

# Beyond ANT

Towards an 'Infra-language' of Reflexivity

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## **Beyond ANT – towards an “infra-language” of reflexivity**

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### **Abstract:**

Actor-Network-Theory (ANT) offers an “infra-language” of the social that allows one to trace social relations very dynamically, while at the same time dissolving human agency, thus providing a flat and de-centred way to sociology. However, ANT struggles with its theoretical design that reduces agency to causation and leads us to conceptualize actor-networks as an homogenous ontology of force. This article proposes to regard ANT’s inability to conceptualize reflexivity and the interrelatedness of different ontologies as the fundamental problem of the theory. Drawing from Günther, it offers an “infra-language” of reflexive relations while maintaining ANT’s de-centered approach. This would enable us to conceptualize actor-networks as inhomogeneous, dynamic and connecting different societal rationales while maintaining the main strengths of ANT.

**Keywords:** Actor-Network-Theory; Reflexivity; Poly-contextuality; Gotthard Günther;

STS

## **Beyond ANT – towards an “infra-language” of reflexivity**

Actor-Network-Theory (ANT) is confronted with two very contradictory criticisms (Gad and Jensen, 2010: 61f.). On the one hand, critics argue that ANT is a theory that subdues actors and their voices under an all-dominating, leviathan-like Actor-Network. This network, in its struggle for power, diminishes every voice that cannot be properly included in a knot into the network as a part of its energy (e.g. Amsterdamska, 1990). On the other hand, it is argued that ANT dissolves agency. Everyone and everything has the chance to become an actor, not only humans. So while, on the one hand, ANT only assumed to have attention for the strong ones, it, on the contrary, is criticized for giving a voice even to things. This brings the question of how a theoretical framework can receive such contradictory criticisms.

I propose in this article that ANT can be read and accordingly criticized in both ways because it is not able to adequately conceptualize *reflexivity*. Although ANT claims to study a plurality of ontologies, it is not fully able to do so because it does not know the difference between an entity that produces ontology and an entity that is simply an element of an ontology (Heidegger, 1993). In consequence, ANT tends to end up with big-leviathan like Actor-Networks that try to incorporate actors external to them. While the analysis often starts with a much nuanced view of social situations, stressing different ontologies and perspectives, these differences often disappear as soon as the actors are included into the network or are stressed as a factor if the network fails.

Nevertheless, discarding the idea of a minimal “infra-language” because of this conceptual flaw would mean to throw the baby away with the bathwater. Therefore, I

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would like to bring forward the notion of poly-contextuality as proposed by Gotthard Günther (1976, 1979b) as a theoretical framework to analyse the relation of different ontologies. This theory allows one to give voice to such actors that are neglected by ANT, and it also allows one to distinguish clearly between actors and non-actors without defining ex-ante which entities have agency and which have not. At the same time, it keeps up the idea of a sociological infra-language.

### **Too many actors or one dominating actor?**

ANT is confronted with contradictory criticism regarding its concept of agency: On the one hand, it is said to have a concept of actors and agency that is far too wide, including things and other non-human entities. ANT's idea of regarding agency simply as "*transformation of a state operated by an agent*" (Cooren, 2010: 17) is said to "commit the heresy of hylocism" (Schaffer, 1991: 182), taking things to display intentionality of agency which they obviously do not have, thus abandoning "all distinctions between humans and nonhumans" (Amsterdamska, 1990: 499). Actually, the protagonists of ANT are accused of a very naïve form of realism, taking every verb seriously (Collins and Yearley, 1992). The concept of actors and agency, these critiques say, should, therefore, be limited to human beings again (Bloor, 1999; Collins, 2010).

On the other hand, ANT is criticized for having too narrow a concept of action, actors, and agency: ANT tends to stick with the interpretation of the powerful. It is accused of sharing the dominant theories and explanations in a field, thus neglecting the voices of those that do not share those interpretations (Star, 1991; Star and Griesemer, 1989). Lee and Brown (1994) even regard this fact as a kind of paradox consequence of

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the problem mentioned above: because ANT is too democratic, too liberal in attributing agency, it starts to display totalitarian tendencies. ANT is a “system of thought that can colonize all areas [...]. Ironically, this colonialization is achieved through ANT’s claim for a more radical fairness (generalized symmetry).” (Lee and Brown, 1994: 780): It simply lacks a concept of otherness as it tries to incorporate everything. The Actor-Network as an overwhelming force starts to dominate all actors involved. ANT then may become somewhat Machiavellian (Law, 1999).

How could this have happened? ANT is rooted deeply in the ethnographic tradition and for example, Latour stresses again and again that the foremost aim of a social scientist should be to listen to those engaged in the fields (e.g. Latour, 2005: 32). Actors, thus Latour (1999, 2005) claims, know what they are doing. A Sociologist should use a kind of “*infra-language* whose role is simply to help them become attentive to the actors’ fully developed meta-language, a reflexive account of what they are saying” (Latour, 2005: 49). Listening to those whose voice is suppressed should be one of the foremost things a scholar of ANT should do. Gad & Jensen (2010) regard the concept of translation (Latour, 1986) between different actors as the central concept of ANT.

But if ANT is about translating between the various actors, it is necessary to regard their ontologies as being different. Translation in this sense has to work in both directions and should not be understood as the exertion of power. The actor-network is in this regard should be thought of as a connection of otherness – so, at least, the advocates of ANT: “This is, in fact, suggested by the very notion of an actor-network: the assembling of a network of variable ontologies of uncertain times, and of variable spaces.” (Sayes, 2013: 140).

This raises the question where the problem of the theories lies – moreover, as empirical studies usually start with a minute analysis of different and divergent actors,

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their perspectives and positions (e.g. Callon, 1986; Latour, 1988) and explain failure of networks with a very detail exegesis of different positions and what lead to a misfit (e.g. Latour, 2002). So what is wrong with ANT that it can be accused of having a concept of agency that is too broad and too narrow at the same time? And how is it possible that a theory that claims to give voice even to the meanest things is accused of not listening to those whose voices are suppressed? – Especially, if we have a look at the minute assembling of different voices and actors that often take place in the studies?

The answer can be found in the concept of agency, as proposed by ANT. ANT regards agency as something that does not result from intentionality or something the actor thinks or does, some property of the actor, but rather from the network. An actor is in the concept of ANT, “not the source of action but the moving target of a vast array of entities swarming towards it” (Latour, 2005: 46). The action is conceptualized as the result of an actor-network. It is build up and distributed by the network. Of the course, an actor is the product of the network, not the other way round.

This has very severe consequences if applied to ANT’s notion of linking different ontologies. If we take the concept of ontology seriously, it refers to the possibility of actively relating to the world, of having an own understanding (logos) of what is (to on) (Aspers, 2015; Heidegger, 1993). An actor is an actor because he, she or it is not only something in the world but has its way of understanding and accordingly moving within it. Bateson (1972) used an example by comparing dogs and stones and their behaviour: If we kick a dog, the reaction will be determined by the way the dog makes sense of the world. A stone’s reaction will only be determined by its mass, its form, position and the impulse of the kick. Therefore, linking ontologies would mean to connect different ways of actively relating to the world. It would mean to dive deep into the different ontologies and study how they link up while staying separate.

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However, ANT's notion of agency and actors suggests something else: Because it is the network that constitutes actors and agency, the different ontologies that may have been there at the beginning, are step by step substituted with the ontology of the network. A new, all-dominant ontology arises that consumes the previous plurality of ontologies – which Latour (1999) freely admits when he states that ANT could also be called actor-rhizome ontology: There is only the ontology of the actor-network. Actors can be subtracted or added to this ontology by the actor-network distributing agency (Latour, 2005: 56f.) But they cannot have their ontology, their way of relating to the world. In this regard, the dog becomes as stone the more it becomes part of the network. This is maybe the strange part of it: At the beginning of empirical work a plurality of actors and ontologies exists. A diverse world is depicted until the assembling starts: Engineer and technocrats (Latour, 2002), scientists (Callon, 1986), economists (Garcia-Parpet, 2007) or other human actors show up and face a multiplicity of actors and voices. Then they integrate these actors into one network – an undertaking that often faces opposition and sometimes fails. Thus, the process of integration and the failure know the plurality of ontologies. Successful integration, however, reconfigures the actor in a way that it becomes more and more but a product of the network, losing his or her voice (Law, 1999). The initial actor starts to speak for the whole network:

“To produce the identity between two actors, one is allowed to speak for or represent the other. It is to engineer a situation in which to all intents and purposes there is no pragmatic difference between them. When scientists contrive to become the only passage point for scallops (Callon, 1986), one need no longer consult the scallops on any matter between them concerning their well-being “(Lee and Brown, 1994: 783–84)

The different ontologies that Sayes (2013) mentions, disappear the more they become part of the ontology of the network. For the different ontologies, the network

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becomes a “world of force” (Lee and Brown, 1994: 783). ANT becomes the study of the “mechanics of power and organization” (Law, 1992: 380) that impose themselves on others. A plurality of ontologies gives way to the one voice of that network that is incorporated in a single spokesperson.

Even Latour (2013: 29) as one of the main protagonists of ANT recognized the problems of ANT to account for a plurality of ontologies. He develops his notion of ‘modes of existence’ to address the phenomenon that sociality always connects and is subject to different ontologies and reflexive positions at the same time. However, this notion is not thought of as a further development of ANT as it again re-centres the human being. The ‘modes of existence’ are thought of as ‘modes of existence’ of humans. Agency again is thought of as human property. And a plurality of ontologies comes at the cost of a symmetrical notion of agency.

This replacement of different ontologies with the one an overarching voice of a single actor who is allowed to speak for the network and the very low key notion of actors as factors that make a difference within this network, also accounts for a large number of non-human actors. Safety-belts (Latour, 1989) or speed bumps (Latour, 1994) become actors because they matter for the network, that is, for the voice that is allowed to speak for the network. Would we define agency as proposing an ontology instead of being part of one, this would not happen.

## **A purely formal theory of social order**

If we do not want to discard the radical project of symmetry, a deontological notion of agency and social relations beyond human agency by e.g. going back to human

agency as safe point of departure (e.g. Jerolmack and Tavory, 2014), we therefore need an “infra-language” that is able to cope with the shortcomings of ANT. As shown above, this is mainly its inability to conceptualize actor-networks as compounds of different ontologies or reflexive positions. Actors have to be understood as proposing their ontology that may be different from the ontology of other actors and even different from the ontology of the network itself that connects the actors. This would, on the one hand, give voice to those who lost their voice in the network. On the other hand, it would diminish the number of non-human actors.

Theory that aims at such a design has itself to be as de-ontologized as possible as any ontological assumptions may collide with the ontologies of the actors themselves or may limit agency to a particular class of entities (e.g. humans, humans & collective actors). In this regard it has to go further than for example the ‘ontological turn’ that still draws from a very rich ontology of human action (Aspers, 2015), even Heidegger’s fundamental ontology still assumes the being that is ontological to be human (Dreyfus, 1991). Theory that does not aim at building upon such a notion but leaves the position of actors undefined has to be purely formal. This offers us a way out of the dilemma as allows us to talk about something (formalism), developing different elements of the theory, while not making any ontological presuppositions. We may develop a theory of agency, reflexivity and the social without saying what an actor, what ontology, what the social *in its substance* is.

Drawing from the argumentation above, we would have to address the “actor”, the “hyphen” and the “network” notion in the “theory” proposed (Latour, 1999):

**Actor:** First of all, we need a concept of actors that is bound to having and proposing their ontology. Ontology in this regard has to be understood quite fundamental (Aspers, 2015) and may not be connected to humans as only entities

building ontologies. Rather we have to turn the relation upside down: Having an ontology means being an actor. This is a rather sophisticated operation as we may not understand this ‘having an ontology’ in any way ontological itself: As soon as we would regard it as a property of an entity, we would end up with the same problem as ANT. Accordingly, it is necessary to develop a *formal* notion of agency that does not build upon ontological premises. It means to identify the notion of the agency with a notion of ontology, or to conceptualize reflexivity without a kind of “carrier”: Actors are to be understood as self-animated ontologies (Hegel, 1999a). Similar to Brandom (2001) we may not regard being an actor as a primary but rather as a secondary phenomenon, derived from a systematic of a higher degree. Nevertheless, this acquired phenomenon is, as soon as it comes into existence, real.

**Hyphen:** This implies the second dimension of the notion of actors we need: Actors have to be and propose their ontology while at the same time being part of other ontologies. Only in this way we can conceptualize something like a relation between different actors. Yet, this requirement means that we have to conceptualize actors in a kind of wave/particle dualism: If we think them coherently, for example as real actors or actants in a network, we would confront the same problem as ANT: The actor would be a result of the network but not of him/herself and the network. Again, this connection has to be theorized with as little ontological assumptions as possible.

**Network:** Thirdly, we need a notion of networks that mirrors this incoherent conceptualization of actors: The connection between different actors has to be a real translation. This means that the relation between actors has to be conceptualized differently from the perspective of the network and the perspective of each actor. The translation may not be only regarded as imposing the own distinctions on a whole network.

**Theory:** To sum up, we need a theoretical design that itself has no ontological implications, that has a notion of decoherence at its centre and proposes an idea of social order that is purely formal. It has to introduce a notion of an ontology without connecting this notion to some ontology like for example Heidegger does if he implicitly thinks of “Dasein” as human beings (Dreyfus, 1991). It has to be able to conceptualize sensemaking without saying who or what is making sense. It cannot start with some ontological assumptions, like for example human intentionality. Rather it has to stay purely formal to be empirically filled depending on research question and subject of analysis (Sayes, 2013). As the “theory” notion is the foundation of the three other elements, it should be addressed first of all:

### **Theory: The Problem of Two-Valued Thinking and a De-ontologized Notion of**

#### **Theory**

The need for a consequently de-ontologized theory of social order leads back to the very philosophical foundations of thinking. I would like to propose the many-valued logic of Gotthard Günther (1976, 1978, 1979b) as a possible starting point to venture upon such a theory. Günther draws heavily on the idealistic tradition and proposes a similar notion of logic as Hegel (1999b) does. We may not regard logic as the rules of thinking as separate from a world of being, he states. Rather the notion of being has to be considered as a structure of thought. The rules of logic are therefore the rules of thinking that it cannot have any precondition. Neither logic nor thought can be given a place in an ontology. It cannot be regarded as belonging to a subject, human beings or anything else because ontology is what logical thinking produces. Logic and metaphysics are in this understanding, identical and can only be understood from within – which

makes Hegel's notion of logic the very starting point for a de-ontologized theory of the social.

Gotthard Günther shares Hegel's notion of logic. Logic, in his understanding, is thinking. And like Hegel, Günther struggles with classical, two-valued logic. But in his case, the struggle is about inter subjectivity. Günther starts with a logical discussion why within classical logical systems inter subjectivity cannot be conceptualized sufficiently. Propositions in two valued logics are either right or wrong. A right proposition is right for every subject, and it's wrong on every imaginable subject. For example the proposition, "the leaf is green" either applies to all possible subjects or none. Accordingly, true propositions are always ontological; statements about what are in the world, statements about entities: there are entities to which the proposition applies that they are cows. There are entities to which the proposition applies that they are green. Even subjects become irreflexive entities in this logic, entities that have certain qualities, but only entities. Having an opinion or a certain taste or a unique perspective is in this logic regarded as being formally the same as the leaf being green: there is an entity to which the proposition applies that it does not like strawberries.

Reflexivity or thinking in two-valued logics can only be conceptualized as false (Günther, 1978). If thinking does not simply copy the world without adding something of its own, a statement is right. But as soon as thinking as thinking, reflexivity as reflexivity, becomes visible, this can only be thought of a wrong proposition. Propositions are wrong because they entail reflexivity. They are wrong because a subject has an erroneous notion of the world.

Two-valued logic in this regard is the formalization of a very pure epistemology. It is grounded on the assumption that there is the world that is made up of entities and truth is nothing but the proper picture of this entity on the subject, the *adequatio rei*

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*etintellectus*. As it is assumed that there is only one truth about an entity, the adequatio between rei et intellectus has to be the same for every subject. If a subject finds another truth in an entity, this truth has accordingly to be wrong – it is contaminated with the reflexivity of the subject while the case of the adequate there is no reflexivity at all.

Two-valued logics are accordingly unable to conceptualize multiple subjects –not to mention reflexive positions not being topic in the classical sense. If we try nevertheless, we end up describing an ontology that comprises entities that have certain qualities we take for being reflexivity. This ontology never depicts actual relations of reflexive positions. Rather it forces reflexive positions into one coherent ontology while being blind to the fact that this ontology itself is only the product of reflexivity—the construction of an observer.

This is what ANT struggles with. On the one hand, ANT treats agency like the quality of a thing, just like the greenness of the leaf. This makes it relatively easy to distribute agency virtually on every entity and to treat it as the gradual thing(Sayes, 2013).Just like leaves that can be more or less green, it is easy to distribute more or less agency to various entities on the one hand. On the contrary, this distribution of agency is never grounded on the reflexivity of the actor itself but depends wholly on the researcher or one voice in the field that speaks for the network. This voice becomes the only truth.

The conceptualization of actor-networks within two-valued logics also accounts for ANT's inability to conceptualize different reflexive positions. Because actor-networks are conceptualized as coherent ontologies, they cannot possibly entail them. Every deviance from the network can only possibly be conceptualized as deviance from the network, either resulting in incorporation of the deviant position or struggle with it. This accounts for Star's (1991) and Amsterdamska's (1990) critique that networks do

not take into peripheral account positions and seem only to struggle for power (Law, 1999). A network that is conceptualized in the categories of right or wrong cannot be thought of in another way.

### **Actor: Negativity as Reflexivity**

The first step towards a theory of multiple ontologies is, therefore, to understand the negative side of two-valued logics not as the “false” but as reflexivity. False in this regard marks the side of subjectivity, the side of thinking. So if we state that a certain statement is false, we do refer to the fact that it is thought or uttered, written down or brought forward in another way.

This idea to conceptualize negativity as reflexivity is not new and stems from the same tradition Günther draws upon. Negation in Hegel’s dialectic represents the moment in which a given concept loses its immediacy through the movement of the spirit. While positivity is the side of substance and being, negativity in this regard is distinction making, knowledge or perception (Hegel, 1999a: XLVI). For Hegel and also Günther, “negation is the principle of distinction and differentiation” (Harris, 1986: 19). From this idea, we can develop a formal notion of agency as proposing an ontology. An agent combines a positive side and a reflexive side, a side of ‘what’ and a side of ‘how’.

This idea is deeply connected with idealist and phenomenological traditions and was first brought forward by Fichte (1994) in such a formal notion. But it mirrors in many philosophical approaches drawing from this tradition but was usually only applied to human thinking and used to develop a notion of subjectivity, culminating in the phenomenology of Husserl (1950). It was Luhmann (1995) who translated the key ideas

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if this tradition into a theory of social systems (Luhmann, 1996) by conceptualizing social systems as operatively closed processes that construct their own environment. A system in this regard is the unity of system as the reflexive side and the environment as an irreflexive side. This mirrors the structure of Hegel's absolute, and of Fichte's and Husserl's subject. A system or a subject, therefore, is a closed sphere of positivity and reflexivity.

Coming from a different tradition, Spencer-Brown (1972) formalized a very similar idea into a logical calculus. For him, the act of drawing a distinction necessarily presupposes an unmarked space from which the distinction is drawn. Every statement and every ontology, therefore, brings with it a sphere without itself. This mirrors the structure of the idealist tradition of marked and concrete positivity and processual negativity to the last detail. Spencer-Brown even formalized the closure of the system in his notion of re-entry, which proved to be a major source for Luhmann.

Even Latour offers a notion of agents as entelechies that is very close to this idea: "Every entelechy makes a whole world for itself. It locates itself and all the others; it decides which forces it is composed of; it generates its own time; it designates those who will be its principle of reality. It translates all the other forces on its behalf, and it seeks to make them accept the version of itself that it would like them to translate" (Latour, 1988: 166). Thus, in this version an actor is defined as the unity of being part of another world and at the same time generating its own.

Drawing from Günther's and Hegel's argumentation we may, therefore, develop a notion of agents that stays completely formal as the derivation has been a reinterpretation of negation as reflexivity. Formally speaking we can, therefore, *define an actor as a logical area that combines a positive and a negative side and that displays an*

*operative movement within this area.* Concerning Spencer-Brown, an actor is the re-entry of the unmarked space into the marked space.

While this definition also covers a lot of theories from transcendental idealism to systems theory, it is limited to none of them and accordingly not connected with any class of entities. It stresses actors as ontology-producing and does not define ex-ante what actors are and what are not.

### **Hyphen: Conceptualizing Interrelatedness**

This definition of actors as entelechies lets us face the problems, the idealist or, in Spencer-Brown's and Luhmann's case constructivist, design implies: The concept offers an idea of how the relation between different entelechies can be conceptualized. If the world is the unity of thinking and positive content, every thought is necessarily constructed as within such a monad. The thought has to be regarded as derived, as a mere construction. None of the classical idealist philosophers solved this problem. Hegel assumed a single, overarching absolute spirit (Hegel, 1999a). Fichte (1994) ended up with a transcendental subject and Husserl, one of the last philosophers who embarked in the attempt of a transcendental inter subjectivity, was also unable to solve the question of inter subjectivity (Schütz, 1957): His transcendental subjects remain closed in themselves. How fundamental and unbridgeable the monad-like structure of these entelechies are, is demonstrated best by Spencer-Brown (1972): The world formalized in his calculus does not even know an outside. The unmarked space always is inside the system itself, which is closed by the re-entry. Accordingly, it is impossible to express multiple entelechies within his calculus (Esposito, 2011). To put it differently, if we

define actors as producing the world, we face significant problems to make them part of another world because we face to different worlds that do not match.

As a matter of course, there have been several attempts to solve this problem. Luhmann, for example, uses constructs such as interpenetration (Luhmann, 1995) or structural coupling (Baraldi, 1993; Luhmann, 1998). These, however, cannot consistently be theorized as they violate the very fundamental notion Luhmann gives his systems. They can only be assumed to be the constructions of one system (Jung, 2009; Renn, 2006). But as such they would not serve the function of connecting different systems. We would only be able to state that each system constructs another system in its environment without having a sound theoretical footing that allows us to say how these constructions connect within reality.

The alternative to solve this problem would be to turn simply entelechies into an empirical phenomenon. This, however, would again mean to make them part of another ontology, giving them a fixed place in the world – most probably as human intentionality (Collins and Yearley, 1992). In any way, neither possibility would lead us to a theoretical design as sketched above.

Formally speaking, we face the problem of negation again. To conceptualize to subjects in one world, we would have to assume one world common world. But in this case, we would have to interpret negativity again in the categories of two-valued logics. If we assume multiple worlds, we lack a notion of how to connect them. Thus, a solution that builds on a certain “Anschauung”<sup>i</sup> is hard to develop. Günther (1976, 1979b) argues therefore for taking a formal approach. In a certain way, sociology has to reproduce the theoretical figure quantum physics made a hundred years ago, suspending “Anschauung” (Heisenberg, 1925).

Günther makes such theoretical move, drawing again heavily on idealism and pointing to the negator (which fits the “Hyphen” very well): So far, we have divided the world into the sphere of being (A) and the sphere of reflexivity ( $\sim A$ ). In this situation, each side constitutes the other: A is the opposite of  $\sim A$  and is constituted as  $\sim A$  while the opposite applies to  $\sim A$ . In this regard the relation is complete: Positivity is not negativity and negativity is not positivity. The sphere of the positive world is not the sphere of reflexivity, and the world of reflexivity is everything that is not part of the positive world. In this regard, there is a deep connection as much as a fundamental difference between both sides: They define each other by mutual exclusion and thus depend on one another. Spencer-Brown (1972) makes this very well: The positive side is marked and indicated. The negative side, however, is neither indicated nor marked. It is but a desideratum. But as such it is constitutional. Positivity is grounded on negativity. Without negativity, there is no positivity. For Günther, this connection is expressed in the negator itself. It is the negator as operator, assign of the distinction between both sides that constitutes the difference between them – and idea that draws attention to the negator itself: How to interpret it? What constitutes the difference between positivity and negativity?

The classical answers interpret the negator within the difference of A and  $\sim A$ : For Fichte (1994) and Husserl (1950) the unity of A and  $\sim A$  is self-consciousness. For Luhmann, the unity of system and environment is a product of the system. In all cases, the positive side is interpreted as a desideratum of reflexivity. This renders the solutions constructivist or idealist: the world is a product of reflexivity.

However, formally speaking these solutions are problematic because they equal the negator with the reflexive side:  $\sim = \sim A$ . Therefore, Günther regards this interpretation as a mistake. The other alternative, identifying the negator with the

positive side ( $\sim = A$ ) is not better. This would be a solution that regards reflexivity as a property of entities.

Günther, therefore, proposes to interpret the negator differently, because as soon as we turn to the negator, it turns from an operator into an operand. Because the negator cannot be defined as the area of  $A$  and  $\sim A$  which it constitutes, it has to be regarded as  $B$ . This can also be shown in Spencer-Brown's calculus: To formalize the re-entry, Spencer-Brown has to introduce a new sign. This sign, however, cannot be defined by his calculus: As soon as the re-entry is marked, we cross the boundary of the first logical area, ending up in a new one. Spencer-Brown's calculus thus crosses its own boundaries without Spencer-Brown noticing it. He introduces a new mark to mark the difference between marked and unmarked space but does not deal with the implications of the introduction of this new mark.

In consequence, the negator displays something that can be called operator-operand dualism. If we look at  $A$  and  $\sim A$ , the negator works as an operator, distinguishing the sphere of reflexivity and non-reflexivity. If we pay attention to the negator itself,  $A$  and  $\sim A$  merge and become  $B$ , demanding for a  $\sim B$  to be defined. The actor as an entelechy proposing a world becomes a positive phenomenon within another world.

By demanding for logical integrity, we produced a new logical domain. This new logical domain is nothing but a new reflexive position. A contexture in Günther's understanding is in this regard nothing else than a purely logical domain that comprises a side of reflexivity and positivity. It is neither a human nor a non-human, and it is not a thing, nor a subject, a ghost, a god or the subconscious. In fact, even the being may not be attributed to a contexture, as from a technical point of view it is not. Rather, being is

something that is constituted within a contexture, something that is produced within an ontology.

To put it differently, Günther argues in a formal way that reflexivity always entails a content and a way of relating to this content. Both sides are present in their immediacy (Hegel, 1999b). Accordingly, a second reflexive position is needed to refer to this immediacy. This may be self-reflexivity or a second reflexive position relating to the first. In any case, the immediacy of reflexive content and the reflexive relation is gone, and both sides merge to a new reflexive content that is being related to. As the new position does this, the new content is not identical with the immediacy of the first reflexive content and reflexive position. For example, the immediacy of consciousness has become a “thou” or the content of self-reflexivity or an “I” is being related to as a “me” (Mead, 2015). According to Günther, we now face two reflexive positions that are necessarily separate.<sup>ii</sup>

### **Network: Compound-Contextures or Actor-Networks?**

So far, the first two elements of the theoretical design outlined above have been addressed. First of all, we have a formal definition of an actor as entelechy, the unity of a positive and a negative domain. An actant in this understanding is a contexture, a logical area that has to be understood purely formal. It proposes its world and dwells within it. Secondly, we can conceptualize an incoherent connection. As soon as we address the unity of thinking and thought, of speaking and utterance as an actant, we open a new contexture. From within this new contexture, the entelechy becomes an ontological phenomenon. Accordingly, an actor is both: from without an actor, from within a monad. Both sides can, however, not be expressed in one coherent ontology. In this regard, the

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actor is itself incoherent and displays a kind of wave-particle dualism. In the formalism, this is marked by the operator/operand dualism of the negator. Thus, the offered theoretical design avoids ontological fallacies (making actors things) as much as transcendental traps. The price, of course, is a complete lack of “Anschauung”: the proposed approach cannot be thought of as something “real”, as practices, networks, as subjects or human actors equipped with intentionality.

What we still lack at this point regarding the elements of a theoretical design as outlined above, is the third element – a notion of network, a substitute for an actant-rhizome-ontology. This notion is already implied by the argumentation Günther uses for his idea of interrelatedness, as the same argumentation may be iterated. What applies to the difference between the first reflexive content and the first reflexive relatedness (A and  $\sim A$ ), producing the second (B and  $\sim B$ ), also applies to the second: The difference of B and  $\sim B$  implies a new reflexive position which may be called C. C implies  $\sim C$ , which may be thought together as E and so forth (Günther, 1979b).

While this may end up in an infinite regress, leading to no order at all, the chain may also be regarded as closed in itself. So while the immediacy of the first position (A and  $\sim A$ ) may be related to as B, implying the second position, B and  $\sim B$  may, which in turn may be related to as A. This actually may be thought of as a situation of double contingency, as interpreted by Luhmann (1995). An active relation would, in turn, have to be thought at least triadic: Position A, position B and the interaction itself as position C. Günther (1979a, 1979b) calls this a compound contexture: Different contexture relating to each other without consuming each other.

This notion accordingly is different from the notion of actor-networks in various regards. First of all, a compound contexture is and can never be coherent. In case it became consistent, it would be a different contexture. An actor network is more of a

well-fitted system of nuts, bolts and gearwheels, working like clockwork that strives for dominance, excluding, subduing or fighting every instance that opposes it (Amsterdamska, 1990). In an actor-network, deviance is not part of the game but a problem of boundary work. In contrast, a compound contexture is about how order emerges out of differences while the difference persists. It is about contradictions, “Widersprüche” (Hegel, 1999b), between the different contexture, the simple fact that they are different worlds.

This notion does of course not imply conflict or fight – though it can mean the very same. It can be a simple fact that a *thou* is never to be fully reached, as its thoughts cannot be. It can mean that I always have to buy my ticket for the railway from the company as I simply cannot buy it for myself. If I were religious, it would mean that I will never fully understand God, but will always strive to do so. Thus, as Jerolmack (2009: 379) points out regarding playing with dogs, the crucial point is not, that perspectives are shared, or that there is any real inter subjectivity. Rather “the tension revolves around each member seeking to engage her project while enabling opportunities for the other to participate in his project.”

A compound contexture is therefore about the links; about different ontologies that never dissolve into one new ontology but rather adapt to a certain degree, build up expectations and work with ideas, entities and structures that to a certain degree fit the ideas, entities and structures of the other contextures. Alter and ego will develop certain expectations that are not identical, but that will most probably fit enough so that the interaction goes on. God and the believer will maintain their distance, God staying distant and sometimes giving relief but never becoming completely linked to the believer. The distance stays. Disappointment, conflict, struggle, and misunderstanding

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will persist as long as the Contextures do not for some reason collapse because the contextures stayed separate and locked into their ontology.

This also shows the second difference regarding actor-networks: Compound contextures are not about a single interpretation. They cannot be thought as being about power or being about science. Rather, they can be about all and nothing. Contextures that are about power may link up with contextures that about believe and Contextures that are about truth or science. The compound may very well work. But it will be a different compound from within each contexture. Science, political influence, and economic interest may link up in research funding projects. Religion, political power, and economic interest may link up in churches. Economic interest, love, and desire may link up in marriage. But it will not be possible to say about what the compound “really” is as it is neither about one of those references nor is it about all of them.

The third difference that however, is more of a change of focus, is the built-in process view. While this process-view is also something inherent to ANT (Hernes, 2010), it is not so much inherent in the notion of network, as in the assembling of the network. A poly-contextural perspective would, therefore, add interest for the dynamics of balance, regarding stability as dynamic in itself. Contextures have to be thought of processes, animated by their internal contradiction (Hegel, 1999b) and, moreover, by the contradictions between different contextures. Because A and  $\sim A$  is conceptualized as B, the relation is not stable and dynamic as B never is A and  $\sim A$ . From within the immediacy of A and  $\sim A$ , the negator is total negativity, the instance that produces movement (Hegel, 1999a: XLIII). From within the second, this very instance is a new positivity: B. And this duality, the fact that total negativity and positivity are identical, that B basically is “ $\sim$ ” produces movement due to the very contradiction: For example, the immediacy of consciousness is never identical with the thou that is considered by

another person. Politics will never manage to make the society do what it aims at (Luhmann, 1993). A poly-contextural perspective would, therefore, develop an interest not only in becoming and failing as process but would also interpret what shows itself as stable and fixed as a process.

## **Conclusion: Towards a Poly-contextural Sociology**

As the argumentation above has been necessarily abstract, it raises, as a matter of cause, the question of its applicability and its consequences for empirical research. The first change for empirical work would be to link agency to reflexivity again – though not to human intentionality. The actor is only who or what shows itself to propose certain ontology, a way of actively relating to the world, reflexivity in its most basic form. This would exclude safety belts (Latour, 1989) as much as speed bumps (Latour, 1994) in most cases. However, it would mean to give God, organizations, even the own self or administrative routines in many cases the status of actors. As soon as something is referred to as being ontological, it may be regarded as an actor.

This leads directly to the second point: Agency can only be attributed using an index. An agent is only an agent for another agent. A galley slave may for the captain of the galley only be part of a machine that is manipulated by whipping and kept running by food. For the galley slave, the situation may be completely different. A lawsuit may become a Kafkaesque entity that hovers over its victim while it simply is an everyday action for the prosecutor. An actor only is an actor for another actor, and the different perspectives may very well fall apart. However, this does neither mean relativism in an “anything-goes”-sense as to each observation an index has to be applied: In the way A, B is an actor for C, while C is only a thing for B.

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This implies that we would systematically have to reconstruct how different ontologies interlink: What kind of world is build up within one contexture? Which rationale does it produce and what other actors does it draw upon? And how does the ontology of the other contextures is a match or a mismatch? In any case, how is it possible, that different perspectives interlink? In the case of Latour's (1989) safety belt, this could, for example, to understand the safety belt as a point in which engineering, traffic regulations, economic interest and the perspective of the driver intersect. It is not the safety belt that is an actor. Rather the safety belt connects laws that enforce traffic security with technical innovation and the interest of the firm to stay in business. The safety belt in this regard is itself poly-contextural.

However, which contextures appear depends on where we start from. In the development of a new safety belt, other contextures would show as in the regular use of it by a driver. In a lawsuit following an accident, the safety belt would be something different than in making actor-network inspired interpretations of it. Neither the driver nor the lawyer nor the engineer nor the manager of the car company would regard it as a moral actor.

This makes a poly-contextural analysis first of all rather complex and secondly rather dynamic. It is complex in a Luhmannian (1995) sense because it aims at reconstructing different ontologies that do not completely fit one another. Instead of one, overarching actor-network, a multiplicity of perspectives and rationales are reconstructed that cannot be thought of as fully fitting, as coherent or as a whole. Rather a compound-contexture is about the incoherence, about the differences and the misfits and the question how an order is possible despite these incoherencies. If "actor-network theory is all about power" (Law, 1992: 387), a poly-contextural perspective would take into account that a compound may be about power, but also of love or truth, believe or

gain and that either dimension may show different from within the next. In this way, translation is not understood as “transformation and the possibility of equivalence” (Law, 1992: 386) but as functional misunderstandings (Luhmann, 1995), as a vague process that does not transform but maintains the difference. Equivalence is regarded as a very fuzzy approximation that establishes a relationship that never implies complete identification. The order is not the coherence, but the stability of a misunderstanding. The compound does not turn heterogeneity into homogeneity but is heterogeneous in itself.

This points in the direction of Luhmann’s (1995) notion of understanding. However, there are major differences. Not only would a pol- contextual perspective be open for non-human actors, which is not the case with systems theory (Blaschke, 2015). Luhmann also has his focus on coherence and the structure of single systems (Grønbaek, 2015). As argued above, connections between systems are something, which are rather a blind spot of his theory – despite the fact that he draws upon the notion of poly-contextuality (Luhmann, 1998). Therefore, in a certain way, the proposed approach turns Luhmann upside down, discarding the focus on large and orderly function systems, the ontology of social and psychological systems, laying the focus on messiness and substituting the monumental systems theory with a minimalistic “infra-language”.

The analysis is furthermore dynamic as the incoherencies between the different contextures produce a certain unsettledness that not necessarily lies in the strive for the predominance of one network or another, or by the resistance of actors. Rather it is inherent in the most stable network. Actors can be reconfigured, may pop up and disappear. Others may become mere things that are ready-to-hand (Heidegger, 1993), or actors may become acts. These movements, for example, the permanent switching of a patient being a thou and the patient being a body that occurs in medical treatments

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(Vogd, 2004), may very well be systematic and a way in which different contextures interlink. The rebuilding of a compound contexture, therefore, is not the reconstruction of something fixed and stable, but rather of a very precarious and dynamic complex that is always on the verge of collapse and that derives its order from dynamic instability rather than from a kind of stasis.

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<sup>i</sup> „Anschauung“ is what can be referred to as an „untranslatable“: The term roughly refers to the possibility of visualizing something in a certain way (Cassin et al., 2014).

<sup>ii</sup> This is maybe the main difference concerning Hegel (e.g. 1999a: 29), who assumes, that the difference between the two positions is „aufgehoben“ – transcended and maintained while brought to a synthesis (see also Cassin et al., 2014).

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