*ethnography*

- *design study*
- *actor-network theory*
- *agency*
- *modes of existence*

# **I, T.T. Stands.** Two Days in the Life of an Object in the Making

**Pauline Lefebvre**

*Abstract*
What does it take to describe the design of an object from the point of view of the object itself? What are the implications of writing on its behalf, in the first person and in the active voice? Through the partial and biased description of a single scene of observation, this paper explores the way ethnographies of architecture and their accompanying theories, such as the actor-network theory, are able to widen our conceptions of the design participants' agency. Undertaken as a writing experiment, the chosen mode of description aims at expanding our ability – as observer and as designer – to account for, and work with, multiple gradients of existence. By amplifying and specifying the various ways in which the object-in-the-making is participating in the design decisions, the text does not only push the limits of our usual accounts of design, it also insists on the active attention that all participants of the design process, human and non human, require.

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**1 - I use pseudonyms in the text in order to maintain the anonymity of both the individuals and the firm.**

*Introduction: a writing experiment*

*DAY 1, 9AM. "Final Turntable Anglers". First thing this morning, Ron*[1] *scribbled me down on a blue post-it in tiny letters only he can read* (Fig. 1)*. Well, my name is TT Stands – for Turntable Stands – but my designers keep giving me many nicknames: Tilted Supports, Anglers, and others. No matter what I am called today, I will silently stay here, black ink on paper under Ron's eyes. As a bullet point, my specialty is to remind and urge him to refine my design, and wait for my time to come.*

These are the first lines of a chronicle written from the point of view of an object as it is being designed – a pair of turntable stands – and all of the various artifacts that stand for it in the course of its design. I encountered this item during a full-time participant observation at a design firm in New York, conducted over a period of seven months. In December 2016, I chose to focus entirely on the last phase of the design and fabrication of a record store interior. This paper draws on a fragment of this fieldwork: two

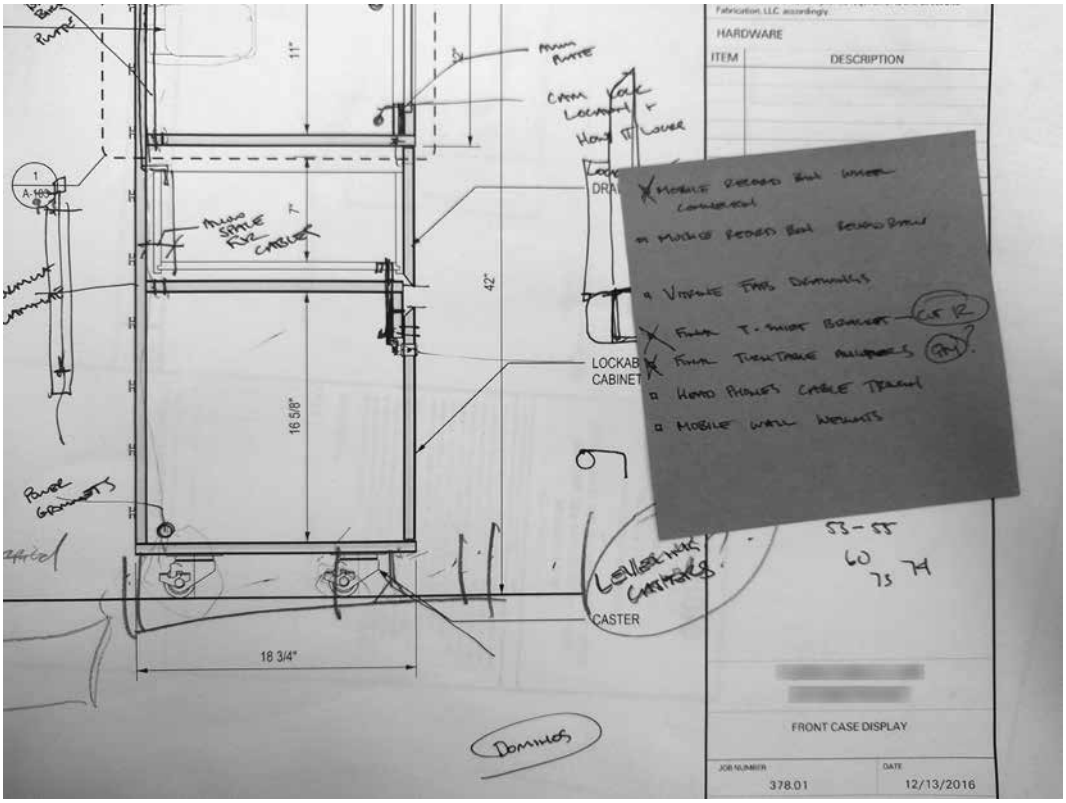


Fig. 1 - "Final Turntable Anglers" on a post-it on Ron's desk.

days of direct observation, and the report of a previously held meeting, during which the design of the turntable stands was finalized. At first, my research method was to follow the designer in charge, but I ended up tracking mostly the object he was working on. The notes I was taking – and the story I am writing here – revolve around the fate and deeds of this "work to be done" (Souriau, 2009) and its different instances, rather than the designer's actions and intentions, or the firm's organization and context. I made these methodological choices to expand on previous ethnographic descriptions of architectural practice.

In the last two decades, an increasing number of researchers have 'ethnographically' approached the practice of architecture, focusing on the designers' activities in the studio, rather than on stabilized discourses or productions (Cuff, 1991; Yaneva, 2009a; Houdart, 2009; Camus, 2016). Some of this research is explicitly aimed at applying the actor-network theory, first developed in the study of science and technology, to the field of architecture (Callon, 1996; Latour and Yaneva, 2008). This body of work has contributed to producing more symmetrical accounts of architectural practice, depicting the design process as an entangled web of actors, human as well as non-human, who all count insofar as they are concerned and active, and cannot be *a priori* dismissed or relegated because of their supposedly less social (mere material) nature and less articulate (mere mute) abilities.

As early as 1996, Michel Callon called for considering design, not as a cognitive capacity of the designers, but as a distributed process, a negotiation with many intermediaries, among which the design objects (models, plans, etc.) play a central role. He was pleading for studies of design that would give importance, even an ontological weight, to all iterations of the building in the making. They could contribute to defining architecture as a practice that "assembles heterogeneous materials and constraints, to make them hold together" (Callon, 1996, p. 32). The ethnographic studies of architecture that were conducted in the following decade insisted on how buildings are not projected from the architect's mind onto matter, but rather are careful and ever-evolving assemblages of multiple entities (material as well as semiotic), whose trajectories the ethnographer can follow. Studying architecture

in the making within and outside of the firm, ethnographers such as Albena Yaneva and Sophie Houdart meticulously depicted how architects and other actors of the design process gain knowledge and progressively–far from linearly–bring the building-to-be into existence, by producing, modifying, manipulating design artifacts such as foam models (Yaneva, 2009b) or perspective views (Houdart, 2010). Yaneva proposes to consider "the *trajectorial* nature of design" (Yaneva, 2009b, p. 28), as an alternative to the notion of project, which is most often used to describe the process that goes from an idea to its realization in architecture. By following the actual trajectories of the foam models during her observations at the OMA, Yaneva departs from the notion of creativity based on invention, or on the projection of original ideas onto matter, to resituate all decisions in the making and transformation of these artifacts. Yaneva also starts to account for the exchanges between the architects and their models in terms that redistribute the agency in the scene. She describes the active role played by the foam, how it "can begin to dominate" and how "the 'knowing architect' loses mastery" (p. 58). She depicts the design process as one of "questioning [the building-in-the-making] and responding to its demands and profound appeals" (pp. 60-61). She accounts for the influence and actions of the work-to-be-done on the designer in charge. She shows how "architects from the OMA act in a meaningful foam environment that can *talk back* to them and can *act upon* them" (p. 62, my emphasis).

My proposition here is to amplify the active role of the object-in-the-making even more, by recounting the events observed from the point of view of the object.

My proposition here is to expand on these conclusions. I propose to amplify the active role of the object-in-the-making even more, by recounting the events observed from the point of view of the object. The usual way to account for a design process such as the one described here would be to explain how the designers progressively stabilize the shape of the object they are designing through successive meetings, feedback from the clients, and their work on the computer and in the shop. Instead, I turn the object into the main character and actor. I write its story in the first person, using the literary technique known as prosopopoeia, which allows speaking on behalf of inanimate and voiceless entities. This technique has been used extensively in fiction or poetry, and it has been adopted in ethnographic accounts as well,

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starting with Latour giving voice to the never-realized train system Aramis (Latour, 1996) and reiterated since with various other entities (Laumonier, 2013; Chau, 2013; Thoreau, Grosman, 2018; Ghyoot, n.d.).
My aim is to discuss what this experiment requires and what its benefits and limits are for describing architecture. How does it tackle our capacities to acknowledge and take into account the active role of objects in design practice?
This text thus results from careful observation and speculative description. As such, it is a partial (Haraway, 1988) ethnographic contribution: it is a precise and accurate depiction of a very specific situation (a few days in the life of one object in the making), and as such has no pretention to provide a comprehensive understanding of architecture as a domain, or to generalize on design as a specific set of knowledge and skills (Lawson, 1980). This ethnography investigates more the second part of the word ('-graphy') than the first ('ethno-'). It uses the tools of writing to explore and emphasize the differences that certain accounts of the design process can make.
The idea is to experience what kinds of actions a narrator such as TT Stands can possibly claim. Turning the 'object in the making' into the main protagonist *and* narrator comes with many challenges.
The narration will be divided in three sections and, for each, I will address a series of practical – almost grammatical – issues raised and put to work in the course of writing in the first person: the voice (active vs. passive) and the vocabulary (choice of the verbs); but also the number (from I to We) and the tense (a 'thick' present). Dealing with these difficulties head-on provides the occasion to draw broader conclusions regarding the object-in-the-making's agency and varying modes of existence.

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*Episode 1: writing in the active voice, stretching the object's agency*
*TWO MONTHS EARLIER. The "Mockup Meeting" is taking place in the designers' shop. For this presentation to the clients, I stand at full scale on a mock-up of the shelving system designed for the store selling the valuable turntables I am to display* (Fig. 2). *Standing there, I invite them all to look at my shape from different angles, to weigh me, manipulate me and move me around.*

Fig. 2 - Mock-up staged for the Mock-up Meeting.

Fig. 3 - Photo sent by the client to the designers.

*Most importantly, I encourage them to test how I fulfill my purpose. Unfortunately, the clients have come with a lot of items to display, but no turntables. To make up for that, I manage to invite myself over to their current store after the meeting.*
*There, I try to support a turntable and let them know how I behave. Well, not so convincingly at first. I am too thin and too light with my single layer of birch plywood: I cannot stand still, keep my two pieces parallel to each other, and avoid tilting backward under the weight… I am about to fail. Nonetheless, the day ends up being very productive. Standing in the existing store, surrounded by the various items sold there, I make clear that I can also display other objects, like little plastic synths for instance. But, with a smaller item on, the length of my stem becomes plain and I suddenly appear oversized… or rather underused:*
*I have the potential to carry not just one, but two of these objects. I start suggesting the addition of a second level of display. The clients understand this and go to get two tacks, which I welcome through my fibers under the pressure of their hammer. With these tacks on, I double my ability to exhibit items* (Fig. 3).
*However, when I travel back to my designers as a photograph attached to an email, I manifest both the success of the collaborative effort – the cleverness of the solution – and its present inelegance. I, TT Stands, am a simple profile cut in one piece from a birch plywood sheet on the table of the CNC mill. I serve my purpose only thanks to my tilted T-shape. With tacks on, I become too complicated. Drilling in my vertical stem and inserting these dowels does not only add*

*steps to my fabrication process (and eventually dollars to my cost), I also look awkward within the shelving system to which I belong, next to my fellow elements (Brackets, Hooks, etc.) In Ron's mailbox, I bring up all these issues. Together, at the computer and in the shop, we need to work on another solution. I compel Ron to note me down on his general to do list. From there, I will be waiting for our work to begin.*

As the one recounting the facts, TT Stands is not only the main actor of the story, in lieu of the designer who usually holds that position. TT Stands is also the reporter, a role that I could have played in my capacity as observer and author. Writing in its name, and telling its story in the first person, is a privilege granted by the literary device of prosopopoeia. However, this authorization remains delicate. The first challenge is to avoid projecting all kinds of human reactions on TT Stands. Despite the literary trick, the task is to remain as close as possible to the empirical observations, which of course do not attest to any thoughts, feelings or other anthropomorphic abilities on the part of TT Stands. The temptation is strong, but it would be counter-productive, as the aim of the experiment is to access the object's own agency.

Despite the literary trick, the task is to remain as close as possible to the empirical observations, which of course do not attest to any thoughts, feelings or other anthropomorphic abilities .

Yet, the operation is also about *stretching* that agency, and to look into its specific features. Some grammatical artifices are therefore required, following the idea that the text can be "all the more accurate *because* [it is] artificial" and therefore "full of artifacts" (Latour, 2005, p. 124). To explore TT Stands' possible modes of action, I force the passage from its status of (passive) object in a sentence where the designer is the (active) subject ("Ron scribbled me down") – which is a more usual way to account for such situations – to being the subject in as many sentences as possible: "I, TT Stands…". Hereafter, it is still tempting to use the passive voice ("I am called…"), but this would maintain the grammatical subject "I" as the object of its designers' activities and projections. To convey the role that TT Stands plays in the situation under scrutiny, I try to conjugate the verbs in the active voice instead ("I urge", "I convince"…). Only then can the intricate exploration of TT Stands' own agency start.

The main task is then to select the verbs that might account for TT Stands' actual activity in each of the

situations described. It is from this delicate selection that one learns about various ways in which the object *participates* in its own design: what does it do? What is it capable of? On the to-do list, TT Stands acts as a reminder: it *schedules*, *waits*, *urges*, *insists*, *calls for attention*... The mock-up that preceded *participates* in meetings, *stands*, *carries*, *displays*, *supports*, *tilts*, *exhibits*... The photo *shows*, *brings up issues*, etc. Some of these abilities could be summarized with the notion of "affordance" (Gibson, 1986). But to stretch TT Stands' activity even further, I rather use the notion of 'agency'. It refers to an ability to act upon, which is beyond absolute active and passive voices, a "faire faire" (or 'making do') (Latour, 1999) which is shared with human participants as well (they all make each other do things). Therefore, it cannot be detached from the "agencement" in which they affect each other (Despret, 2013).

In this respect, the operation of writing in the first person and in the active voice presents a major risk, that of recreating a unique and unilateral center of action, instead of generating a more distributed network of attachments: the object rather than the designer, but a single active center anyway. Other grammatical experiments could have been conducted, such as generalizing the passive voice to all the actors, to insist on their interdependency. Or, we could have stuck to a more classical ethnographic description, where the observer is the narrator and accounts for the actions and reactions in ways that can be more symmetrical. However, the pitfall of the writing technique adopted here goes hand in hand with its main benefit, which is to push the activation of the object to its limits, for the sake of the experimentation. This effort has indeed the virtue that it *provisionally reverses the asymmetry* between human and non-human agency. Eventually, the aim is to reestablish a balance – to make room for the "many metaphysical shades between full causality and sheer inexistence" (Latour, 2005, p. 72). However, this first requires shaking our habitual descriptions relying on human intentionality, creativity and domination. Those are still commonplace, as attest the efforts deployed in the course of writing this piece.

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*Episode 2: tracking the transformations, accounting for trajectories*

*DAY 1, 11AM. Lying on my post-it this morning, I am silently reminding Ron that he needs to follow up on the decisions reached at the last meeting. I finally catch his attention, and bring him to search for me in the drawing set in which I sit as traits printed out on paper. There, I am not just a scribbled instruction; I am a scaled drawing, indicating with precision my current contours and size. But, since the episode at the store, I have become an old version. I am now less a plan than a template, helping Ron to redesign my exact profile, as my traits quickly transfer to a piece of tracing paper superimposed on me* (Fig. 4). *From under, I guide Ron's hand and square along and parallel to my lines, so that my new sketch maintains my original geometry, while my vertical stem gains a notch. This indentation replaces the tacks or dowels and allows for a second level of display.*

*I am now ready to reintegrate my original milieu: the infinite grey workspace of the CAD software. There, once again, I emerge from the slight transformation of an outdated version of myself. This time, I duplicate nearby and, an 'explode', 'divide', 'line', 'fillet', and 'join' later, here I am: the latest refined digital model of TT Stands. So far, I am only a profile but, an 'extrude curve' later, I regain some thickness. I duplicate again, right next to myself in the Y-axis: I require two layers of birch plywood in order to resist the weight of a turntable.*

*On the infinite grey surface, I coexist with all former versions of myself* (Fig. 5). *This organized chaos is an archive of my successive transformations* (Fig. 6). *To distinguish myself as the latest version, I need to sit in a specific frame: the layout from which I will transfer to the printer. This morning, two of us share this space: 70 Degree Angle and 45 Degree Angle, also known as "the steep" and "the moderate". We both come out of the printer, laid out on our page of the drawing set. But only one of us, 70 Degree Angle, goes on to the other journey from the digital grey space to the CNC mill. For that trip, I duplicate again and migrate into another rectangle, where I multiply until four of us fit top to tail so we occupy the smallest portion of the surface* (Fig. 7). *In this tight position, we start to travel down to the shop. The rectangle goes into a specific file and folder. Then comes the moment of the queue. We squeeze*

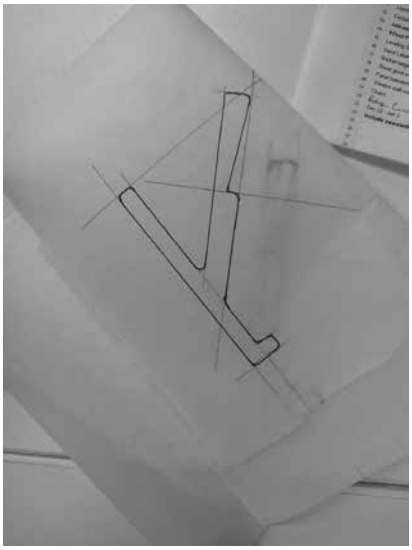


Fig. 4 - New sketch on tracing paper.

Fig. 5 - Portion of the Rhino workspace.

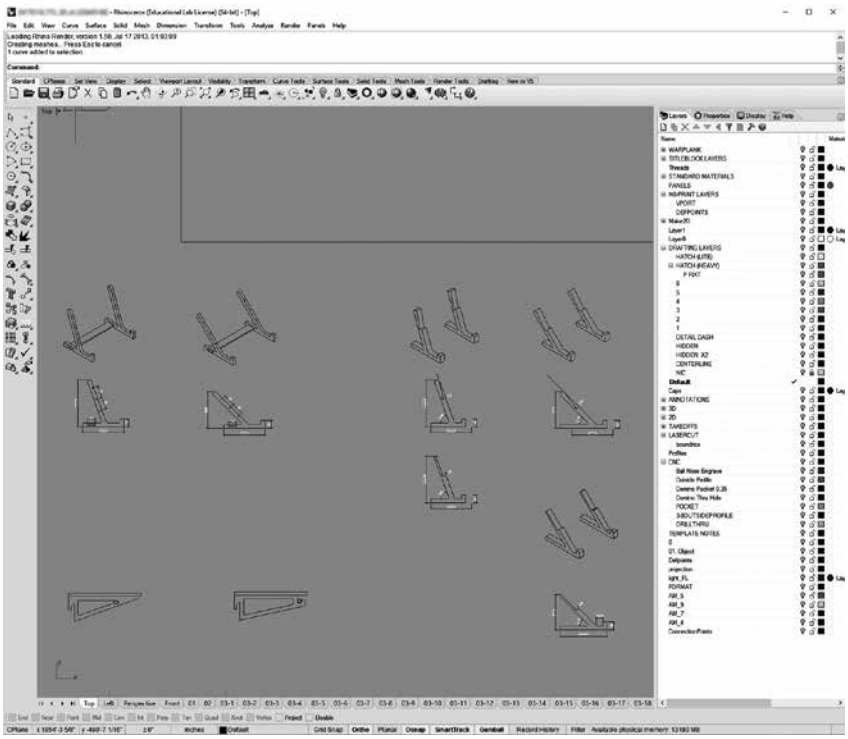
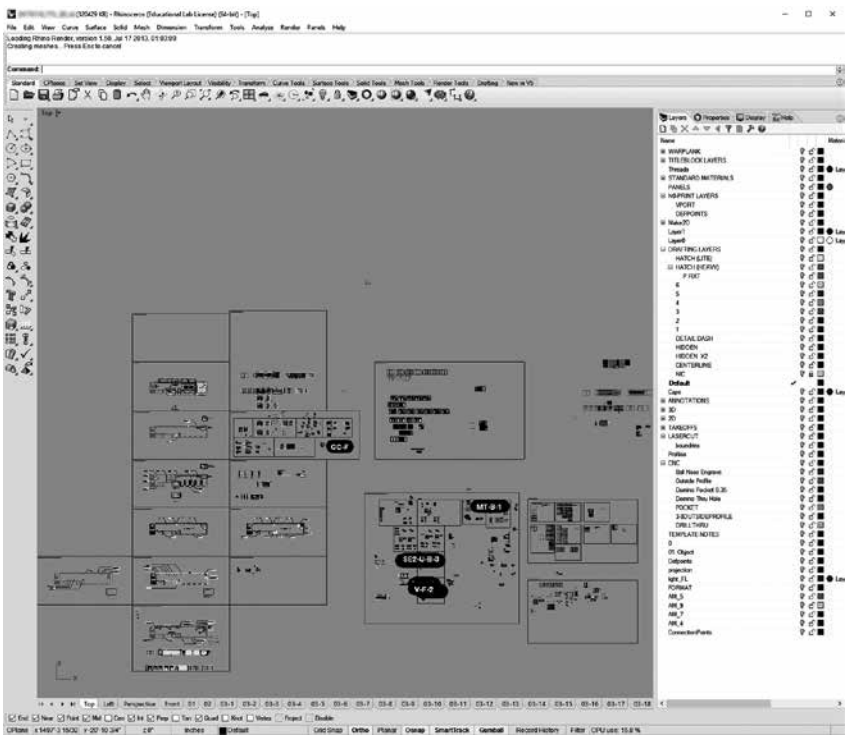


Fig. 6 - Ron's "organized chaos" (Rhino workspace).



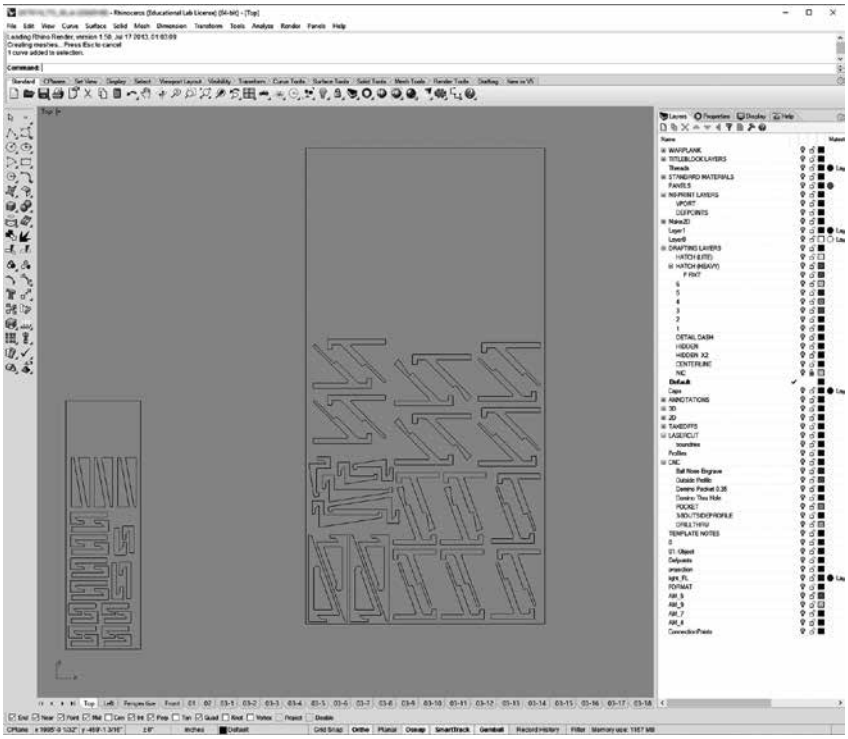


Fig. 7 - Rhino model of the cuts to be made in a sheet of plywood.

*into one line of a spreadsheet, and wait* (Fig. 8). *When it is our turn, we transform into a collection of numerical values, map a path for the CNC Mill downstairs, and animate its arm, until every one of our four occurrences appear as straight cuts in the sheet of plywood.*
*All my pieces finally detach themselves from the sheet under the Operator's fingers. There are four of us because we work as a pair, with two layers each, glued*

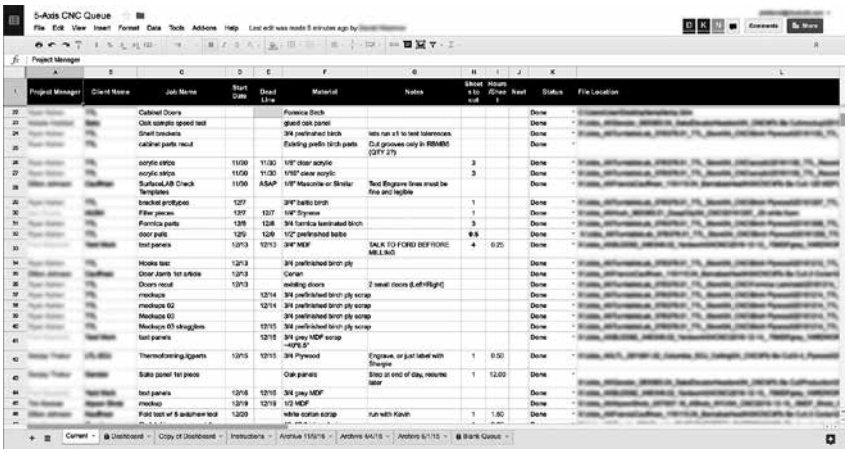


Fig. 8 - Spreadsheet of the CNC-mill jobs.

*and nailed together. My layers are not perfectly similar and the irregular touch of my rounded edges compels Ron to sand them until I feel smoother. We need to look good for the internal discussion that is about to take place, to increase our chances to convince the Partner. The same is true of the setting in which I exhibit my new shape: I take place on a mock-up of the shelving system, which has been waiting at the back of the shop since the last meeting* (Fig. 9).
*Two older mock-ups are already there. Standing next to me, their proud, straight and untouched stems appear sharper than mine; they make the indentation in my stem look clumsy. As soon as the Partner and the Project Manager arrive, I show my notch and, together with my previous versions, clearly exhibit the non-parallel edges of my stem. Quickly, I turn into a template again, so that the Partner can place me against a piece of paper on the wall* (Fig. 10). *There, I guide his pencil along my edges to draw my contour. I am traces of graphite again. But, this time, I make him follow my lines more strictly and carve my notch parallel to my main vertical axis. This is much*

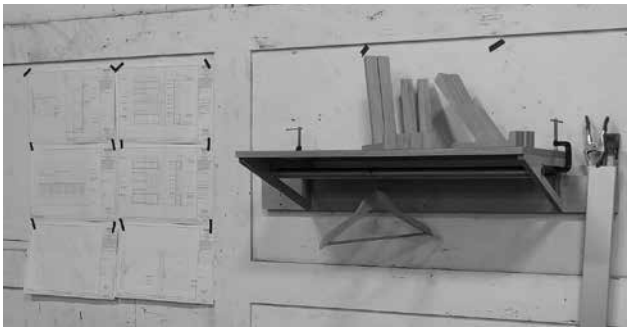


Fig. 9 - Mock-up and drawing set staged for the Internal Meeting.

Fig. 10 - The partner refining the design during the Internal Meeting.

*more satisfying. However, my stem on the mock-up still raises one last question: at the moment, it presents a notch in the middle of its height, but this notch could slide up or down. My straight edge does not a priori dictate any solution to this problem; I am open to more than one option. At that precise moment, my existence is branching even more: there is not just 45 Degree Angle, which I left behind on the computer; we are both about to split into Lower and Higher Notch… As I let myself be modeled and cut very easily, I will have Ron take me along this fast journey from sketch to mock-up once again, so I can exhibit all of these options.*

This second episode confirms what the first one had started to show: TT Stands does not act the same as a line on a post-it on its designer's desk, as a mock-up carefully staged among other items for a meeting, or as an axon in a drawing set. Its agency varies, depending not only on the many different forms it takes (words, lines, scaled drawing, virtual model, numbers, codes, mock-up…) and materials it is made of (graphite, ink, bites, plywood…), but also on the circumstances under which it exists (by what it is surrounded, of what assemblage it is part). Narrating the design process of this object in the first person and in the active voice imposes a careful exploration of what constitutes the "I" at each instant, and how it acts in ever-particular and situated ways.
Among the many verbs used to report what TT Stands is doing, many are those that attest to its capacity of *exhibiting* certain features (its geometry, its resistance to weight, its functionality) and of setting people in action (*making them do*). In particular, more than once, they document its ability to *guide* the designer towards its transformation, while assuring a certain degree of continuity (when the plan and later the mock-up itself serve as templates to sketch a new version; when the sketch is copied on the computer to be refined; or when the model turns into a code able to animate the CNC-mill). However, this requisite of 'continuity' does not exceed TT Stands' concrete agency and it is therefore ever local and provisional. Most crucially, this observation should not lead to the conclusion that TT Stands' existence rests on this continuity, rather than on the various concrete forms it takes along its trajectory. Making TT Stands into the protagonist and narrator is intended to focus on what

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it *does*, rather than what it *is*. Yet, the experiment continually raises the question: who or what is this "I" calling itself TT Stands at every step of a process where no objects or ideas remain stable?
Despite its speculative aspects, this text remains as close as possible to the observations. The focus is on the forms and materials with which the designers (including the end-users) concretely interact. The text empirically describes what these "designerly objects" (Houlstan-Hasaerts, Laki 2015) undergo, what they do, and how they transform. The protagonist of the story, TT Stands, *is* the ink on the post-it or in the drawing set, the line of command to the CNC mill, the piece of birch plywood, etc. TT Stands is not an idea or an intention going from the head of the designer to his fingers; nor does it flow untouched through all these materials.
If TT Stands is to exist as the final design or object, it is through the collective efforts of all these instances.
As the story is written in the present tense, the "I" is what it concretely, presently does, *at each instant* of the process. TT Stands *sits* on the desk, on the screen, *navigates* in the cables, *aligns* on the workbench; it *is* made of ink, pixel, information, wood; and, most crucially, each of these instances *act* in a particular way.
If the process described was to be compared to a relay race (Latour, 2013, pp. 106-108), TT Stands would be the series of runners, not the baton they hand to each other. Also, the progression is not as linear as might first appear. Following TT Stands passing from a bullet point to a drawing to a mock-up, one might conclude that the design is moving forward from an abstract instruction to a concrete object, the materiality of which is the closest to the final object possible. However, TT Stands' trajectory does not only go back and forth along that line; at every step, it denies the possibility for such a line to go from abstract to material, from less to more real, from less to more existent. For instance, when a carefully prepared mock-up shows its defects so immediately that it turns into a template and hands over the action to a sketch. The race is made out of loops.
"I TT Stands" does not only shift from one form of agency to another; its existence also branches out. Most often, TT Stands also happens to be more than one thing at the same time. Various forms coexist, but also different options; and many versions pile up while new instances replace older ones, or add them-

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selves to the evolving archive. How can TT Stands remain a single protagonist under these circumstances? In the writing experiment undertaken here, the fact that design is about multiplying options (Farías, 2015) and "versioning" possible real-to-come (Houdart, 2009) is made visible when the "I" needs to turn into a "We", or be both at once.

Whether plural of singular, TT Stands' actions are written in the present tense. Again, this is a way to explore what all these things *are doing*, at each instant. However, the present tense around TT Stands is 'thick'. Most of the time, TT Stands sends instructions based on what preceded it, and leads to its own transformation *and* consequent dismissal or replacement. Its existence flickers and branches repeatedly. The bullet point is there to remind and get crossed off the list; the print-out exhibits but is soon outdated after it has guided a pen along new lines; the CAD modeling is an archive as much as it sends instructions to different machines; the mock-up is an active participant in meetings, a simulator of future use; as such, it could be considered as close to the end of the process; but it is there to be altered, or even turned into a template to allow more changes. Each of these instances is a trace of what preceded, a testimony of the present state of affairs, and a tool for what follows. *They exist as trajectories*.

Of course, they cannot exist without the assemblage in which they participate. They are in a close-knit interdependent relationship with the designers who make them, *make them do*, and are *made to do* by them. Moreover, in many cases, TT Stands' agency depends on other objects present in the scene, whether the items it needs to be able to display, or former versions that attest, by comparison, to its more or less successful refinement. Also, the situation in which the object is placed impacts its role and agency: where the model sits in the virtual space, how carefully the mock-up is staged, etc. Even if the narration stresses TT Stands' agency in particular, these observations serve as reminders of the fact that this agency happens in interaction, both with the surrounding objects and with the humans involved.

Each of these instances is a trace of what preceded, a testimony of the present state of affairs, and a tool for what follows.

*Episode 3: situating agency in interactions, reestablishing a shared responsibility*

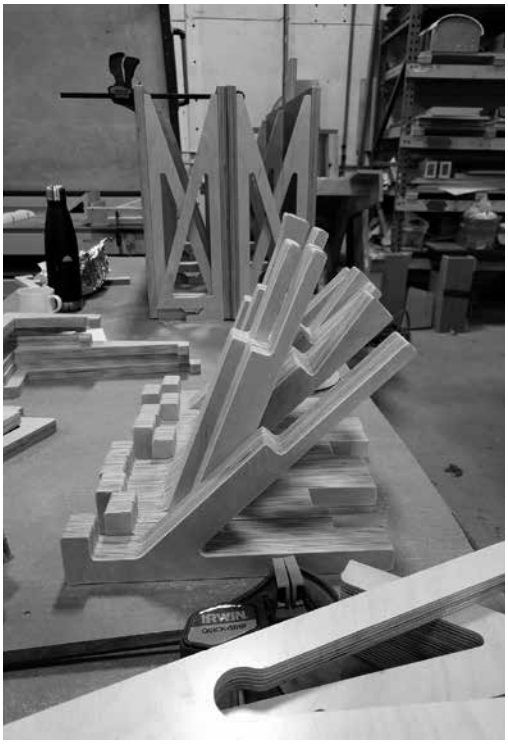
*DAY 2. Today, we traveled to the store again, the new*

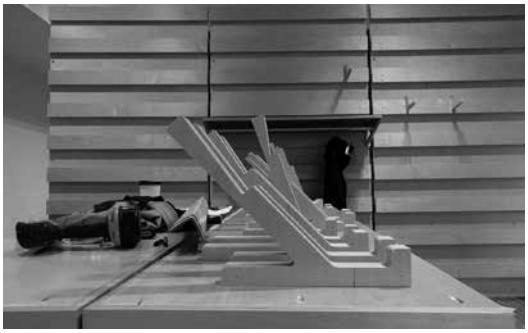
*one this time. A walkthrough is scheduled with the clients and the design team. I am not alone on this trip. Four of us came out of the recent discussions* (Fig. 11) *and piled up in a box to board the truck and ride to the construction site* (Fig. 12)*: Steep-Mid-Notch, Steep-High-Notch, Moderate-Mid-Notch and Moderate-High-Notch. Even a discarded Non-Parallel found its way here. We are now all standing, neatly aligned in pairs, on the table in the middle of the future store* (Fig. 13)*. We give a great deal of satisfaction to the Project Manager: she tells Ron how good we all look. But we are also juxtaposing our differences and exhibiting our variations. For Karen, one of us stands out as she points at me and says: "I like this one better". Ron agrees. Yet this is no final decision. The clients are coming in. We directly raise a wave of enthusiasm in our three future owners. One of them keeps exclaiming, "this just looks sick!" Our presence in the store visibly increases his impatience to unpack the items he brought with him – he asks repeatedly if it is "time to grab something". When our turn comes to participate in the meeting, he finally unpacks a turntable and two synths, which we are now able to accommodate with our new notch* (Fig. 14)*. As*

Fig. 11 - Elements to be taken to the construction site.

Fig. 12 - Box containing the mock-ups for the Walk-Through.

Fig. 13 - Mock-ups staged on site.





*expected, only the latest ones among us are appealing to them: my non-parallel self stays behind. But the four of us present them with two issues: the angle of the stem and the position of the notch. It is not an easy choice: we all look very good and we all perform well enough. To make our differences more perceptible, we recommend to be placed in the exact environment where we are to end at: the shelves at the front of the store. To fully exhibit our respective performance, we also have them turn the adjustable lighting on the ceiling towards us. Even then, both angles look "sick" to them. We are the center of a discussion between two of our future owners: "steep or moderate?" they are asking, while continually moving their three items from one of us to the other. Eventually, the moderate angle passes the test, while the steep angle fails. Half of us are dismissed. We still have to show the difference it makes to place our notch at mid-height or higher. Standing there, displaying a synth on each level* (Fig. 15)*, we open up the question along two distinct lines of argument. With a higher notch, I advocate functionality: I allow displaying a bigger element on the bottom and a smaller one on the top, and I thus maximize the amount of items that I can exhibit. With a lower notch, on the contrary, I trigger aesthetic arguments: unlike those with a higher notch, I leave the top of the stem apparent behind the upper item I display, and simply look "more cool". The functional argument almost won: I would be coherent with the whole system designed for the store, which conveys the idea that "the more one could fit, the better". But the aesthetic arguments of*

Fig.14 - Mock-ups with two synths.

Fig. 15 - Mock-ups staged on their future shelves.

*Lower Notch seem to convince more. However, I do not succeed in making them decide yet. Only a few days later, would the clients make up their minds and send an email to my designers: I, TT Stands, was to have a 45-degree angle and a notch at mid point.*

The challenge is indeed to enrich the degree of collaboration between all actors involved. Turning objects into subjects is not supposed to deprive the designers and users of any active contributions and responsibilities. On the contrary, training our descriptive apparatus increases our chances to “ecologize” the design scene, allowing for richer exchanges, and a deeper sense of accountability.

This last sequence confirms how TT Stands’ agency depends on the milieu in which it acts. It is when juxtaposed with former versions and other still equally valid options that TT Stands acts most effectively in the context of that last meeting. The importance of the setting is also particularly striking in the scene, as TT Stands is placed in the right area of the store and in the best conditions, in order to deliver its full potential as a mock-up.

Such discussions are crucial moments to redistribute the agency: instead of depicting humans making decisions or having ideas on their own, focusing on TT Stands’ actions allows to insist on its active role in the choices that are made and the particular way in which it exerts its influence. Moreover, as I have indicated above, if the present experiment focuses exclusively on TT Stands’ actions, the end goal is to advocate for a better-distributed agency. The challenge is indeed to enrich the degree of collaboration between all actors involved. Turning objects into subjects is not supposed to deprive the designers and users of any active contributions and responsibilities. On the contrary, training our descriptive apparatus increases our chances to “ecologize” (Latour, 2013, p. 230) the design scene, allowing for richer exchanges, and a deeper sense of accountability. This also concerns the practice of design: designers’ responsibility increases as they engage in more intricate transactions with the objects they deal with. For instance, when a version of TT Stands is chosen because it is more “elegant”, the criterion is aesthetic – how good the shape looks – as well as moral – how ‘politely’ the solution responds to TT Stands’ demands (Lefebvre, 2016).

Turning TT Stands into the only narrator can therefore appear insufficient, mainly with regard to these political and moral notions of participation and responsibility. Not because the trick would absolve the architects from their responsibility, but rather because many other protagonists are ignored in this scene, whose viewpoints might have contributed to emphasizing the numerous intricacies of the design process. Birch Plywood might have insisted on its

specific features and argued for other ways to be implemented; CNC Mill might have revealed its major influence on the designers' initial choices; etc. The text presented here can thus only be considered as a single biographical line among many others. It is from their crossings that one can eventually expect to "catalyze a sensibility that finds a world filled not with ontologically distinct categories of beings (subjects and objects) but with variously composed materialities that form confederations" (Bennett, 2010, p. 99).

*Conclusion*

To conclude, I want to stress once more what this paper contributes to recent ethnographies of architecture, in their attempts to portray design as an ecological endeavor. In their wake, the paper meticulously describes the negotiations around the becoming of an object as it is being designed in the studio and beyond, tracking the various instances of this object-in-the-making (not just mock-ups, but also sketches, models, drawings, lines of texts, lines of codes, etc.). It depicts the successive transformations of these design artifacts and, most importantly, accounts for their respective agency. The specific contribution of this paper lies in the writing experiment that consists in recalling the episode from the point of the view of the object-in-the-making, rather than describing the scene as an external observer. The aim is to explore what the limits and promises are of adopting such a perspective, with regard to its ability to enrich our understanding of the agency of objects in the design process. The format adopted does not come without risks, such as the tendency to anthropomorphize the object-subject "I, TT Stands", or the fact that this object-narrator becomes the single center of action (in lieu of the designer), thereby impeding a broader redistribution of the agency among all actors involved. However, the advantage of focusing on the writing technique (the '-graphic' of the ethnographic work) is that those problems come to the fore as very practical questions: what verbs are to be used and how, and who is the subject in the sentence? These practical questions need to be addressed frontally, and progressively coalesce into two main lines of conclusion. (1) Writing in the first person and in the active voice (and hopefully reading such a description) – while trying to identify or avoid pitfalls – contributes to acknowledging and specifying the objects' own agen-

This paper contributes to recent ethnographies of architecture, in their attempts to portray design as an ecological endeavor.

Turning the object-in-the making into the main narrator also demands disentangling its many co-existences.

cy; it forces clarification on the way design artifacts actively take part in design decisions, in ever-particular and situated ways. (2) Turning the object-in-the making into the main narrator also demands disentangling its many co-existences. TT Stands is nothing like a single, stable entity, maintaining itself unchanged throughout the design process. The challenges encountered in the course of writing also point to the variability of TT Stands' agency. The object-in-the-making does not only take different forms, but it is also characterized by different degrees and kinds of agency. Its respective agency cannot be considered independently of the milieu or assemblage in which it is situated. The limits of writing in the first person and in the active voice are a fierce reminder that agency cannot be considered apart from the ever-particular situations in which it unfolds. Finally, if the narrative choice stresses the agency of TT Stands – and by extension of many other actors other than the designer alone – , it also calls for adding more experiments of this kind, to multiply the perspectives from which such an episode can be told, in order to acknowledge the various actors whose agency deserve to be expanded as well.

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