

Growing thickness as a research methodology

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Abstract

According to the Cambridge Academic Content Dictionary, 'thickness' is the distance between the opposite sides of something, as well as the quality of being thick. From the same dictionary, as an adjective, 'thick' also refers to the attribute of things growing close together, with little space between them and in large amounts. If an object is thick, it is difficult to see through it. These definitions look respectively at an object from the outside - recognising its opposite borders, and from the inside - appreciating the things populating the distance between those borders. Thickness consists of the opposite borders with the evolving entities growing within them simultaneously.

Therefore, discussing thickness implies dynamic zooming in and out. In the "Inquiries on Dropull's states of Liminality" workshop in Tirana, February 2019, the concept of thickness was appropriated to describe a desired state of liminality in several southern Albanian territories belonging to the Dropull region. At the workshop kick-off, the instructors highlighted liminal spaces as physical thresholds between the rural and the urban, and the teams were asked to work towards growing a thickness from such boundaries. In the following sections, I will describe the methodology enacted to grow thickness and I will draw an analogy with my PhD research project as it sits in a liminal space between disciplines that need to be scientifically positioned and defined.

Cross-sectioning boundaries

In his Manifesto of the Third Landscape Gilles Clément, defines the "third landscape" as "the sum of the space left over by man to landscape evolution – to nature alone. [...] This can be considered as the genetic reservoir of the planet, the space of the future" (Clément: 2004). He also defines the boundaries between the third landscape and human-inhabited landscape as particularly rich environments which most of the time contain much more species than the territories divided by them [Fig1]. Clément invites us to rethink linear boundaries as thickness and interstitial areas where different ecosystems meet and merge. Clément's thinking has been instrumental in the conceptual framing of the Tirana workshop.

As a methodology for the Tirana workshop, operative transversalities

and acupunctural interventions have been suggested in order to enable teams to elaborate customised urban design strategies for each assigned Albanian territory. Operative transversalities refer to the possibility of cross-sectioning a longitudinal territory, such as a Dropull village with its system of the countryside, mountains, rivers, residential and commercial areas, historical heritages, roads. Such cross-sections revealed the limits of each element in the system as transitional, unexploited boundaries which potentially could weave the physical and the social dimensions of the village.

Agopunctural interventions followed cross-sectioning and were meant as meaningful urban design artefacts to populate those boundaries. Therefore, workshop teams were encouraged to "cut & weave" by introducing urban acupunctures. Cross-sectioning is the

first action to be performed in order to zoom in into a system, look between the limits of two boundary objects in the system and design for the growth of the space in between those limits. Clement's boundaries thickness should result from the combined actions of cross-sectioning at the right spot, where more natural, artificial and social elements were contemporary present, and then of expanding the revealed borders into stand-alone areas. I believe that cross-sectioning could be a powerful conceptual tool to grow thickness between the most diverse domains and to enable dynamic exchanges among them.

Cross boundaries research as a counterpoint

As an analogy, I think of my PhD research project standing in a liminal space which needs to be scientifically positioned in between other disciplines. The topic of my PhD is about new social interactions enabled by an autonomous car. Even if it mostly belongs to the domain of interaction and service design, it touches diverse scientific domains such as Human-Computer Interaction, Anthropology, Engineering, just to list a few. In the design research field, my being in a state-less condition is not an isolated case. It has been a temporary high-entropy condition for many researchers which, as far as I see, was sorted out in two different ways. Some researchers came up with original manifestos and situated their work "at the border" within a particular discipline. This can be the case of Tim Brown (Brown, 2008) and Jane

Fulton Suri (Suri, 2001: 1278-1289) from IDEO and their human-centred approach beyond pure ergonomics that made a product design agency mutating into an innovation consultancy (Brown and Katz, 2011). Through their vision, the design objectives and methodology expanded and the design discipline itself evolved. In some other cases, researchers have hunted for new territories where their research questions could be grounded, diverse knowledge could be shared among different disciplines and research methods could be appropriated. This is the case of the Design Anthropology discipline, which, according to Otto and Smith, is "[...] a style of knowledge production and practical intervention that straddles two separate knowledge traditions with markedly different objectives, epistemic assumptions, and methods" (Otto and Smith, 2013: 1-29). In the following paragraphs, I will dig into the constituents of Design Anthropology to understand how such territory has emerged.

First of all, we need to clearly acknowledge that Design Anthropology is not the anthropology of design, and so the design is not the object of analysis. Design and anthropology merged into a new discipline in such a way that design embraced a way of thinking other than setting determinate ends in advance, and anthropology expanded beyond the analysis of what has already come to pass [6]. The entropy of design and anthropology merging at their borders enabled a system of transformation in which design strives for an open-ended

process and results, being suited to the improvisatory nature of the everyday human life, while anthropology embraces speculative inquiries into possible human futures. Some anthropologists define Design Anthropology as anthropology by means of design (Otto and Smith, 2013: 1-29), and from a designer perspective, which I embody, this can be considered symmetric: Design Anthropology as design by means of anthropology. The key point is that at the boundaries both disciplines rethought each other and came up with a common agenda which turned the distance between the two origin borders thicker and thicker. Gatt and Ingold (Gatt and Ingold, 2013: 139-158) introduced the concept of correspondence as instrumental to this mutual rethinking of the two disciplines which led to the emersion of the new Territory of Design Anthropology. According to their thinking, correspondence is the opposite of facing each other and can be described as the movement of proceeding forward together, sharing the same visual field. It can be assimilated to the action of walking abreast (Lee and Ingold, 2013: 67) or to the action of making music together as a band or a chamber group (Schütz, 1951: 76-97). This kind of interaction implies that all actors move towards the same direction and that they stop very rarely to turn to face one another. Eye-to-eye contact, even if it induces a perfect union between the involved persons in a specific moment, is motionless. Correspondence, instead, allows all parties to move and "[...] wrap around each other like melodies in counterpoint." (Gatt and Ingold, 2013: 139-158). According to Gatt and Ingold, Design Anthropology as a discipline is a correspondence between two parties, design and anthropology, which converse and answer each other like in a counterpointed piece of music. Design and anthropology set up a new territory not to describe each other, but to answer to each other by their own means. Only by looking at the score of a counterpointed music, everybody can recognise that all parties play together [Fig2] and answer to each other, for example by exchanging music themes as in a Bach's Fugue [Fig3].

As stated by Fux and Mann [9], the study of counterpoint might be compared to the study of perspective (Fux and Mann, 1971). Both were important in Renaissance art and both reflect the rise of three-dimensional thought. Instead of merely aggregating parts in a two-dimensional approach, counterpoint conceives its composition by its depth, its

thickness. The word counterpoint comes from the Latin *punctus contra punctum*, which means note against note, as shown in Fig3. Counterpoint compositions are polyphonic music pieces with two or more voices. Its simplest expression is based on a main melody (*cantus firmus*) and its tones, above which, one or more additional voices are set so that to every tone of the *cantus firmus* is added a consonant tone in the other voice/s (Fux and Mann, 1971) (Schönberg and Stein, 1982). As Schönberg states "the only rules demanding the interdependence of contrapuntal voices are these: that the voices should meet at certain points incomprehensible harmonies, and that together they should distinctly express the tonality. Otherwise, they should be as independent as possible. [...] Independence is reduced if they meet too often in primes or octaves [intervals]" (Schönberg and Stein, 1982). If voices are not different enough when they meet, counterpoint is not effective. Harmonies can be read vertically, as a cut through the score, a cross-section of the voices playing together in a particular moment. Harmonies express the tonality of a particular music piece, its own identity. They should not be numerous; otherwise music become monotonous and movement slows down. The maximum expressions of counterpoint are Bach's Fugues. Bach genius is shown by his way of keeping the voices moving forward, without rarely stopping them into harmonies, yet letting them incidentally converging into meaningful harmonies to promptly leave the spot and continue the musical movements as a variation of the theme. Counterpoint teaches us how different voices can independently progress and at the same time dialogue in a dynamic way; how from time to time they come together into meaningful harmonies; how the same voices quickly move out from still harmonies and proceed their movements as evolved and enriched entities. Coming back to Design Anthropology, where the concept of counterpoint was introduced in this paper, it has been growing into a cross boundaries discipline thanks to its contrapuntal structure between Design and Anthropology. Drawing from the analysis of Design Anthropology and counterpoint, the aim of this paper is to define my PhD methodology as a counterpointed research.

Iteration of my research methodology through counterpoint

My initial PhD methodology has been defined as a people-centred design process departing from two initial design



Fig1. Saint Nazaire garden by Gilles Clément.
Source / <https://www.area-arch.it/en/jardins-du-tiers-paysage/>

concepts, where no contributing discipline was visualized [Fig4]. The process unfolds through fieldwork, being synthesized into insights and opportunity areas, concept generation through brainstorming, co-creation and prototyping. The process is iterative and thus one can go through the steps "as needed" (Ideo, 2011). In order to inform my project with knowledge from neighbouring disciplines, I started to iterate my methodology. I stepped back from my people-centred design process and I started wandering on the boundaries of several different scientific territories which were already researching on autonomous driving and people interactions, such as: Human-Computer Interaction (HCI), Design Anthropology, User Experience (UX), Philosophy of Mind, Urbanism. Moreover, for each discipline, I pointed out particular research groups as my privileged speakers. Still, in such bi-dimensional representation, those disciplines and my process just face each other and do not converse [Fig5].

Then, I introduced counterpointing as the following operation. I managed to layer the neighbouring disciplines on top of my process and eventually enabled a conversation among my own research and theirs. The iterated research methodology pictures several scientific voices proceeding in parallel and meeting at particular points as temporary harmonies [Fig6]. Meaningful meetings in-between the borders of the different disciplines

have consisted so far of a number of ongoing activities I have undertaken, such as visiting periods, workshops, co-authoring papers, inviting researchers from different disciplines to participate in my fieldwork or prototyping sessions.

Each activity populates the distance between the opposite sides of our respective disciplines and is represented as a cut through the scientific voices. In such a process, my PhD research results to be scientifically positioned at the boundary space of different disciplines, and to be growing thickness as long as me together with others meet to speculate on new little pieces of knowledge that do not belong specifically to any restricted discipline.

Conclusion and next steps

The counterpoint approach has allowed my work to be recognised by the neighbouring disciplines as well as retained its own design-research autonomy. Moreover, the harmonies created with cross-sectioned disciplines have revealed all those pieces of knowledge that remain mainly tacit in design practise and design research (Schön, 1992: 3-14). Building on what Schön defined as designers' knowledge in action, according to which designers know more than what they explicitly are able to describe, the counterpoint approach has enabled the other disciplines to define and position the knowledge produced through my work. This is so far evident in my PhD



Fig2. / Some extracted bars from Canzon Seconda, by Giovanni Gabrieli (1557- 1617). In the dashed square, everyone can appreciate that the four parties play exactly together. The red lines highlight some possible cross-sections which create harmonies.

Source / [https://imslp.org/wiki/Canzon_II_a_4%2C_Ch.187_\(Gabrieli%2C_Giovanni\)](https://imslp.org/wiki/Canzon_II_a_4%2C_Ch.187_(Gabrieli%2C_Giovanni))

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Fuga IV

(a 5 Parti)



Fig3. / Some extracted bars from the Fugue No. 4 in C-Sharp Minor, BWV 849, 5 parties. (The Well-Tempered Clavier, Book 1). Everyone can appreciate the theme, highlighted, which get exchanged by the parties answering each other and proceeding forward all together.

Source / [https://imslp.org/wiki/Das_wohltemperierte_Klavier_I,_BWV_846-869_\(Bach,_Johann_Sebastian\)](https://imslp.org/wiki/Das_wohltemperierte_Klavier_I,_BWV_846-869_(Bach,_Johann_Sebastian))

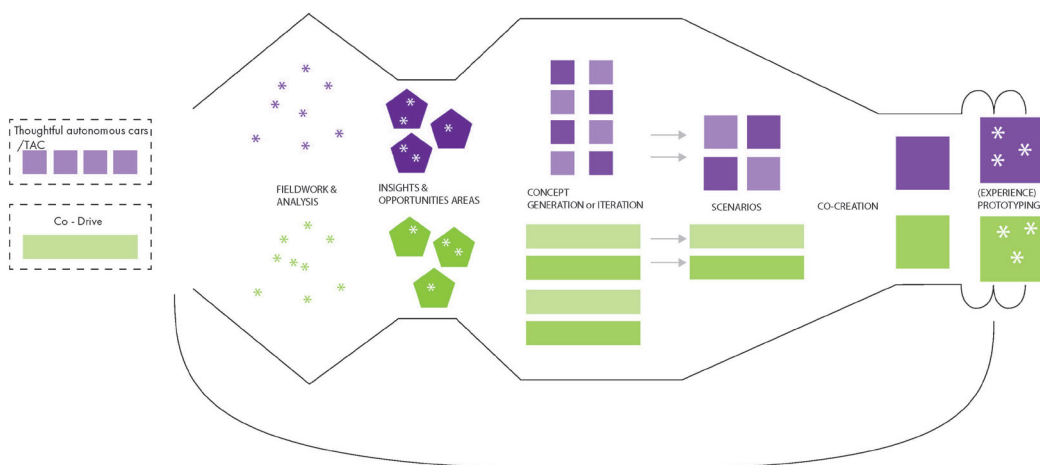


Fig4. / The initial people-centred design process for my PhD research, where no contributing disciplines are visualised. Source / the author.

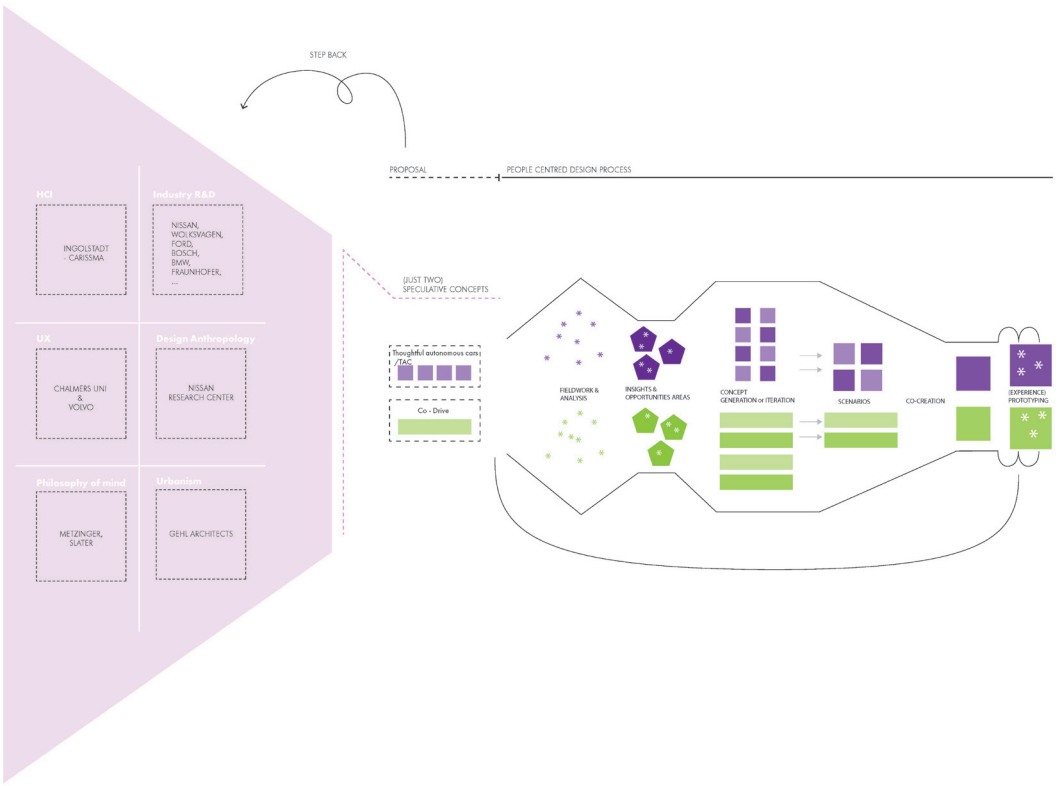


Fig5. / Stepping back and introducing contributing disciplines as an iteration of my research methodology. Source / the author

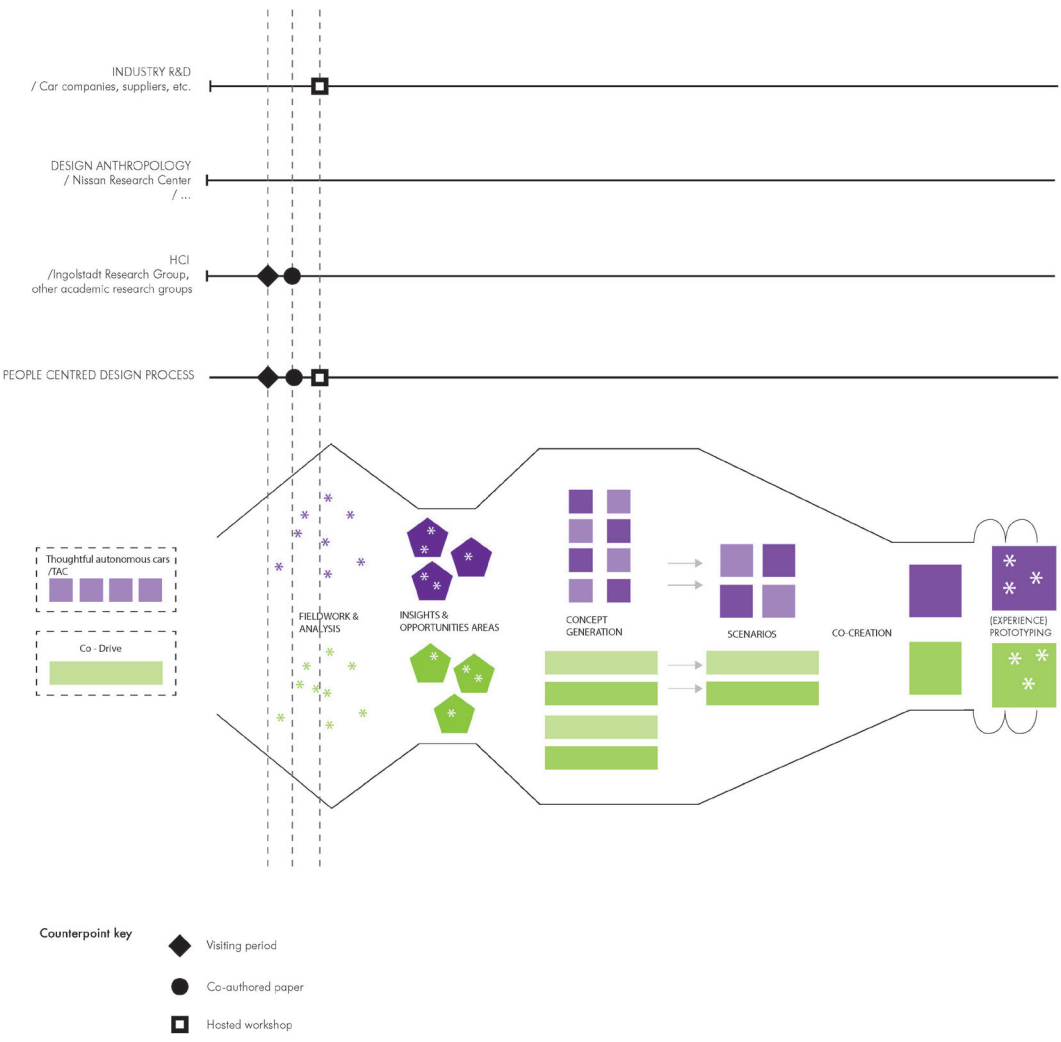


Fig6. / Different approaches and disciplines are laid down as in a music score, allowing counterpoint. Cross sectioning reveal harmonies (through a vertical cut) which stand as achievements accomplished while the disciplines/approaches merged. Source / the author.

research through the collaboration with researchers from the HCI community in co-authoring papers: while my contribution focuses mainly to arguments, design concepts and the decisions leading to them, their contribution is to frame such original content within established scientific theories and to support it with relevant literature.

As the next step of my PhD work, I aim to differentiate further the way I populate the distance between my design process and the other disciplines by the introduction of new counterpoint keys, as I defined them in Fig6. A couple of potential new ones could be:

- the "hosted experiment", which would consist of the collaboration with external research labs to design and run experiments on my design concepts. A "hosted experiment" would aim to probe specific HCI or social science-related research questions raising from my design work;
- the "technology appropriation", which would consist in making use of pieces of technologies developed by other research labs in my prototypes.

The placement of new counterpoint keys would suit the design phases of the concept generation and co-creation which will be unfolding in the second year of my PhD research, so to keep growing thickness as the design research process interweaves with other different disciplines and research domains.

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