw ourselves into solving it this eagerly – by the way, that's also true for all areas of life. [LLL, 2017]*

> *All in all, this course was for me the one that offered the 'most lifelike' experience – despite all the uncertainties – for the future among my master's classes. [LLL, 2017]*

Both the literature and the experience of the authors support that group cooperation is largely influenced by the individual's attitude towards the group, the group's acceptance of the individual, and the individual's ability to assert their interests within the group. Participants unanimously related group identification and the realization of cooperation as a success:

During the whole of the project I had the feeling that this 'for everyone' is really 'for everyone'. [DISCO2, 2017]

An invisible bond had formed between us that was based on helping each other's thoughts, to make them advance, which required a great deal of patience, concentration. There were some moments when we almost abandoned, but there were always one or two group members who shook us, and reminded us that it's not what we have to do that's important, but the way that we get there. [DISCO2, 2017]

we crossed our own borders together, paying attention to each other in mass, thereby developing ourselves. [LIB3, 2016]

All participant's *own identity is at least as much important as group identity*. By participating to a similar cooperative project, an individual, parallel to developing their own ideas, is able to accept others and keep the interests of the group in mind:

I was willing to give up my own ideas for the sake of the community, which is an achievement in personality development. (LLL, 2017)

Successful cooperation is a learning experience that can, at the same time, assert participants' professional identities, and can, as such, be considered as a form of self-development in leadership:

After six years of studying marketing, I met new approaches, and after a long time managed to be enthusiastic about a university project. And not least, it gave me a personal motivation and inspiration (during and also since the project) to find my own way, and go ahead with my lifelong dreams lost in the process. [LIB3, 2016]

The possibility of professional co-operation within the group is provided by the *creative design process*, the feeling of success, or simply the flow (Csikszentmihalyi, 1998). The *creative leadership by example* of professional leaders or instructors is essential. This can engender an *active design coordination*, which, in turn, contributes to directly or indDorsHIPirectly stimulating the design flow (Cosovan, 2015).

This was maybe the only class I attended so far at the university where I felt that I actually learn instead of simply being taught, and

where it mattered less what I, as a person, achieve, rather the way we, as a small group, had developed together. [DISCO2, 2017]

Groups supervised during the sampling period were able to perceive the importance of the emergence and rotation of various roles during the resolution of the project. They actively required the intervention or moderation of the instructor along the optimal or sub-optimal functioning of the group thereby creating a cooperation of peers:

I was motivated to contribute in the tasks and to not accept everything as is and not hesitate to question everything I disagree with since this is what propels everything forward and helps one's development. I believe that we managed to do good and do well. Thank you. [DISCO2, 2017]

As a conclusion, I can say that the methods of designcommunication and wikinomic cooperation helped me get out of my comfort zone, and be able to think differently and think together with a group. [DISCO1, 2017]

Conclusion: designcommunication a leadership tool in ill-structured problem solving

Managerial thinking emphasizes rationality and control. Whether it is about objectives, resources, organizations, structures, or people, managers are conceptualized to solve problems. Managers ask the following question: 'What problems need to be solved, and how can we achieve the best results in a way that everybody contribute to corporate success?' Managerial objectives derive from constraints rather than desires, and root in organizational culture and traditions (Zaleznik, 1992:127). Most leadership and management training programs are geared to transmit ready-made methods and frames, thereby training experts in closed problem solving (see e.g. Dorst, 2011). Leaders operate in high-risk environments, they are prone to face high risks and danger, especially where these represent a potential source of advantage. Leaders can cope with chaos and disorganization, and they are able to assess problems in non-trivial situations (Zaleznik, 1992:128). Designcommunication provides an approach for coping with ill-structured challenges and tasks, which in a training setting provides

leadership simulation where training participants can create their working principles and solution at the same time:

The usual, clear rules of the game – that we were well used to during our 19-20 years of studies – were not present. I felt quite uncomfortable with the situation at the beginning, but from the moment I realized the freedom it gives, I started to enjoy it. [LLL, 2017]

Providing freedom to students, supporting student's novel or even extreme ideas, professional and personal humility were all examples set for us that, first, offered an appropriate background for self-development, value creation, the understanding of added value and underlying connections between concepts, and second, helped us cooperate without rivalry, to get the most out of ourselves and to give space to what we consider important and enjoyable. [LLL, 2017]

According to classical, conservative managerial approaches (Martin, 2007) less attractive, but secure and risk-averse corporate choices are favored. Representatives of leadership approaches and integrative thinking, on the contrary, face complex situations and are able to start over and over again. Integrative thinkers look for new options and solutions. Traditional, managerial thinkers concentrate on potential solutions. A conventional thinker would accept the word as it is, while an integrative thinker would take on the challenge of improving the world (Martin (2007, p. 67) – DOING GOOD in a designcommunication sense.

In the context of leadership training designcommunication is an alternative approach to design thinking that provides an emotionally filled, highly involving working experience for coping with ill-structured problem cases. The authors believe that understanding of designcommunication is further elaborated in a comparison to design thinking (Table 1).

Table 1. Design thinking and DIS.CO

DESIGN THINKING		DIS.CO
to design useful products	PHILOSOPHY	do good and say good

integrates human needs, technological opportunities, and success criteria in business in strategy, organizational, and product development using a design toolbox	DEFINITION	design / creative approach, philosophy, methodology; creative designer interaction, communication integrated into development
three iterative steps: inspiration (investigation and understanding of problem) ↓ ideation (idea generation) ↓ implementation	GUIDELINES OF THE DESIGN PROCESS	holistic view for finding the optimal solution by taking maximum and minimum requirements into consideration through the complementary and opposing notions of: material – immaterial + survival – subsistence – development + constant (invariable) – variable
systematic creativity	NATURE OF THE CREATIVE PROCESS	creativity influencing domains
recognition	NATURE OF KNOWLEDGE ACQUISITION AND SOLUTION	discovery
linear	IMPLEMENTED DEVELOPMENT	exponential
convention-bound routine (permanent accessories, participants remain in their previous roles)	MAIN FEATURE OF THE DESIGN PROCESS	rite of process (roles and artifacts generated through a value-oriented process)
coaches never, participants hardly get out of their comfort zone	COMFORT ZONE	both the facilitators and participants get out of their comfort zone

Source: own collection

Annex: Sample composition and attributes

Date and description of course; number of participants	Project description	Output of cooperation	Citation reference in text
Aug. 2016. Intensive week (before start of regular classes). Participants from 3 Hungarian universities (UCB, BME, MOME) (n=28)	Experience- and emotion-based approach to the library of CUB; concept proposals for spatial, material, visual, service and procedural systems	Interdisciplinary cooperation; A few students quit the course because of the form of cooperation, for those who stayed, mostly a successful experience	LIB3, 2016
Oct. 2016. Block seminar (Marketing MA students of CUB) (n=26)	Further development of results of LIB3, 2016. Experience- and emotion-based approach to the library of CUB; improved concept proposals for spatial, material, visual, service and procedural systems	The group successfully solved the task, but strong intra-group conflicts developed on the basis of the varying levels of individual participation; the group required a top-down moderation from the lecturers	LIB1, 2016
Fall 2016 semester. Regular course (Marketing MA students of CUB) (n=18)	"The future". Creation of a product / idea / service / solution having a decisive influence in survival / subsistence / development (cf. TFF Idea, Cosovan, 2009, p. 130.) **solution: Game of Care application**	Strong autonomous group work where the group found itself and created an own communication platform; No observable intra-group conflicts.	GOC, 2016
Jan. 2017. Intensive week (before start of regular classes) (Marketing MA students of CUB) (n=28)	"The future". TFF Idea **solution: LLL (live and let live) poem / song / manifesto**	Strong autonomous group work where the group found the way to manage itself; Group members overcame initial disagreements. Group manifesto available at: http://bit.ly/2ED0rZe	LLL, 2017
Spring 2017 semester. Regular course (Marketing MA students of CUB) (n=17)	"The future". TFF Idea solution: Mindful May	Strong autonomous group work where the group found the way to manage itself: http://bit.ly/2ED0SCQ	MIND, 2017
Aug. 2017. Intensive week (before start of regular classes)	Relating designcommunication and design thinking in	Initial lack of self-confidence in group, followed by a dynamic	DISCO1, 2017

(Marketing MA students of CUB) (n=19)	theory and in practice	group work: http://bit.ly/2vcIUYP	
Fall 2017 semester. Regular course (Marketing MA students of CUB) (n=16)	Relating designcommunication and design thinking in theory and in practice, starting from individual interpretation of given articles	Lack of interest for each other's individual works; Compromises in group work (dropping ideas); Finding group cohesion; Animated film on flow with 5 characters (impersonations of design, communication, thinking, designcommunication, and design thinking): http://bit.ly/2gossjc	DISCO2, 2017
Jan. 2018. Intensive week (before start of regular classes) (Marketing MA students of CUB) (n=19)	Communication vs. thinking: -> communication independent of culture and civilization -> changing / saving the life of a homeless person	Group couldn't wait for teachers leave them alone to work – Autonomous group; Strong emotional involvement of participants Initiative and film ("Pass on!"): http://bit.ly/2EAi38l	PASSON, 2018

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