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# Turning a Traffic Light into an Epistemological Device: An ANT Proposal to Disassemble and Stabilize Urban Life into Regions of Usefulness

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**ABSTRACT**

Mixing Actor-Network Theory, empirical philosophy, and Heidegger's notion of *usability*, this paper discusses a methodological strategy for approaching and temporarily stabilizing urban life based on an experimental epistemological exercise of decomposing a traffic light in Times Square, New York City, into its practices and relations. This strategy conceives of urban elements and formations as multiplicities of multiple and simultaneous practices and materials (*useful things*) and pays particular attention to the effervescences and heterogeneous associations they embody and enact. As a contribution to the social approach of knowledge production, this essay explores the creation of concepts using any aspects and components taken from *outside*, unpacking them as analytical instruments and partial results of multimodal ethnographic practices. In a more concrete scenario, *Region of usefulness*, a sort of qualitative multiplicity, is proposed here as an unfinished epistemological tool for empirically grasping and representing urban life. It is unfinished since it has to be constantly reconstructed and resignified in relation to other elements and, at the same time, it has to be designed and assembled by following and translating those mixed associations composing urban life, using its modes and affordances as analytical resources for producing objective knowledge, that is, limited, embodied, and temporal.

**KEYWORDS**

Inventive methods; urban studies; empirical philosophy; Actor-Network Theory

## Introduction

Using a mixed perspective mostly inspired by Actor-Network Theory[1] (ANT), empirical philosophy, and Heidegger's notion on usability ([1962] 2008), this essay examines the process of constructing and applying a methodological strategy designed to approach and represent bounded urban places using their particularities, modes, and affordances as epistemological tools. This essay is an experimental and speculative exercise of disassembling and temporarily stabilizing a set of flowing locations and multi-ontological elements happening together in the same geography, the corner of 7$^{th}$ Avenue over 43$^{rd}$ Street in Midtown Manhattan, New York City.[2] Additionally, this is a document about how to create things with concepts and about a more attractive enterprise: how to create concepts with things.

Although this paper intends not to discuss the different meanings and applications of *concept* as an ideal type, a common analytical framework is proposed below. In a nutshell, it does not matter what the nominative definition of a concept is. A concept must be defined by its properties, components, and relationships instead of just providing a predicative explanation. Without the

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intention of either proposing a sort of recipe or minimizing discussion around this element, a concept will here be understood based on a kind of deconstruction[3] as enunciated by Deleuze and Guattari in their book 'What is Philosophy?' (1994, 15–18).

(1) Every concept has components and is defined by them.
(2) It is a multiplicity, although not every multiplicity is conceptual. There is no concept with only one component.
(3) Every concept is at least double or triple, etc. No concept possesses every component since this would be chaos pure and simple.
(4) Every concept has an irregular contour defined by the sum of its components.
(5) The concept is a whole because it totalizes its components, but it is an incomplete whole.
(6) All concepts are connected to problems without which they would have no meaning, and which can themselves only be isolated or understood as their solution emerges.
(7) Every concept has a history.
(8) A concept also has a becoming that involves its relationship with concepts situated on the same plane. Here concepts link up with each other, support one another, coordinate their contours, articulate their respective problems, and belong to the same philosophy, even if they have different histories.

The process of creation is a double movement that pretends to stabilize the world outside momentarily. In addition to including *concepts*, this operation also involves *materials*; meaning *materialities*. Both *concepts* and *objects* could be, ontologically, located under the same category of *useful things* (UT). (Heidegger [1962] 2008). 'The being of useful things is that they are "in-order-to-do-something", which means that they refer, that is related to something other than themselves and thus constitute a "multiplicity of references" or in other words, a complex network of relations' (Schiølin 2012, 777–78).

A *useful thing*, either a concept or a material, is always linked to another element. It only exists in relation to other things and when it is producing a *difference*.[4] For instance, and shyly introducing the key matter to take care of during this essay, a traffic light is a traffic light insofar as it 'things' (Heidegger 1971, 175 quoted after Schiølin 2012, 779). Doing 'things' means turning the substantive into a verb, into an action. In a raw way, a traffic light is in-order-to-traffic-light-thing. What a traffic light does – regulating the circulation of elements in the same space – is what turns a traffic light into a traffic light and not into another element, let us say, either a screen or a sidewalk.

## Matter is Semiotic, Semiotic is Material

From an ANT standpoint, the differentiation between *concepts* and *materials* seems to vanish once both elements participate in creating new objects or temporal associations. 'It is not possible to distinguish for long between those actants that are going to play the role of ["concepts"] and those that will play the role of "things"' (Latour 1993, 184). Those *useful things* acquire, under that outlook, a new connotation as *actors*:

> What is an actor? Any element which bends space around itself, makes other elements dependent upon itself and translates their will into a language of its own. An actor makes changes in the set of elements and concepts habitually used to describe the social and the natural worlds (Callon and Latour 1981, 286).

However, the aim of putting *concepts* and *materials* on the same ontological level is neither to defuse the discussion about the action of each kind of element nor to simplify the process of interaction between them. Instead, the intention of this proposed 'ontological *heterogeneity*' (Callon 1986) is to overcome the duality of human/non-human that, traditionally, located agency – the capacity of action, of producing a difference – in the first type of elements while marginalizing the second type of elements as merely *passive entities*.

> Often in practice we bracket off non-human materials, assuming they have a status which differs from that of a human. So materials become resources or constraints; they are said to be passive; to be active only when they are mobilized by flesh and blood actors. But if the social is really materially heterogeneous then this asymmetry doesn't work very well. Yes, there are differences between conversations, texts, techniques and bodies. Of course. But why should we start out by assuming that some of these have no active role to play in social dynamics? (Callon and Law 1997, 168).

Nevertheless, recognizing a sort of symmetry between humans and non-humans does not explain the process of creating *things* with *concepts* and vice versa. We know so far that both elements share the same ontological level and that they exist, that they are they, only *in-order-to-do-something*. An element is an element on its own, *if and only if* it is *doing* its *thing*. It means operationalizing its essence, interacting, affecting, and being in relation *with* others.

> Heidegger (1971) deduces the point that the words 'to be' and 'with' are linked and, furthermore, that 'I am' therefore means 'being together with the world' (51). This basic feature of being together with the world splits itself into a range of different modalities: 'To have to do with something, to produce, order and take care of something, to use something, to give something up and let it get lost, to undertake, to accomplish, to find out, to ask about, to observe, to speak about, to determine (53). (Schiølin 2012, 777).

This interaction between actors is produced in a context propitiated by a sort of semiotic mediation[5] that is working in both directions: matter is semiotic, and the semiotic is material (Haraway 1988, 1991; Law 2007). Nevertheless, this sentence's supposed simplicity has a two-step trick that conceals new layers of complexity. However, it is more of a trap than a trick and consists of displacing the *capacities*[6] of *useful things* – also known as actors – from a singular theoretical frame to a plural empirical one. Those two traps or layers of complexity will be unpacked in the following sections.

## Expanding a Traffic Light

Let us focus on two *capacities* already displayed in this paper that a *useful thing* has. A *useful thing* has the capability of (1) *being with*, which means the ability to interact and be relational, and (2) *doing things*, that is, the potentiality of producing a difference and affecting others. Moreover, for doing that, let us come back to the traffic light example again, but this time let us talk about a particular traffic light: the one that is located at the corner of 7$^{th}$ Avenue and W. 43$^{rd}$ Street in Times Square. This traffic light has to regulate vehicle and pedestrian traffic flow but only over the Avenue. The mobilities happening on the street are the responsibility of another similar device.

The junction of 7$^{th}$ Avenue and W. 43$^{rd}$ Street is a regularly busy crossway. This intersection connects the southern part of Times Square's *Zone D*[7] (See Figure 1) with the *East D corridor*, a busy walkway in front of the Paramount Building where, among other local establishments, the restaurants Hard Rock Cafe and Bubba Gump Shrimp Co. are located. Although this traffic light is certainly not a tourist attraction, almost everyone passing by glances at it. Furthermore, although this traffic light is just a metal pole with switching lights, almost everyone follows its instructions and respects its tacit authority.

The traffic light deploys its instructions through interactive and social processes of visual and auditory indexation. Each semiotic element participating in the regulation of cars, bikes, and pedestrians – a red or green light, or the repetition of a sequence of beeps, for example – indicates a well-defined direction, a discourse, that also implies the temporal configuration of specific spatialities (Scollon and Scollon 2003) and the development of certain performative situations (Austin 1962) such as crossing – walking, running – the street, stopping, and using the car's horn.

We have, thus, a materialized and placed set of discourses, actions, and instructions (Scollon and Scollon 2003) that pedestrians and all kinds of drivers learned about in different previous contexts. They already know what a traffic light is and what is its *usefulness* is about before facing – watching or listening – this particular device. However, it is through the continuous *placement, indexation*, and *actualization* (Shields 2002) of the traffic light's performative and multimodal discourse/set of instructions – move!; stop!; hurry up! – that its authority is reinforced.

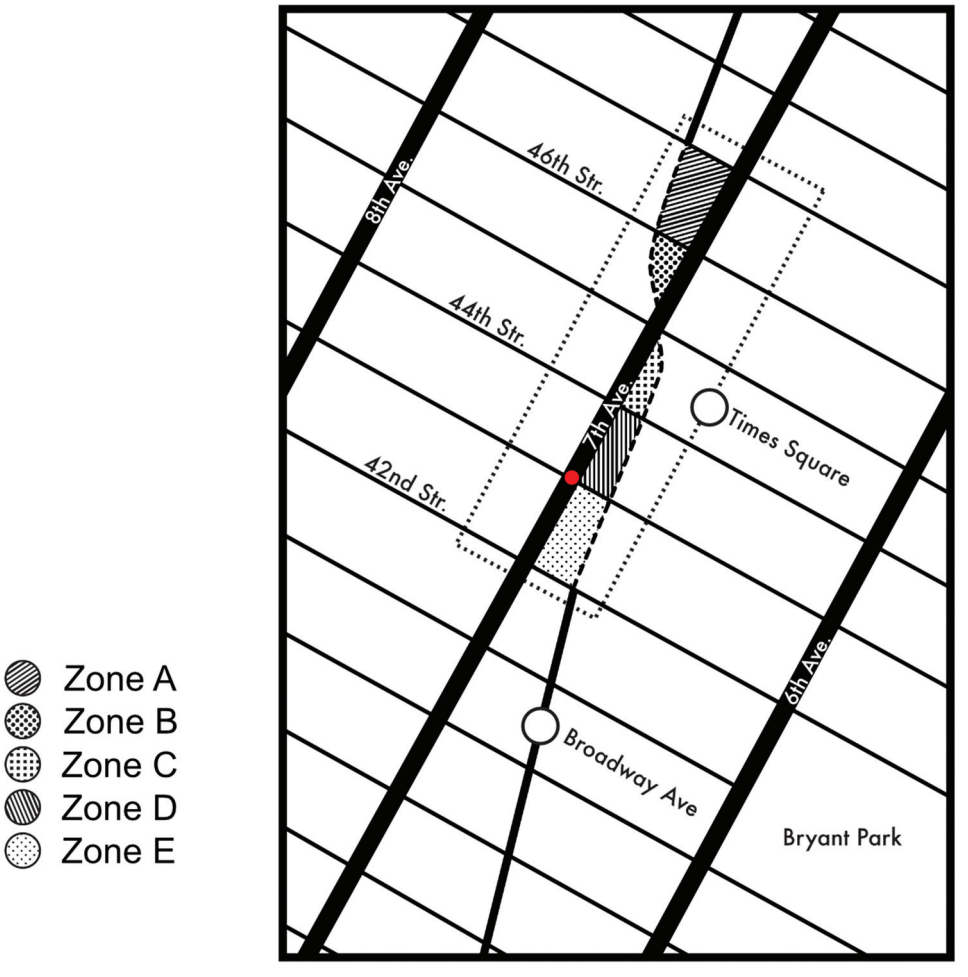


**Figure 1.** General map of Times Square divided into five zones. The red dot is where the traffic light is located.

Despite the fact that it looks like an easy job, being a traffic light in Times Square is more complicated than it appears. While it may not have much to offer visually, its ability to catch pedestrians' eyes is highly effective. Due to the excess of lights, screens, and advertisements in this area, tourists are more inclined to focus on other things than the repetitive and unoriginal choreography offered by traffic lights. The façade of the Hard Rock café, for instance, is a stiff competitor. On the other side of Broadway, a giant American flag made of LED lights on the US Army Recruiting Office also provides a continuous distraction.

One could say almost all the elements in Times Square are competing against each other for capturing tourists' attention. The subway station located diagonally at the traffic light, at the corner of 7$^{th}$ Avenue and W 42$^{nd}$ Street, is perhaps the only station of the whole system which façade has been decorated with lights signals and walls made of glass. Crossing the Avenue eastbound, over pedestrianized Broadway, a Starbucks looks like an old Broadway theatre; the police station over 7th Avenue and between W. 42$^{nd}$ and W. 43$^{rd}$ Street reminds a 1960s' diner. Furthermore, let us not forget about the enormous screens displaying ads one can find in each building around.

Coming back to the traffic light in question, this element is an assemblage of lights dispersed around the intersection created by the overlap of 43$^{rd}$ Street and 7$^{th}$ Avenue. This traffic light is composed of two different sets of lights and accessories. One group is for vehicles, the other for

pedestrians. Each of these sets of lights is made up of LED fixtures housed in a yellow metal case protecting a plastic container of cables and electronic components and supported by a metal pole and software and a control center staffed by transportation officials employed by the City's Department of Transportation.

The traffic light on 7th Avenue is constituted by three sets of signals. The first two are visual and based on colors. One is for vehicles, the traditional red-yellow-green lamps, the second is for pedestrians. The pedestrian traffic light displays two different images. On the left, the palm of a red hand symbolizes the act of stopping. On the right, the shape of a walking human body. This symbol is white. When the pedestrian traffic light switches between the red symbol and the white one, it is possible to see for a short time how the red symbol blinks in a sort of intermittent transition. Meanwhile, in the other way around, the *switching operation* is produced immediately.

The pedestrian crosswalk signal is interactive, ostensibly allowing pedestrians to control the interval of transition. There is a button they can press momentarily interfering in the City's traffic system and accelerating the transition between the red hand and the white body. There is another less subtle but more popular way pedestrians intervene in the traffic circulation, which consists of crossing the Avenue against the light. Most of the time I witnessed this, the pedestrians were distracted by looking at the other screens, their deceives, or street performances and did not realize the traffic light sent them a message. Fortunately, the horns of the cars constantly reminded them to stay alert.

The last set of signals composing the traffic light is an audible one. It was installed in 2015 'to assist pedestrians who are blind or have low vision in crossing the street' (NYC DOT 2017). Even though I am not visually impaired, this audible signal has always been helpful, allowing me to cross the street without looking at the traffic light. Because I was continuously using my phone and camera when I was walking around Times Square, my eyes were constantly focused on the screens of my devices. Fortunately, the beep from the traffic light was always there to inform me how much time I had to remain on the sidewalk and when it was possible to cross the street.

Returning to the visual signals, the sets of lights comprising this pedestrian crosswalk have their own *intensity*. They are shaped and limited by a particular timing cycle. The green light for pedestrians, for instance, lasted 30 seconds, while the green light for cars had a duration of 50 seconds. At the same intersection, a secondary and perpendicular green light for pedestrians had an interval of 28 seconds, two seconds less. The green indicator for cars had ten seconds more.[8] On the same metal pole holding the vehicular traffic light, there was a security camera. I could not determine whether this device was part of the traffic light or a component of another system that shared a common element and spatiality.

The act of *being* of this traffic light is to regulate the transit and interactions of vehicles and pedestrians crossing 7th Avenue. In other words, to control the cohabitation or coexistence of those elements in relation to a particular space. Thus, on the one side, we have vehicles – cars, motorcycles, and bicycles – going southbound while, on the other side, there are westbound vehicles as well as pedestrians walking in every direction. This regulation of bodies involves other elements that are creating temporal associations of relationships in which the traffic light is also participating:

Two streets overlapped;
a pedestrian walk;
two sidewalks;
a bike line;
some painted indications on the ground;
a color code;
vehicles;
pedestrians;
an ethical background;
a sense of responsibility;
a bunch of rules;

a sense of spatiality;
a tacit agreement;
a center of control;
the Department of Transportation.

## Regions of Usefulness (First Layer of Complexity)

Even if we isolate the traffic light from the associated networks of which it is a part, we find a hybrid multiplicity inside it. This is where the first layer of complexity emerges: The first displacement of the *capacities* of a *useful thing* happens when it is recognized not only as a participant in a net of relationships but also as the temporal stabilization of a tangle of relationships. A traffic light is not just a single object connected to others. It is also several elements gathered, creating two temporal objects, the traffic light as a material object, a physical thing, and the traffic light as a concept, as a specific abstraction. The traffic light can be disassembled in multiple ways:

1. Decomposing into materialities. It means taking an object apart piece by piece until we are left with a collection of minor elements such as cables, screws, LED lights, welding points, circuits, and chunks of plastic. These elements could, of course, be further decomposed until we are left with the raw material from which it was constructed, but, where is the traffic light in here? This sort of reductionism will not be particularly useful in the context of this methodological proposal.

2. Decomposing into concepts. While following the same logic, here, the stress is on other kinds of elements. Decomposing an object into concepts requires more intellectual effort and a higher level of abstraction than decomposing it into other materials. This second method of decomposition is also an approach that is not pursued in this paper due to the fact that, like the first approach, it is insufficient for describing and stabilizing urban life and furthermore hides and reduces its complexity and multiplicity.

3. Dismounting its different regions of usefulness. These *regions* are temporal and unstable associations of various elements —unities of sense— gathered for a specific purpose. As it has been previously argued, the usefulness of an element is what conditions its being, and that usefulness is always happening in relation to others, in the shape of regions[9] of references, in general terms of regions of usefulness. Despite their own logic and coherence, some of these elements could also be part of more extensive and temporal regions where they can operate in conjunction with other similar associations to accomplish more general objectives.

For instance, there is a component of the traffic light that allows the device to communicate with the control center. There is another *region* of the device in charge of letting the vehicles flow. There is a *region* focused on telling pedestrians when they need to stop. There is one that conducts electricity to the device's other components, and there is another which integrates this traffic light with the entire network of transportation. Following and tracing *regions of usefulness* is the method for decomposing urban spaces, which I propose to explore to disassemble and represent, in a more accurate way, the complexity and instability of *life outside*, using its modes and affordances as analytical resources for producing embodied and situated knowledge (Haraway 1988).

Nevertheless, these regions of usefulness should not be understood as either pre-made networks or infrastructures. They must be constantly reconstructed and resignified in relation to other regions and elements. The key is to pay attention to the particularities of each situation. Sometimes this movement will reinforce the reasons and practices of why a *region* is composed. At other times, it will imply a reorganization of the elements inside that kind of geography, how they are related, and the common goals they share. To talk about *usefulness* is to emphasize the action, the capacity of affecting others that, ontologically, an object *in-order-to-do-something* has. Also, *usefulness* should not be read here in terms of utilitarianism or positivism but in the sense proposed by Heidegger in relation to *useful things*.

## Practice and Materials (Second Layer of Complexity)

A different but related way of understanding those *regions* is to take them as individual elements as each exists as an *in-order-to-do-something* thing. The components and circuitry in the device that take care of emitting the two different kinds of beeps which let blind people know when they can cross the street, for example, are themselves a device. The button that activates the 'walk' symbol is another device. Thus, we are presented with a second layer of complexity: The devices that compose the traffic light and the traffic light itself are material-semiotic elements that are simultaneously materials as well as *practice*.

When I talk about *practice*,[10] I refer to the operability of a *concept* that is part of a *region* of *regions of usefulness*. Thus, for example, the moment we *observe*, we *take care*[11] of the concept of the 'traffic light' in relation to other elements – either those which are part of its external networks or those which compose it – we are also recognizing its particularity of being relational, *in-order-to-do-things*, in order to do what traffic lights, supposedly, do.

According to Deleuze, the object of philosophy is recognizing the metaphysics of a concept (its anthology) as a movement with others. Philosophy could be described as 'the modest task of a pedagogy of the concept' (Deleuze and Guattari 1994, 12). That pedagogy is the process of understanding that 'the concept no longer constitutes an abstract signifier of a phenomenon with an agreed-upon meaning, but is itself an act, a verb, something created from and physically lived on a specific plane of thinking' (Lenz Taguchi 2016).

In the broader sense, the *pedagogy* of the concept is *just* the process of creating concepts. This process of creation puts new concepts in circulation in relation to other elements. 'The object of philosophy is to create concepts that are always new. [. . .] concepts are not waiting for us ready-made, like heavenly bodies' (Deleuze and Guattari 1994, 5). Continuing with the same argumentative line, *concepts* are not theoretical responses to *material* situations but temporal stabilizations of embodied practices. In other words, a *concept* is a *virtuality* (Shields 2002) that needs to be continuously actualized and that, at the same time, is modifying and shaping materialities.

To summarize these first epistemological explorations on the traffic light at the corner of 7$^{th}$ Avenue and W. 43$^{rd}$ Street, and empirically define the initial statement of this essay: matter is semiotic, and the semiotic is material, I would like to propose to conceive of the traffic light as a material-semiotic element happening simultaneously (second layer of complexity) as an *object* and as a *practice*. However, we should not forget to pay attention to its *multiplicity* (the first layer of complexity), which indicates we are facing a hybrid (material-semiotic) object that participates in different *regions of usefulness*, but that is temporally embodying other *regions* too.

## Multiplicity and Simultaneity

Following Mol's (2002) perspective on *multiplicity*, each practice has its own materiality. This statement means that instead of talking about a single (material) traffic light where many practices could – or could not – be related, we should see that the traffic light is the conjunction of not only practices but also of materials that are individually related to specific concepts. For instance, the practice of stopping pedestrians is tied to a particular materiality (+ spatiality): a precise set of lights, an unmistakable sound, a group of static bodies gathered on a corner, some boundaries, a temporality, etc.

> If practices are foregrounded there is no longer a single passive object in the middle, waiting to be seen from the point of view of a seemingly endless series of perspectives. Instead, objects come into being —and disappear— with the practices in which they are manipulated. (2002, 5).

If we take a traffic light, or a sidewalk, a building, a plaza, or any other component of the urban space – including the urban space itself – and continue decomposing it, practice by practice, we will be able to temporarily assemble and stabilize many *regions* happening simultaneously in the same

geography but with different times. Those *regions* are *versions*[12] of the same temporal object producing their own spaces and continually negotiating their existences. That is why, if we agree that the *world outside* is *multiple* and happens simultaneously, then our method for approaching it, should be constructed following those two features.

In *Time and Free Will*, Bergson ([1913] 2001) proposed a critique of the Kantian idea of space-time, arguing that these concepts should be separated to explore whether certain kinds of elements, *conscious states*, are either produced in space or in time. Bergson's thesis is that these elements are temporal and should be measured in terms of *duration* and *intensity*. He also presents two different kinds of multiplicity, qualitative and quantitative, as epistemological resources for approaching any type of element. Quantitative multiplicity functions in terms of space and qualitative multiplicity in terms of time.

As Latta (2014, 58) states, 'when one counts objects, one does so spatially. Moving successively from one item to the next; thus, a spatial knowing takes place' The process of counting ignores the particularities of what it is approaching. Ergo, these elements could be juxtaposed. What matters, in this sort of multiplicity, is homogenizing and reducing its participants or components. Qualitative multiplicity, by way of contrast, is 'intensive and not admitting of measure' (Bergson [1913] 2001, 3), it does not homogenize. It does not reduce the elements participating inside its shape to numerical signs, for instance. Bergson's most famous example of this qualitative multiplicity regards sympathy. To feel sympathy for someone else is a moral process that involves a heterogeneous set of feelings – sometimes giving the impression that these sensations contradict themselves – for instance, repugnance and humility.

Despite that apparent contradiction, these feelings are cohabiting in time without being either juxtaposed, neglected, or negated by other emotions and senses. Qualitative multiplicity is about difference. Intensity is the magnitude Bergson proposes for taking care of that sort of multiplicity.

Instead of an automated counting system producing a numerical record of how many people crossed Times Square, a device for apprehending and representing its multiplicity would take care of *not only* how many pedestrians daily visit Times Square, but what kind of elements – pedestrians included – simultaneously inhabit the space. This symmetrical simultaneity is based on attributes and relations rather than on how many bodies occupy a particular space. *Intensity* is the magnitude Bergson proposes for taking care of that sort of multiplicity.

Intensity will be understood here in a Deleuzian way as 'pure difference in itself. [. . .] intensity is the form of difference in so far as this is the reason of the sensible. Every intensity is differential, by itself a difference. Every intensity is E – E', where E itself refers to an e – e', and e to t – t' etc.: each intensity is already a coupling (in which each element of the couple refers in turn to couples of elements of another order), thereby revealing the properly qualitative content of quantity.' (Deleuze [1968] 1994, 144, 222).

Translating qualitative multiplicity to this paper's intentions and scope, that kind of *multiplicity*, understood under the label of *simultaneity*, is a heterogeneous set of elements that temporarily and synchronically coexist, regardless of their differences and contradictions, *in-order-to-do-something*, in order to be *useful*. A *region of usefulness* is a sort of qualitative multiplicity. Instead of producing numerical records resulting from standard decompositions of elements, either into their materialities or concepts, it takes care of what kind of materials, practices, and entanglements they are simultaneously composing and actualizing.

## Conclusion

Through an experimental exercise based on decomposing a traffic light located at the corner of 7$^{th}$ Avenue over 43$^{rd}$ Street in Midtown Manhattan, a methodological strategy for encompassing and representing urban life was presented. Mixing empirical philosophy and Actor-Network Theory, this

approach proposes disassembling bounded elements, *useful things*, into a set of relations, unities of sense, that they embody for specific purposes. A *useful thing* has the ability to interact and be relational and the potentiality of producing a difference and affecting others.

Those elements gather *inside* them a (qualitative) multiplicity of differences, known here as *regions of usefulness*. Those geographies, which do not follow the Cartesian model, are effervescent and unstable associations composed of two main attributes: *multiplicity* and *simultaneity*. *Multiplicity* represents a hybrid construction where an element is, at the same time, a participant in a net of relations but also the temporal stabilization of a tangle of relations. Both *useful things* and *regions of usefulness* are material-semiotic elements that are simultaneously *materials* as well as *practice*.

This paper intends to propose and provoke the usage and further exploration of *regions of usefulness* as a method for approaching, describing, and temporally stabilizing urban life as a *multiplicity* of *multiple* and *simultaneous* practices and materials, paying particular attention to the effervescent and heterogeneous associations they are embodying and composing with others. *Region of usefulness* is an epistemological tool designed by following and translating the particularities, affordances, and relations of a particular element, a traffic light, which behaves here as an object and practice (a concept turned into an action).

The idea of developing this experiment is to approach and expand other routes and ways of producing knowledge about limited and spatialized elements, using their modes and particularities as epistemological devices and multimodal resources. Despite this method was constructed and tested in a bounded location and following a particular set of entanglements, it may be useful for exploring, disassembling, and temporarily stabilizing other urban locations and elements. Nevertheless, to validate that hypothesis, it is necessary to use and actualize that tool, adapting it to the specificities of that new study object, taking from that element its flows, characteristics, and relations.

## Notes

1. Actor-Network Theory 'combines two words usually considered as opposites: actor and network. It is reminiscent of the old, traditional tensions at the heart of the social sciences, such as those between agency and structure or micro- and macro-analysis. Yet, ANT, also known as the sociology of translation, is not just another attempt to show the artificial or dialectical nature of these classical oppositions. On the contrary, its purpose is to show how they are constructed and to provide tools for analyzing that process.' (Callon 2001).
2. The selection of that specific space results from a set of ethnographic explorations on Times Square, carried out between July and September 2019, as part of my doctoral research.
3. The format of that 'deconstruction', in the shape of a list, is a resource presented for explanatory purposes in this document that does not correspond to the way how this piece of information was displayed in the original source.
4. Precisely, the condition of *usefulness* of a *useful thing* is tied to that relational capacity that allows it to produce a *difference*, but, at the same time, it is also linked to the as well relational status of the element that is being *affected*. That situation could also be conceived as a kind of geography made of relations granted by the capacities of *affecting* and being *affected*.
5. The notion of mediation in this paper is inspired by Haraway's 1991 conception of 'material-semiotic,' where the semiotic is also material and not just the representation of the material.
6. These two capacities, which are strongly tied and almost melted together, are always expressed in relation to other elements. These are: (1) the capability of being, in-order-to-do-something-[to-others]. (2) the ability of doing, in-order-to-produce-a-difference-[in-others].
7. The names used in this paper for identifying Times Square's zones and other spatialities are not their official denominations. They are part of a specific exercise of identification.
8. According to Ascher (2005) New York's traffic lights 'have two phases: an east-west one and a north-south one. They generally operate on 60-, 90-, 120-second intervals; the cycle is determined by local traffic conditions and may even be longer at times.' (6).
9. The decision to use 'regions' instead of "networks,' for example, was based on the appropriateness of using a geographical metaphor to link the concept of 'space' to the process of making relationships. Instead of *happening* in space, those regions of relationships create their own space.

10. To define *practice* as 'the operability of a concept' could also lead to two different and undesirable academic positions: The first one is to think that here practices, as actions, are only related to concepts and that objects are just passive elements affected by those practices. Second, that practices are a different category than, for instance, agency – the capacity that objects have of producing a difference – and because of that they are located in a different ontological level. The reality is that the term 'practice' was proposed with the intention of highlighting the capacities that concepts have of *being-in-order-to*, of affecting other elements. The contrast between practice and agency, between the difference produced by objects and concepts, should be understood as an expositive discernment and not as an ontological one.
11. I understand the act of taking care of something in the way de la Bellacasa (2011) proposes approaching this action: as an academic activity but also as an ethical and political obligation that requires us to look after the concepts and elements we use and observe to remain responsible for their becoming. To take care represents an ontological responsibility that forces us to take any element seriously, explaining everything and not taking anything for granted.
12. To talk about a *version* of an element refers to an epistemological resource designed for, somehow, organizing the flowing *world outside* but taking care of its specificities. Inspired by Latour's work on *reduction* and *irreduction* (Latour [1988] 1993), this strategy recognizes the impossibility of encompassing reality using analytical frames that pacifies it. Instead of considering an element as a solidified substance, a version pays attention to its relations and temporal unicity.

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