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Adventure: expedition to Pragmatism and Inventivism in the design situation

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Figure 1 Two wildlife cameras and a clearing (image courtesy: Sander Mulder)

In this Conversation session we explored the two contrasting philosophical perspectives of Pragmatism and Inventivism. Pragmatism tends to focus on technical objects as fulfilling a purpose for mankind in a concrete situational context. In contrast, the French philosopher Gilbert Simondon introduces an Inventivist philosophical position in which technical objects a) have their own mode of being called technicity, b) are becoming more open, and c) should not be reduced to a purpose, as that hinders their co-emergence with mankind - a problematic position with regards to design. The Conversation took the form of exploring an imaginary design case revolving around using the technology of a wildlife camera to design for



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a dinner table setting. Two imaginary design teams were formed, each operating in a philosophical 'clearing' representing one of the perspectives. Moderators supported each team. Each team had a wildlife camera at their disposal to work with, which at the same time captured each session at selected points. Four participants joined the Conversation session, two per clearing. Halfway through the session the participants reflected intermediately and then one each swapped clearings. The last 10 minutes were spent on a joint reflection. This exploration indicates how the differences in philosophical positions play out when entering concrete design consideration.

Keywords: *Pragmatism, Inventivism, Design Philosophy, Design Situations*

1 Organising question(s) or provocation(s)

Designers work in a local and temporal context while at the same time contributing to a larger ongoing human project: our evolving relation with machines that become more open, indeterminate and sensitive to outside information – sophisticated machines. During this Conversation we wanted to draw attention to sophisticated machines that enter design situations in practice. How can designers engage with two contrasting perspectives on such machines: 1) Pragmatists aiming for adaptation of the machine towards purpose in a concrete situational context and 2) Inventivists exploring a machine to foster co-emergence, in which there is equality of mankind and machine?

2 The Conversation

2.1 Theoretical background

Before presenting the set-up of the Conversation, we need to clarify briefly the two contrasting theoretical perspectives with which we asked the participants to engage. For the sake of the Conversation the organising question is quite bold, especially with regards to the Pragmatist perspective. We lay aside for instance contemporary accounts such as speculative pragmatism explored by Debaise and Stengers (Debaise, 2005; Debaise & Stengers, 2017).

In Pragmatism a design situation boils down to the great Pragmatists' question: 'does it, with our additions, rise or fall in value? Are the additions worthy or unworthy?' (James, 1907, original emphasis). Such an evaluation towards decision-making is done from an individual and experiential perspective (cf. Melles, 2008, p. 89). 'Pragmatism holds to an instrumental account of ideas as plans of action that borrow their meanings from their practical real-world consequences.' (Melles, 2008, p. 88). The implications for humans' relation with technical objects is to accommodate the technical object's mode of existence towards human existence, making us either master/slave and reducing it to utility mainly.

The Inventivist perspective is speculative towards a design situation, boiling down to the question: How can humans and machines co-emerge in ways that neither could alone? The implication for the relation is that the technical object's own mode of existence and human existence have equality. Inventivism is a philosophical position inspired by the French philosopher Gilbert Simondon (1924-1989) and could be seen as incommensurable with Pragmatism. Simondon argued that technical objects have their own mode of being. This mode of being evolves as the Canadian philosopher Brian Massumi puts it 'through the network into a postindustrial "open object"' (De Boever et al., 2009, p. 38). A sophisticated machine 'harbors a certain margin of indeterminacy [and] this margin [...] allows the machine to be sensitive to outside information' (De Boever et al., 2009, p. 17). Simondon calls

this margin of indeterminacy "openness" or "technicity", an "ontological force" of technological apparatuses (Hoel & Van der Tuin, 2012).¹

2.2 Set-up of the session

2.2.1 Overview of the session

On this last, hot day of the conference, four delegates took part in a session to explore the effect of two (seemingly) incommensurable philosophical positions and how one can engage with them in a design situation. First the theory as described above was briefly explained, as shown in Table 1 (next page). The same information was also available to participants on instruction cards during their subsequent hands-on explorations, as shown in Table 2 (next page). Second, the imaginary design challenge was introduced:

- You are part of a household equipment design team for a manufacturer
- The challenge is to add to a dining table [domestic setting]
- To what extent can we use (parts of) a *wildlife* camera?

With this, we invited the participants to join one of two versions of an imaginary design team within a larger company. Both teams were assigned to improve an existing situation by exploring what the wildlife camera, a contemporary technical object, could add to a dinner table setting. No other boundaries were given.

The two versions of the teams were a 'Pragmatist' and an 'Inventivist' team. Each convened in their own 'clearing' to explore the design challenge for 20 minutes.² Professor Cees de Bont and Stella Boess moderated the 'Pragmatists clearing', while 'Simondonian' co-convenors Jonas Fritsch and Sander Mulder moderated the 'Inventivists Clearing'. After 35 minutes, the teams reflected briefly and from each team the two delegates swapped teams in order to engage with the other perspective. The teams explored and reflected for another 20 minutes. To wrap up we asked delegates to articulate how they engaged in each position. Did the changing of position provoke new and more distinct notions how to relate to design? The explorations and reflections were automatically captured on digital video by the wildlife cameras that were simultaneously the technology being used in the exploration (see point 2.2.3, below). The contributions were later transcribed. Extracts are presented and interpreted in section 2.3 Outcome of the session. An overview of the Conversation is shown in Table 1.

¹ This third ingredient was the account of both Ernst Cassirer (1974-1945) and Gilbert Simondon (De Boever et al., 2009).

² Clearing is used here as 'open space', a vantage point from which to consider the design situation

Table 1: Overview of the Conversation

	Opening		Round 1		Round 2		Closure
0	Welcome	15	Explore	45	Explore contrast	75	Plenary reflection and wrap-up
5	Intro	35	Capture	65	Capture		
			# people swap				

2.2.2 Introduction of the theory

At the start of the session, the theory from section 2.1 was introduced as shown in Table 2.

Table 2: Two contrasting perspectives in a design situation

Clearing		
	Pragmatists	Inventivists
Emphasis in presentation	Aiming for <i>utility</i> : How can my actions and experience guide me in decision-making about the machine?	Working with <i>indeterminacy</i> : How can humans and machines co- emerge in ways that neither could alone?
	Implications for relation [with the machine]: <i>accommodation</i> of the technical object's mode of existence towards human existence making us either master/slave	Implications for relation [with the machine]: <i>equalling</i> the technical object's own mode of existence with human existence

Instruction cards were handed out to support each team's exploration. Table 3 shows the content.

Table 3: Content of instruction cards with suggestions for moderators

Clearing		
	Pragmatists	Inventivists
Camera's role	The camera's role is to capture for humans.	The camera's role is not to capture but to complete humans.
	How could the camera capture for us what we, humans, cannot in the given context.	How could we, camera and human(s), capture what neither could alone in the given context?
Suggested approaches	Explore generative metaphors to discuss what the camera could add to the situation.	Explore verbs to imagine what we, camera and human(s), can do together Generate both transitive verbs (able to take sense or use a direct object, e.g. we see a donkey) and intransitive verbs (able to take no direct object e.g. look at the sky)
	Think of the camera in the context like 'watch dog' or 'Cupido's arrow'.	Explore analogies to imagine what we, camera and human(s), can do together. Generate both structural analogies resembling physical spatiality (e.g. camera resembles an eye) and operatory analogies that express processes (e.g. filtering). The latter 'cease[s] to objectify the real so as to set free the processes of genesis' (Barthélémy, 2012)

2.2.3 *The 'sophisticated machines' that were both input for the design situation and recording the sessions*

Two sophisticated wildlife cameras were brought to the situation. Each team explored what this state-of-the-art technology could do for the project. Figure 2 gives an impression of one such camera and a 'clearing': the vantage point of Pragmatism, from which to explore what the camera does and could do. The clearing is a table around which participants were seated, with an instruction card about the perspective. After informed consent of the participants, the moderators used the wildlife cameras to record the design situation parts of the Conversation.



Figure 2 The Pragmatist clearing with a camera (face down, so not filming at that moment) and an instruction card about the perspective [still from a normal video camera] (image courtesy: Stella Boess)

2.3 **Outcome of the session**

2.3.1 *How moderators steered the exploration in each perspective*

The Conversation resulted in some indications of how the differences in philosophical positions play out when entering concrete design consideration.

To make each perspective practically usable in the exploration, the moderators of each clearing started by reformulating the theory towards more spoken-word, practical questions. The moderator in the Pragmatist clearing asks how the device is going to help a specific user in a particular situation. The moderator in the Inventivist clearing conveyed the theory as an appreciation or invitation towards exploring new relations and experimentations. In line with their theoretical positions the moderators tried to foster or steer towards purpose or experimentation respectively. This also meant that the moderators tried to steer participants away from certain things: in the Pragmatist clearing, this was any closer inspection of the camera's capabilities that was not linked to a scenario of use, to a useful purpose:

Participant 3: "It was blinking. It only blinks for a bit and then yeah it is recording." (...) "(to see the result you have to) take out the card and play it. It is not supposed to play back to dears and bears."

(...) Moderator 1: "So coming back to the family situation. We already have a few things"...

In the Inventivist clearing, moderators sought to steer away from anthropomorphism (no quotes recorded) or exploring mere utility functions of the camera:

Moderator 3: "I really do like the idea of using technologies to develop new relations and new forms of experimentation and creativity at home also because [...] all smart home apps or applications are about convenience, so the house has to heat up 30 minutes before we come home, [...] and I think there is really much more to explore."

2.3.2 Idea explorations in each perspective

The ideas developed in the Pragmatist perspective were that the camera could support to deliver evidence in a lawsuit (e.g. a divorce), could be used as a teaching tool to train socially preferred habits (e.g. not turning your plate to cut) or as a means to change behaviour (e.g. to invoke healthy eating within a dispersed family by sharing footage of prepared dishes).

The ideas developed in the Inventivist perspective were that the camera could register choreographies at the table (e.g. alternate settings like eating alone, with friends, partying or being sad)

It turned out to be difficult to always determine how a 'subordinate' or an 'equal' relation could be defined. This played out particularly in the Inventivist clearing: the ideas ranged from purely experiential, revealing emotions, to very practical. Conversely, the Pragmatist clearing had less problems with variations in what they discussed: it always came back to a scenario and what the value in it was. In this, the Pragmatist clearing got quite enthusiastic about all the solutions they were developing, which almost made it seem as if these conflict and behaviour change problems were already solved.

2.3.3 The role of technology in each perspective

The relation with the camera is hardly reflected upon in the Pragmatist clearing and if it occurs the machine should help you in a particular situation. The Inventivist clearing showed multiple reflections on the relation with the camera a.o. how the camera could be helped.

2.3.4 The role of humans in each perspective

The scenarios that were explored seemed more normative in the Pragmatist clearing e.g. persuading towards learning, behaviour change or flourishing of a community. In contrast, the Inventivist clearing seemed to show two extremes: very practical or very experiential, very emotive. Put differently the Inventivist clearing seemed to give rise to more processual situations where you find your way through as you go along. Figure 3 (next page) shows a video still of a more experiential scenario performed during the Conversation reflection where a choreography of the hands at a dinner table is captured.

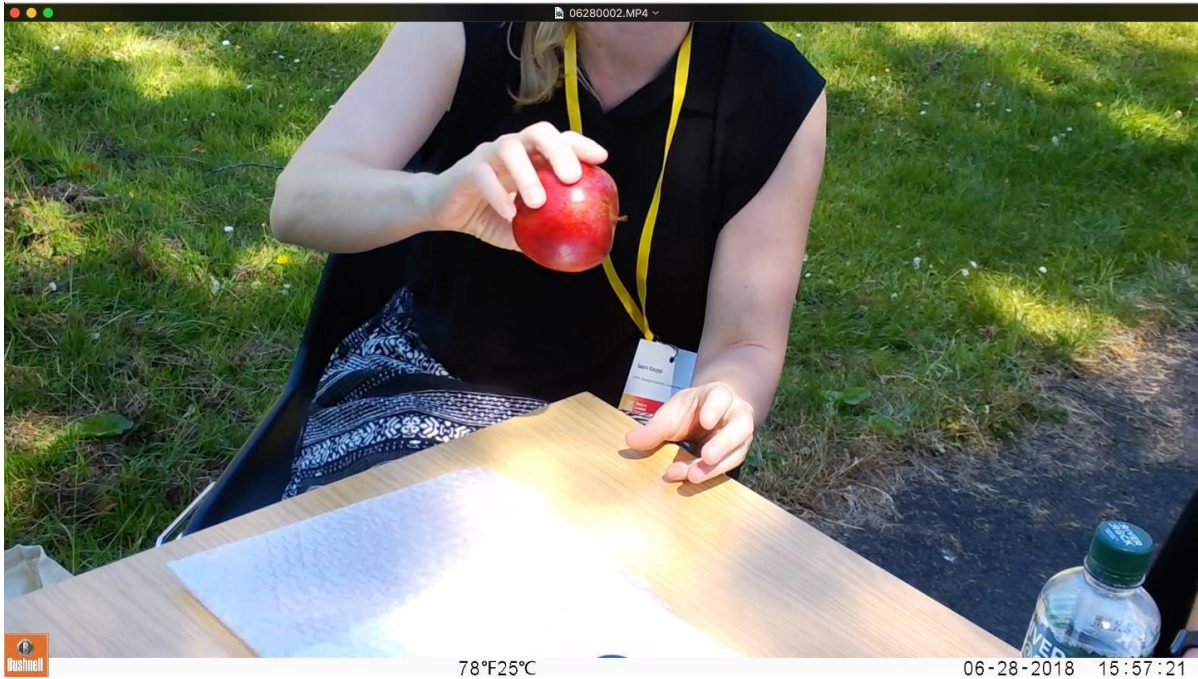


Figure 3 Inventivist clearing participant performing dinner table experience [video still] (image courtesy: Sander Mulder)

2.3.5 Insights from the role swap

The role swap further brought each perspective into relief. This came halfway through the exploration when both participants from each clearing switched sides.³ Each clearing briefly exchanged accounts with the new participants on what had been explored in the new and previous clearing so far.

The participant who switched from the Inventivist to the Pragmatist clearing noted later in reflection that coming to the Pragmatist clearing was an experience that felt less free, less creative, while the participant also acknowledged that it was valuable to explore usefulness in context.

The participant who switched from the Pragmatist to the Inventivist clearing noted later that coming to the Inventivist clearing was initially disorienting because it was more difficult to understand the focus of the discussion, and then came to acknowledge that, with some help from the moderators, that interesting experiences were being explored.

2.4 Discussion

Some concluding reflections pulled both perspectives together again indicating that it was possible to engage with both positions in a design situation each bringing different possibilities of a sophisticated machine to the fore.

It appeared that both pairs of participants could engage with both perspectives within a fictive design case. As co-convenor Jonas Fritsch reflected: '[...] it is just different ways of thinking about and exploring different kinds of design spaces and one can easily be transformed into the other so accentuating a space of possibilities in a sense.' This first exploration also gives some indications that there are differences. As a delegate said after switching from the Pragmatist to the Inventivist clearing: 'I felt like I was trying to appropriate a new kind of ethical view on the world' and another delegate reflected 'I felt that the first group [Inventivist] that I was in was more emotionally led'.

If one attempts to relate the outcomes to the design process and how the perspectives could inform real design teams, one could say that a constant focus on value and usefulness is likely to preclude

³ At this point in the session one delegate had to leave, so the Pragmatist clearing was continued with just one participant just coming from the Inventivist clearing.

many potential creative and sensitive ways that technology and humans could interact. It is a clearer and simpler perspective that is easier to articulate: the debate always comes back to value and usefulness, which also seem quite amenable to being transferred into business propositions.

The perspective of Inventivism, conversely, showed a deeper and more sensitive engagement with both technological possibility and human experience. Interestingly, the ideas in this clearing did not lead to any attempts at persuasion, rather engaging with complex human experience. When the participant joining the Pragmatist clearing was quizzed about the benefit of their previous Inventivist perspective, they said they thought of it as a 'performative art project'. Soon, however, this participant also started to see the potential of the Pragmatists' previous ideas for promoting behaviour change, for example in helping children learn to eat.

In conclusion, this initial and small exploration of perspectives through the Conversation format has brought these insights: the Pragmatist perspective makes goal finding and translation to notions of usefulness easier. But it potentially misses deeper layers that could lead to new ideas - in fact it seemed somewhat to suppress interest in these deeper layers. The Inventivist perspective, in turn, seems more difficult to integrate in the goal-setting and value perspective of many company contexts, yet ultimately yields new, unexpected and sensitive directions for design.

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