

The Paradox of The Boundary Creature

A thesis depicting the concept of boundary's nature in market formations

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Abstract

Within the burgeoning literature of how market representations is performing markets, recent research has suggested looking at how conceptual boundaries are affecting the market onto which they are drawn. One key aspect of this type of framing is the relation between market formations and the performative power of the law, of which relatively little has been written. This thesis is therefore set out to describe the relationship between the law as a conceptual boundary and how it shapes markets, but also how market enactments challenges the frames created by the law. In order to grasp this relationship, a profound investigation of boundaries constituency has been conducted in order to conceptualize the boundary as an object, to make it something that we can understand. Coming to grips with the paradoxical nature of the boundary requires an ontological and epistemological discourse around what they are, and how we can understand them. In this body of work, the boundary is defined as an entity in its own right, where its materiality is conceptualized as a conflict. This conflict in turn is of great interest in terms of market delineations, as the complexity arising when a frame is created is on the basis of excluding something, also including the very same thing. The resilience of the boundary depends on what investments that are put into it, which is a delicate thing, because if the conceptual boundaries bracketing the world is no longer cohesive with its material nature, then the latter gallops on, leaving the perception of reality misunderstood.

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Definitions of Key Concepts

Performativity: In order to grasp the complex nature surrounding us, we create representations of the world. These representations and their format varies greatly depending on what they are depicting, but in terms of markets it can be anything from reports, statistics, classifications schemes, law statements and models etc. The Performativity approach suggests that these representations have a great impact in the construction of reality.

Socio-technical agencements: Representations and ideas of the world around us make up one part of reality, however, there is also a material world present that continuously challenges our representations and ideas of the world. A socio-technical agencement is the depiction of the world that interlinks our ideas we have of the world with the world itself.

Objects: An object is in this thesis used to denote an assembly of things constituting for instance a boundary or a market. Moreover, in accordance with Actor-Network Theory nonhuman objects can act participatory in systems and be a part of the associations we make of things, such as for instance a market.

Conceptual boundaries: In this thesis conceptual boundaries will be discussed in relation to the actual materiality of the boundary. Here, when talking about conceptual boundaries I refer to the representations we have of a boundary, which in most of the cases in this thesis will be the law.

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“Before the law stands a doorkeeper. A man from the country arrives and requests admittance to the Law. But the doorkeeper says he can’t grant him admittance now. The man thinks it over again and then asks if he will be allowed to enter later. “It’s possible” says the doorkeeper “but not now” (Franz Kafka, 1925, p 215)

1. Introduction - Without a Thing of Boundary, There is No Thing.

Franz Kafka’s short story “Before the Law” depicts the tale of an old man’s eternal waiting to gain access to the law. More specifically, it portrays the state of being *“outside the law”* and its boundary (Boano & Marten, 2012). Here, Kafka approaches questions of spatiality and marginality and of who or what it is that decides *“what it means to be in or out, who decides what is inside and what remains outside, where the perpetual exception of not being able to cross the border and not understanding why, remains the character’s personal doom”* (Boano & Marten, 2012, p. 1). One could argue that this discussion put forward by Kafka is evidence of the invisible power asserted by law, state and territory, which circumscribes an individual’s freedom. While this might very well be the case, another question that arises in relation to this story is: Why does this man wait until his own inevitable death to get access to “The Law”?

This leads us on to spark questions around this divider and boundary itself. What is it actually? What does it constitute of? How is it sustained? And who is affected by a boundary? The latter question is asked by Brett Christopher in his article “The Law’s Market” from 2015. He, just as this thesis, acknowledges the critical approach presented by Timothy Mitchell in “The Properties of Markets” (2007) that urges us to start questioning the effect of how market boundaries are drawn. Both these authors, as well as the perspective maintained in this body of work, proclaims that it is key to start realizing the implications of what is decided to be inside and outside a market. Not only for the market itself, but also from a societal view point, thus we must *“question the nature of the political-economic worlds that these boundary drawings ultimately help to effect and organize”* (Christophers, 2015, p. 1) in order to understand the ramifications of for instance what is denoted as a market and a non market in the capitalistic system (Mitchell, 2007).

When one thinks of boundaries, what might come to mind are the relationships between frontiers and borders, or the geographical locations and delineations of nation states. For instance, geographical frontiers could probably evoke stark associations with zones of conflict in militarized regions (Strassoldo, 1977). However, boundaries can also refer to a more specific point, i.e. some mark, and some writers have suggested that this “mark” refers to the same “mark” that designates a military frontier as well as the “market” (ibid). All three are seen as references to a form of exchange practice denoted as “silent trade” in the no-man’s land between actors (De Greef, 1908 & Strassoldo, 1977). Though thrilling, this line of thought is limited and subject to question because it fails to acknowledge the agency of boundaries themselves. In military strategic terminology, a boundary is a remote location such as *“mountain range, brush and deserts, an area that stretches between defined territories, a no-man’s land that separates one power center from another”* (Renqvist, 2011, p. 13). On one hand it is a no man’s land and separator, yet as will be shown here in this work - it also serves as a connector. Is it therefore right to think that the boundary is a thin line, a “no-thing land”? Or is it rather something in its own right? And if it is a thing in itself, how can we understand the relationship between a conceptual boundary (law, maps, documents) and a physical demarcation (state frontiers, water, deserts)?

What this thesis proposes is that the boundary should be seen as an entity in its own right, which simultaneously divides as well as connects “things”. In other words, the boundary is a paradox—it creates the conditions for things to interact by acting as a divider. This type of interaction stems from a chaotic outset which through division becomes ordered, yet, though some order is established, there remains an ongoing conflict that also presupposes the boundaries’ existence (Trías, 2003). The necessary condition for a boundary is that there are actual things to be divided, and once divided drawn into a more ordered interaction. This duality of the boundary and its relationship with things are responsible for its complexity and its resilience. The object of study will in this context will be markets and their formation, and more specifically what will be treated is the interrelationship between markets and boundary drawings in terms of law. In order to do so however, one must first try and disentangle the actual concept in more general terms as well, which will be the outset. Yet, in order to answer the question raised above regarding the relationships between physical and conceptual boundaries, one must first begin to understand the impact representations have on the material world.

Representations are the definitions of the world we create as we continuously struggle with making sense of things by categorizing them, delineating them, and putting them into brackets. And when doing so, it is important to remember that as Latour suggests, *“there will be as many definitions of ‘the whole picture’ as there are actors striving to enroll and/or to be enrolled in it”* (Latour, 1986, p. 6). However, these definitions that we create are only temporary. Our understandings of how things are can only be performed *“for as long as you are able to perform it”* (ibid). This performance determines how long a definition may hold, when we are again plunged into chaos, and how this plunging will take place. All of this of course depends on what investment we have in the definition. Society is made and unmade constantly (Callon, 2010) because actors are inclined to create conflicts that render in time a new type of order on which we balance. Various forces in society continuously recreate this never ending balancing act.

Although consideration of representations being abstractly – as definition, they do have influence within the material world, and it is important to address that influence. For instance, is it reasonable to consider that a scientific theory can alter the nature of the object it describes? Michel Callon, for instance, poses this question in the book *“Do Economists Make Markets?”* (MacKenzie et al, 2007) when he tries to disentangle the notion of performativity with relation to economics, and more specifically when he asks: what does it mean to say that something is performative? The implication of this question is that our models, which are used as a way to try to understand the essence of economic formations, also impact how economics function?

Economists advocating the performative approach are proposing exactly this that the economy and more precisely markets are created in part through our efforts to understand them (Latour, 1986). Other economists of the more traditional school argue the opposite, that while economic theories are descriptions that produce concepts, they cannot affect economies even if we wanted them to (Callon, 2006). However, the concept of performativity offers an explanation as to why these models, definitions and descriptions can be viewed not only as representations but also as “things” that participate in the construction of other “things”.

So why is this important? Well in a sense one could say that “*market formation processes perform social (market) systems (Giesler 2003) by forging associations and distinguishing markets (Abbot 1995)*” (Kjellberg & Olson, 2016 p. 4). Central, then, to the position mentioned above is the belief that the market object is affected by the things that aim to describe it (Callon, 2006). The influence of experts, for instance, and the models they create of the market certainly provide one example, yet there are many other forms of representations that can be said to have an impact on how we perceive markets. In order to tie back to the subject of this thesis more specifically, is to address the set of representations expressed as law-enforcement. One of the many examples to be discussed here is for instance competitive authorities attempt to delineate a market based on its material constituency, which in turn has implications for the market onto which the boundaries are being drawn (Kjellberg, 2010 & Christophers, 2015).

Again, the concept of performativity explains how this can be the case: it pinpoints the interrelation between logic and rhetoric and affords to language a function not only to represent and logically explain its object, but also to co-create that object. In Callon’s terms: “*all utterances are performative and that it is impossible to maintain the hypothesis of the existence of pure constative utterances*” (2006, p. 10). This performative relationship between an utterance and the world it describes and evokes is defined as a socio-technical agencements, which will be discussed in greater depth in the next section, but before that, this seems to be a good place to pause to connect the threads presented above.

The Kafka example brought up in the opening is applicable to the relation between markets and the law. The law acts as a gatekeeper monitoring the entry of new actors and restricts their actions (Coffee, 2003), defines the boundaries drawn and guard their enforcement (Robillard et al, 2002) through, for instance, antitrust law (Christophers, 2015), procurement procedures and property rights, to mention a few activities. So what does the law do here? It acts as a divider, something that separates an outside from an inside, it becomes a boundary. Yet, as a line in the form of a boundary is drawn, something else happens too, a new relationship is created between entities. This relationship is two sided; it connects one space, one materia, one world with another, so every boundary is also a threshold (Renqvist, 2011). It is not simply a no-man’s land in between markets, within markets or even between a market and a non markets (Christophers, 2015) it is also a

connector, which this thesis aims to demonstrate in detail. Here, it is also important to note the impact of definitions and the translation of world into word used in boundary creation. In law for instance, phrasing creates delineation (Robillard et al, 2002). Thus, it is important to try to understand this relationship exactly, to understand how the material world is translated into something that can be expressed? By studying the performative power boundaries assert by uttering something about how the world is constituted, we also come closer to being able to say something about boundaries own materiality, and as we will see going forward, understanding performativity is an important concept in this process.

1.1 Performativity As Concept

When it comes to performativity, it is worth noting that it does not deploy the concept of truth, but rather it aims at determining the success of its own representations of the world it intends to depict (Callon, 2006). As the concept is rather complex yet of outmost importance for the analysis in this thesis, I will now here try to disentangle what “being performative” actually means. The model below is an own constructed model based translated from Michel Callon ideas on performativity (2006) and aims at visualizing the interrelations among its three essential aspects:

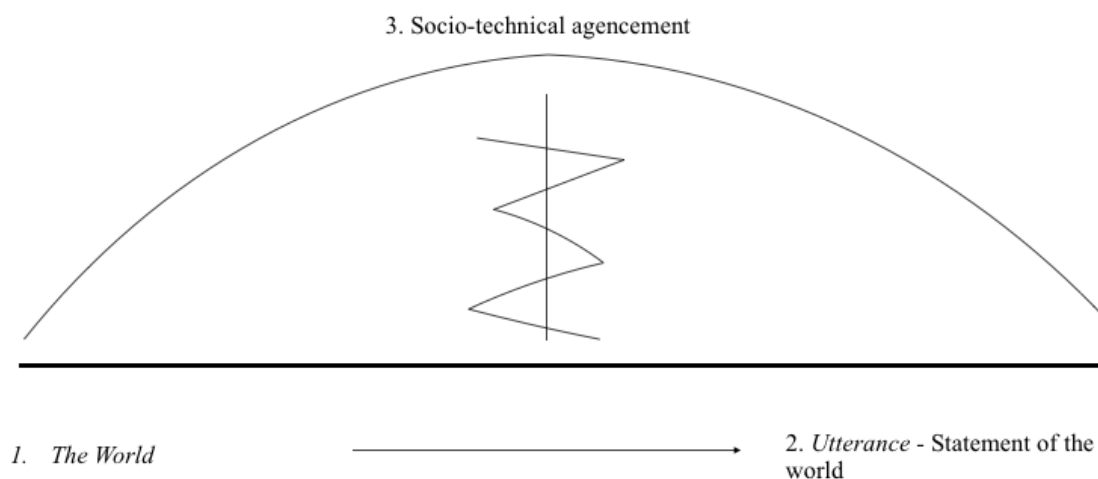


Figure 1: Model depicting the interrelations between The World and Words, expressed as socio-technical agencements

1. The World (the actual world in all its complexity), 2. The Utterance (the statement that tries to make sense of its world), and 3. The Socio-technical agencement (the relationship between 1 and 2). A socio-technical agencement is the result of statements that can act differently depending on how they are configured and thus, when a socio-technical agencement is constructed, the statement of its constituency is interweaved into its meaning; *“it includes the meaning pointing to it”* (Callon, 2006, p. 16). In other words, The Utterance (2) includes The Socio-technical agencement (3). This might become a little bit more clear with the help of an example, I will now return to the example of the Black Scholes formula mentioned earlier to help articulate the interrelations between these and explain the concept of performativity. In Michel Callon’s article on performativity from 2006 (greatly cited in this thesis) it is depicted how Donald MacKenzie (2006) explains how the Black Scholes formula became actual in the sense that it grew meaningful in its own world (Callon, 2006).

Through continuous refinements and adjustments to the world it aimed at depicting, the Black Scholes formula constantly found itself in an actualization process that adjusted its descriptions of the world. At some point in time it might be even right to say that the formula described the world it depicted successfully, and then by default, the formula also became true (ibid). This happens when the formula tries to progressively discover its world as The Utterance (2) describes, experiments, observes, categorizes or articulates how The World (1) is constituted. The World (1) then becomes more accessible and is defined based on The Utterances (2) that are expressed as a socio-technical agencements (3 - and in this case a formula called Black Scholes) which actualizes the world it describes. This actualization process moves us in between these three instances constantly, and in stage 3. The Socio-technical agencement is constantly subjected to trial and error.

More specifically, as the world that a formula describes is in constant movement. The formula becomes false (or fails), and as soon as it fails to adjust to the new condition; *“the game is never over, for new framings are always possible, always involving a bricolage of both the agencements and the statements”* (Callon, 2006, p.17). What makes this actualization process possible in the first place though, is the performative nature of The Utterance (2). A statement namely opens up for a process of trial and error that we continuously enact and learn from. Thus, when the statement can be refuted, the prescribed socio-technical agencement no longer holds, and needs to be adjusted.

1.2 Problematization

So how does this interlink with the markets and their boundaries? And how is the linkage between world, utterance and socio-technical agencements important for us to understand the relationship between markets and law? Well, as performativity *“moves beyond things accessible for the human mind as it deploys all the materialities comprising the socio-technical agencements that constitute the world in which these agents are plunged”* (Callon, 2006 p.17), the concept of performativity shows us how the law (which is a conceptualization of the market) and the market are interrelated. Just as the Black Scholes formula, a law is also a socio-technical agencement that continuously balances the material world with the representation we want to create of that world by delineating it. The drawing of a boundary in terms of law is as Christophers (2015) denotes *“perennially dogged by conflict”* (p. 1) as the market is continuously evolving and challenging the idea of the market expressed in the law.

In order to understand the complex relationship between these two entities, we need to start to looking at the boundary to understand what happens when we declare something to be outside or inside a market (Mitchell, 2007). We also need to understand how the law can make this delineation, on which grounds, and what it is that eventually causes the law to change (or mitigate changes in the market). Performativity invites all the events that might refute or occur as unforeseen happenings into the delineation, meaning all the other things that are continuously enacted in the world, that eventually causes the socio-technical agencements to fail (Callon, 2006). There are various definitions to these failures, and the one used here will be that of Michel Callon who calls it overflowing. Importantly, as we will see, the very being of a frame, a definition, a law is from the lenses of performativity dependent on that another world is present.

Moreover, as Callon (2006) also shows us, it is not only the conflict in the constituency of the boundary between world and word that cause a socio-technical agencement to fail, other views of how the world is constituted also causes conflicts and strains (Christophers, 2015). *“The fact of imposing devices designed to realize a statement causes other worlds to proliferate in reaction to that performance. Any act, even of language, produces effects that might strike back”* (Callon, 20016, p. 17) Both these aspects are important building blocks for us to come to

understand the relationship between markets and law, and how boundaries expressed as law affect markets' constituency.

In the light of this, boundaries become hugely interesting entities to study. As aforementioned, the main argument put forward in this thesis proposes that the boundary is an entity, a divider yet something that connects; however, which other entities does it connect? The previous discussion regarding performativity suggests that one could construct a conceptualization of boundaries as performative entities, as they in their inclusive exclusion (Mitchell, 2007) during a moment of stabilization could be claimed to enrapture the socio-technical agencement of the things that it connects. During certain moments, a boundary—may it be a law, geographical or social barrier—successfully describes its world, yet as unforeseen and opposing contexts are constantly challenging its stabilization, if the representation of the boundary shall continue to be performative, it also needs to adjust. But what is it that it needs to adjust to? And how does that happen?

1.2.2 Research Questions

The above mentioned questions address matters that many market-theorists deal with: that markets are malleable entities which implies that they are able to retain and take form (Nenonen et al, 2014) and that they are continuously deteriorated and deconstructed as well as the fact that the formation is very much dependent on the representations we create of these markets (Rosa et al, 1999, Rinallo & Golfretto, 2006 & Arujo et al 2010). Moreover, the concept of performativity gives us a chance to observe reality (Callon, 2006). What is performed is the social-technical agencement that, most successfully, describes the various competing structures that underpin a market (ibid). The analysis performed in this thesis aims at clarifying the concepts of what boundaries are by a suggestive approach, saying that socio-technical agencements actually are boundaries. Thus, the questions to guide the analysis will be:

- 1) How can boundaries be conceptualized as performative objects in markets?*
- 2) In what ways is it possible to suggest that boundaries are socio-technical agencements?*
- 3) How can the conflict between boundaries be conceptualized?*

1.3 Purpose & Contribution

This thesis aims to conceptualize the notion of the boundary in relation to markets and more specifically markets interrelationship with the law. It will do so by forming a logical discourse that interconnects various strands of literature relevant for the development of a theoretical model that is to be seen as a contribution to research within market structures and their formation (Kjellberg & Helgesson, 2007). By using concepts from the burgeoning literature within performative economics (Callon, 2006 & MacKenzie, 2007) it seeks to conduct a theoretical analysis and conceptualization of what and how boundaries are and detect the conflicts that constitutes these boundaries. Despite its common features (boundaries are to be found everywhere in society) and the extensive research made within various fields that treats boundaries in one form or another (Strassoldo, 1977, Curzon, 1907, Lamont & Molnár, 2002) relatively little has been discussed around boundaries constituency and its conflict in relation to markets in terms of law (Christophers 2015 & Star & Greisemer, 1989). This thesis maintains that by studying the complex nature of conceptual boundaries (Christophers, 2015) one could also get closer to the precarious relationship between markets and the boundaries forging their delineation, such as the law, and in the greater perspective disentangle the implications and effects of these boundary drawings.

2. Methodology

2.1 Scientific Research Approach

“You are wrong, Simplicio: what you ought to say is that everyone knows that it is called “gravity”. What I am asking you for is not the name of the thing, but its essence, of which essence you know not a bit more than you know about the essence of whatever moves the stars around”
(Galilei, 1632/2001, p 272 in Machado & Silva, 2007)

This thesis will rely on the conceptual analysis method to create a discourse around the notion of boundaries. A method that in many regards, despite its positive accounts, has for the most part been neglected in scientific research (Petocz & Newbery, 2010). The quote above by Galileo Galilei pinpoints the essence of what this analysis is aiming at - to understand and disentangle the actual meaning of the concept of boundaries, or in more scientific terms evaluate the linguistic usage and

application to understand what it is and how it is (Machado & Silva, 2007). In an article by Machado & Silva it is shown how the Italian scientist, though being a strong advocate for experimentation and mathematization (Petocz & Newbery, 2010) also “*used the conceptual analysis to formulate clear concepts and testable explanations of the physical world and to reject their opposites*” (Machado & Silva, 2007, p 2).

When adding this approach as method to the two other activities one enriches the analysis since one can approach objects (market structures and their boundaries) from more angles (Flick, 2002). This is important and relevant in any discipline that contains components that are conceptual, such as definitions, categories and forms of linguistic structure (Bowker & Star, 2000). In terms of boundaries, their constituency and the suggestive approach applied in this thesis, the analysis conducted here is therefore guided nicely by the toolbox offered by a conceptual analysis framework, as the goal of such approach is to increase “*the conceptual clarity of a theory through careful clarifications and specifications of meaning*” (Laudan, 1977, p. 50 in Machado & Silva).

Conceptual analysis adds to the scientific density by among other things clarification of concepts, which is the sub-category within conceptual analysis mostly used in this thesis, but it should be added that this type of analysis also aids “*exposing conceptual problems in models, revealing unacknowledged assumptions and steps in arguments and evaluating the constituency of theoretical accounts*” (Petocz & Newbery, 2010, p. 4). As a methodology the conceptual analysis is closely related to a critical thinking approach and it is sometimes also referred to as theoretical research. Moreover, strong advocates for this method argue that conceptual analysis should not only be seen as a third activity adding to the other two previously mentioned. Rather it is the activity that presupposes experimentation and mathematization by being logically prior in the line of scientific inquiry (Petocz & Newbery, 2010) and it is therefore to be seen as the primary method, a short explanation to as to why this can be the case will here follow, for an overview please see the model below.

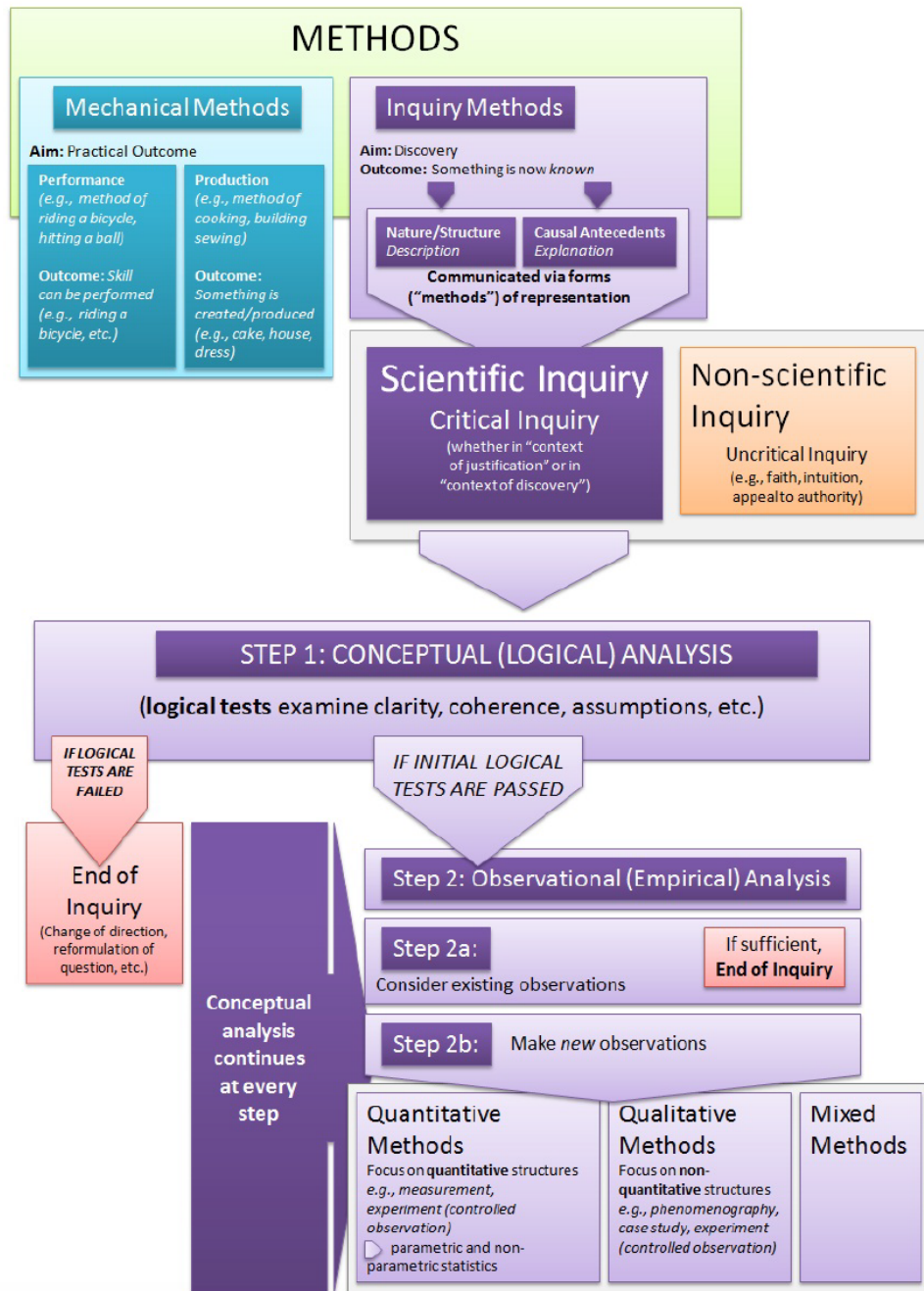


Figure 2: Original model from article by Petocz & Newbery (2010)

Petocz & Newbery suggests that the initial division of methods can be broken down between two basic categories: mechanical and inquiry. The mechanical approach sets out to perform or result in something we were not capable of performing before. Now, the inquiry method's fundamental difference with the mechanical is its underlying intention to discover, aiming at detecting things that previously have been unknown. More specifically it seeks to understand the epistemology and ontology of the nature or structure of a situation, providing us with a description. Within the part of

inquiry, this method can then also be divided into two categories—non-scientific and scientific, where the latter separates itself from the first by being of critical nature—which is the only acknowledged core scientific method (Michell, 2010). This approach can only be maintained by logical reasoning around the theoretical concepts that underpin the observational analysis that must be conducted first after the conceptual part has validated and clarified the meaning. Also, as empirical research then is conducted, the conceptual approach must constantly be iterated in the process of observational methods (Petocz & Newbery, 2010).

Moreover, in their article Petocz & Newbery (2010) raises the issue of that when subscribing to a realistic approach it is sometimes presumed that one also needs to apply a positivistic vision in the distinction between logical and empirical inquiry. The main argument proposes here that the latter is the only method that can be regarded as scientific whereas logics is merely attributable to philosophy. The viewpoint that will be maintained in this thesis, however, is slight different. First and foremost, as Petocz & Newbery stresses, the outset of scientific inquiry and research is the conceptual analysis and so *“the persistent application of logic as the common feature of all reasoned knowledge...in essence scientific method is simply the pursuit of truth as determined by logical considerations”* (Cohen & Nagel, 1934, p. 192 in Petocz & Newbery, 2010). Thus, the scientific contribution and focus provided here will be an analysis of the theoretical concepts that can aid our ontological and epistemological understanding of what boundaries are. It will do so by disentangling chosen theories with regards to boundaries, and connect their interconnecting strands (Cronbach and Meehl, 1955). Secondly, As Maggetti et al (2013) describes the thoughts of Goertz (2006a), in addition to a realist approach one could add an ontological and causal view as *“ontological refers to what constitutes a phenomena or portion of reality we are interested in”* (Maggetti et al, 2013, p. 5). Yet, as the approach in this thesis is suggestive rather than conclusive (Star & Greisemer, 1989), the perspective that will be maintained will be more of a nominalist view which enforces the interpretive aspect of the analysis (Maggetti et al, 2013). The difficulties and potential critique that arises from this will be discussed below.

More specifically the approach presented above implies (how Cronbach and Meehl, 1955 identifies it) to firstly examine the meaning of the concept of boundaries, that is, what they are. Secondly, conducting a linguistic and conceptual examination by disentangling and then proposing definitions

as to how they are. This will be guided by the performative approach and the advocacy that boundaries actually are socio-technical agencements. Thirdly, this assertions developed in the proposed theoretical model are then applied to two cases in order to extract somewhat of empirical cognizance to the model (Machado & Silva, 2007). It ought to be emphasized here that the conceptual analysis does not neglect the importance of insights from the material world when it comes to scientific methodology and research, it only argues that the meaning and linguistic coherence of how one approaches a specific theory needs to be examined to a greater extent before the empirical work can be conducted (ibid).

Therefore, in this thesis two specific cases are brought in to serve as tools to inform the model and aid the validity of the theoretical concept of boundaries that is developed. This thesis thus uses an abductive approach to guide the conceptual analysis further (Alvesson & Sköldberg, 2009) with two examples that depicts the boundary phenomena and its conflict. One can therefore say that this thesis also (in addition to the conceptual) makes an observational analysis as a step 2 from the model by Petocz & Newbery. These two cases could be seen as exemplifying ones that due to their nature “*will provide a suitable context for certain research questions to be answered*” (Bryman, 2012, p. 62). The first example treats the deregulation of cannabis market in the United States. To study boundaries in terms of market systems and the relationships among various types of socio-technical agencements (meaning in this context different definitions of a market), it is helpful to depict market situations where the market itself and its adjacent entities are in an ongoing reformation, which in turn enhances the conflict aspect and draws it into the foreground (Kjellberg & Helgesson, 2007). It also shows how the socio-technical agencement is continuously actualized in order for the statement to fulfill the conditions of felicity, that is to successfully describe its object (Callon, 2006) which in this case is the market. In other words, this example primarily aims to show the various conflicts that are enacted between statements of what the boundary is and secondly it also depicts the actual materiality of the market boundary itself by analyzing its constitution profoundly through the means of exchange. This case uses the work of Professor Hans Kjellberg and David Olson published in 2016, the content and application to the topic of boundaries has been discussed with the paper’s co-author Kjellberg who is also the supervisor of this thesis.

The second example builds on this latter aspect and strengthens the suggestion of how one can see the boundary as a socio-technical agencement by treating the case of “Freeports” which are places where one can place valuable objects in facilities located in free-trade zones. This is an interesting topic to discuss firstly due to its implications of and by globalization (in Political Economy, one has for instance started to look at this type (and others) of offshoring as an “*integrated realm nibbling... at the very foundations of the international political order*” (Palan 1999. p 18)). Secondly, Freeports in the modern sense have been investigated relatively little as a phenomena (Heidenreich, 2016 & Steyerl, 2015) and it is first in later years its ramifications for, for instance the art market, has come to be acknowledged (ibid). Thirdly, this example pin points the complexity of the boundary as it itself is a form of lacuna, an exception from the law, which gives a whole new dimension to the relationship between market and the law, and is fruitful in terms of discussing how the law as a boundary, and its paradox, is constituted. The material used in this thesis with relation to both offshoring and more specifically Freeports is gathered from two other pieces of (unpublished) work conducted in the autumn of 2016. These papers were written in courses with a Philosophical and Political focus, and are brought in to strengthen the analysis made.

2.1.1 Quality of Study

The conceptual study also calls for reflections on the quality criteria, where the main aspects to consider here ought to be the validity of the model presented. Internal validity as defined by Bryman (2012) has been addressed by conducting five informal conversations carried out with experts within the areas of linguistics, philosophy, geography and law as well as markets. These talks have offered valuable insights into how the concepts developed could be applied and analyzed from these persons’ own areas of expertise, as well as to confirm that the conclusions, linkages and logical reasoning that is conducted has grounding. This was specially the case for the analysis of the Spanish philosopher Eugenio Trías, who's work has here been translated from the Swedish version of his book “Thinking Religion” from 1997. These translations and interpretations have been discussed with philosopher Anna-Lena Renqvist who used to work with Trías and to whom we are obliged to for translating Trías texts into Swedish.

In terms of external validity, it is my intention to bring forward a suggestion of how to approach the paradox of boundaries which ought to be generalizable not only for the two specific cases that the

concept is applied to here. Since the abstraction level of the model is, as already noted, high, one could in accordance with the classification scheme put forward by Wallace & Poulson (2011) say that the degree of generalization is also extensive, yet, the degree of certainty and claim to knowledge could be questioned, please see the model below for overview, the white box is where I identify this thesis to be. The aspects mentioned above in terms of the two chosen cases, the informal interviews and use of material collected during the course of a year (in the case of Freeports) are all activities that have been carried out in order to mitigate this possible shortfall and secure the claim to knowledge. Yet, there are obviously aspects in terms of potential critique that also needs to be addressed.

		Degree of certainty	
		Low	High
Degree of generalization	Low	<p>Low vulnerability to critical questioning because abstraction level is low and claim to knowledge low</p> <p>Critical question: Is there sufficient evidence from the specific context to support any tentative claim?</p>	<p>Moderate vulnerability to critical questioning because claim to knowledge is high and</p> <p>Critical question: Is there sufficient evidence from the specific context to support any confident claim?</p>
	High	<p>Moderate vulnerability to critical questioning because abstraction level is high but claim to knowledge low</p> <p>Critical question: Is there sufficient evidence from the specific context to support any tentative claim entailing extensive generalization?</p>	<p>High vulnerability to critical questioning</p> <p>Critical question: Is there sufficient evidence from the specific context and other context to support any confident claim entailing extensive generalization?</p>

Figure 3: Simplified model of Wallace & Poulson's original from 2011 showing the critical inquiries arising from different classifications of generalization

2.2 Delimitations

Machado & Silva (2007) recognizes in their article the various forms criticism the conceptual analysis may elicit. The strongest one being that in one way it is already part of the scientific method practices. That all type of research to some extent include logical reasoning around the theoretical concepts applicable to the investigated area in one way or another, and the arguments made by the method might be regarded as rather obvious or as pure reasoning. These claims are countered by the fact that critical inquiry, as proved above, requires a solid understanding of

concepts and as shown this knowledge in turn presupposes the other methods validity and coherence. It might very well be that it can be seen as simply sound reasoning - *“but it is sound reasoning applied to the verbal output of scientist, to their theories, accounts, to models and concepts”* (Machado & Silva, 2007, p. 9) and thus *“probing these verbal outputs for their intelligibility is comparable to probing experiments for their methodological soundness or quantitative models for their mathematical correctness”* (ibid).

Moreover, the suggestions made in this study with regard to the constitution of boundaries might be subject to critique in terms of that it has been chosen not to include a substantial set of empirical data to validate the claims of boundaries performativity as might be warranted. However, what needs to be stressed here is that the conceptual analysis method, even though not excluding or neglecting the importance of observational methods, does not require to move further into the empirics every time. As seen in the model by Petocz & Newbery sometimes the inquiry actually ends before conducting a specific empirical activity. In this thesis, the main argument is as argued by Österberg (1979) that the theoretical concepts used have a high abstraction level that is challenging to actually observe. Yet, the conceptual analysis is used to concretize it in order to bridge the gap between the intangible theories and more tangible cases in order to make the notion of boundaries more concrete. Also, the work conducted here should not be seen as exhaustive in any way but rather as an invitation to a further discourse on the notion of boundaries which also preferably would entail an empirical investigation of the concepts developed.

Also on the note of empirics and the fact that this thesis treats the subject of performativity from a purely conceptual viewpoint clearly invites a third form of criticism as the statements created here around boundaries are not subject to any actual form of refutation. It is an exquisite task to try and render a concept meaningful, who's perpetual meaning suggests that truths resides in the interconnectedness between world and utterance, without a more solid connection to the world. This critique is of course valid, yet again, it ought to be stressed that due to the limit of space, the work conducted here and its approach could be seen as providing a suggestion to the constituency of boundaries that aims at building a case from a philosophical discourse as to why it is a fruitful thought to see boundaries as socio-technical agencements. In doing so, it also welcomes other statements and further studies with empirical examples that might refute or confirm this program.

3. Theorizing boundaries - A Conceptual Analysis

3.1 Literature Review

In an article from 1977 called “*The Study of Boundaries: A Systems-Oriented, Multidisciplinary, Bibliographical Essay*” author Raimondo Strassoldo offers an extensive overview of the different areas of literature dealing with the notion of boundaries. Despite its rather standard approach the article gives good insight into how the notion of boundaries have been depicted historically. Against this back drop, the depictions used in this article, and other articles as well, are presented here and are contrasted with regard to the performative approach to underpin the conceptualization of how these types of boundary formations could be seen as socio-technical agencements. Thus this literature review has two functions, it aims to give an overview of the very broad term “boundary” and how it is viewed within various streams of theory, and also take relevant parts from these various strands and interconnect them to formulate a model that theorizes boundaries.

3.1.1 Political Boundaries

Even though this thesis does not have a political focus specifically, it is hard to discuss the notion of boundaries without addressing the political implications of delineations, specially in terms of performativity (Callon, 2010). The performative approach to markets in general shows us that there is no one way to optimally describe how markets functions and what they are. It is key to realize that markets have a pluralistic nature and constitute complex systems and configurations which complicate the depiction of their actual state. And if that is the case for markets, then it ought to also be the case for the things framing them: their boundaries. The reason performativity becomes an interesting lens through which to analyze boundaries is because it is multifaceted and democratic, which also opens up for a political debate and a discussion around power (ibid).

If we for instance take the European Central Bank, an institution inspired by the economic theories of Milton Friedman, as an example and how it imposes rules and norms devised by the monetary theses advocated by neoclassical economists, the picture might become clearer. When this representation of the market is accepted, it will begin to enforce incentives, create organizational charts and managerially support a strategy that confines to the theory—enforcing its agenda further and strengthening its argument by producing regularities and repetition. It is not always the case

that performativity ought to be seen as prescriptive in this sense but this example does a good job in proving the institutional aspect of performativity (Callon, 2010). In this case it also becomes a matter of power.

Also, the notion of power can be exemplified by the more “classical” concern of political science in relation to boundaries, which normally depict them as a zone of conflict between two states, and more specifically considers borders mainly a source of tension (Gross, 1966). The delineation between for instance Northern and Southern economies¹ are of great relevance in this sense due two reasons specifically. Firstly, in relation to the above mention aspect regarding performativity as it actualizes the aspect of socio-technical agencement program. The statements that continuously win the battle of how to define a boundary between two states has historically been the ones that favor the western world (Ougaard, 2015), as these actors are the ones that have the strongest forces to enact their own interests by investing in their statements. This then becomes a self-fulfilling prophesy. If the stronger definitions of how the world is delineated continuously define it, then in the name of the neoliberal project, western economies will decry national frontiers when it comes to trade whereas weaker nations will obtain a protectionist approach in some cases (Strassoldo, 1977) and in others, they may be subjected to exploitation. Secondly, this also actualizes the geopolitical viewpoint of boundaries which focuses on how boundaries work in a socio-economical context (Kurszewski, 1972). In these cases it is also relevant to discuss the actual geographical boundaries and the type of power which can be attributable to the natural frontiers held by a nation (Curzon, 1907). This is something which will be further elaborated on in the geography section.

The felicity that depicts how well an utterance describes its object (in other words the success of the performance) is determined by the fit between the utterance and the socio-technical agencement, and this fit is bound to vary from time to time (Callon, 2010). What is shown here is that through the lenses of performativity, we get a chance to “*exhibit the struggle between worlds that are trying to prevail; and it makes the struggle for life between statements visible. Each statement, each model like the neoclassical theory as well as any other, battles to exist. In reality though, this struggle between statements is a struggle between socio-technical agencements*” (Callon, 2006, p.30). How this is the case will be formulated in the following pages.

¹ Northern economies are defined as advanced economies in the western world

3.1.2 Boundaries of Law

Law was one of the first disciplines to address the notion of boundaries and international law has for a long period of time included the structure of state boundaries (Strassoldo, 1977). What has been the area of focus is how to settle around an “optimum” type of boundary, and to a great extent these discourses draw upon Roman civil law and the boundaries of private property (ibid). Also in terms of property arrangements, the law has in many ways proclaimed itself of being the ultimate decision unit for what is to fall inside and outside boundaries of land (Robillard et al, 2002) which is manifested in this telling quote “*what boundaries are is a matter of law; where boundaries are is a matter of fact*” (Robillard et al, 2002 p. 7).

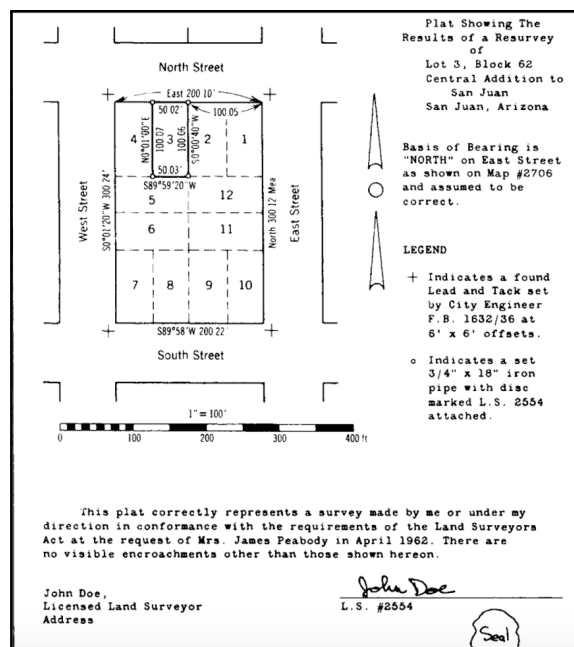


Figure 4: From the book "Evidence and Procedures of Boundary Location" by Robillard et al (2002) showing the results of a resurvey of a plot

Related to this topic is the profession of land surveyors, who locate spatial boundaries and property delineations, a role that requires good insight in where a court would arguably place a boundary. Here the importance of words (or as we might say statements about the material world expressed as documents, reports, maps etc) have a critical impact. One interesting principle these land surveyors must follow is for instance the description of the land, at the time that the description was made,

which could be as in the model above, over fifty years ago. A court will in any disagreement base their ruling on how they interpret these delineations made historically (ibid).

Another example of how conceptual boundaries affect material delineations is antitrust law which is a critical arena for differentiation of one product or service market from another. This approach suggests that when markets are envisioned through the law, the law itself simultaneously comes to perform the market by constituting it and forming it (Christophers, 2015). This again points us to the discussion of performativity and representations, as conceptual boundaries (in this case, the law) are drawn as a form of direction as to how activities and economical transactions are to be carried out. Yet, it also mirrors the current market structure through this envisioning.

Christophers (2015) shows us how antitrust law for instance defines market competition by identifying meaningful economic activities and then delineates them based on this definition in the form of competition law. Simultaneously, as the law is enforced it also creates a delineation and produces the specific categorization. It is then stated that “*competition law is perennially dogged by conflict, both over the placement of such conceptual boundaries, and over the very process of placement and the status of the market boundary itself*” (Christophers, 2015, p. 2) in other words it portrays how antitrust law’s conceptual boundaries is continuously reenacted as conflicting interests draw the definition of the market in various directions, but also depicts how these conflicts somehow constitutes the boundary. Other branches focusing in the function of law and boundaries are so called “limologists”(Curzon, 1907) - specialists in boundary studies. And in terms of market structure optimization there are advocates for the design of rules in terms of regulatory framework that can aid markets that do not function optimally (Roth, 2009).

Thus to conclude, the law which is defined by Brett Christophers as a conceptual boundary, (in comparison with a physical boundary that will be dealt with in the next section) has implications for the material world as these delineations must fit the actual world state. Yet they are performative in the sense that the world also becomes the way that the law proclaims. A land surveyor who's field notes lays the foundation for how to arrange and delineate property must for instance be able to prove the cohesiveness between the written words and the land that together form the fundament on

which the law then is formulated, thereby the land surveyors notes must be so extensive that they are able to say: *“Here is your land parcel. No ifs, ands, or buts”* (Robillard et al, 2002 p. 44)

3.1.3 Geographical Boundaries

A second major approach to boundaries which runs alongside that of law is the geographical one (Strassoldo, 1977). Historically, geography together with the subject history, have been the most extensive area dealing with the notion of boundaries, which mainly (but not simply) is attributable to that it describes nations way of securing power (Curzon, 1907). This topic also addresses the physical aspect of the boundary. Natural boundaries, such as mountains, oceans and deserts have for instance been seen as a nation's security in defending the land against potential intruders. Yet, again, they can also be seen as a connectors, rivers for instance have been debated as a paradox as they both separate societies and social groups as well as “bridge” them (ibid).

In terms of disagreeing and agreeing on an actual core it is also shown that this is in many ways easier than to actually settle around areas where domains are smoothing with each other (Strassoldo, 1977). Various authors have dealt with this topic by analyzing so called “in-between spaces” of residencies in borderland territories for instance. By analyzing the link and interactions between people living across borderlands Banerjee & Chen (2012) show how the notion of globalization affects people inhabiting areas that are at the border, creating barriers rather than “borderlessness”. This is an increasingly urgent topic as of today specially when discussing what it entails entering a border far from the original homeland for instance, to live at the border of another country is in many ways to live as an exception, where rights and rules are not clearly defined but rather blurred, language loses its power and the feeling of in-between becomes a real divider (Renqvist 2011).

Also, influence exerted by national boundaries on economic activities has been studied by economic geographers who for instance show how national boundaries can affect the economy on multiple levels (Clark, 1994). Firstly, from a macro-economical view point, boundaries can be seen as representations of geographical boundaries with a direct impact on trade policies, Clark calls this primary effects. Secondly, boundaries also imply micro-economical effects directly related to the actual border zones. These are denoted as secondary effects and the consequences are mainly seen in the actual zones. Also, with markets more specifically, it is almost impossible to talk about them

without referring to their actual location in terms of geographical boundaries when we intend to define and identify markets no matter how infinitely small or expansive they appear to be: the New York housing market, French automobile market or the global financial market etc (Christophers, 2016).

Thus, to connect this passage above, interlinking the physicality of boundaries with that of the conceptual could be exemplified with a geographical delineation aimed to be made through representations matched with the physical boundary. Bruno Latour describes in a chapter in *Pandora's hope* (1999) the joint work of a geomorphologists (the exploration of the shape of land), a botanists and a pedologists (the profession of studying soil). In this study it is depicted how these set out to figure out if whether an area in the rainforest Amazons is shrinking or expanding, meaning is the boundary of the forest expanding or is the savanna, located adjacent to the forest, advancing? This study first of all portrays the difficulties in agreeing on a boundary and its placement as all these actors have varying opinions and experiences that they bring in to explaining the phenomena of the expanding/shrinking forest. It also shows how we by creating representations of the forest, through the means of collecting samples, drawing maps and marking plants with number tags, make the real world accessible to us. Here again the notion of the socio-technical agencement is relevant, as it in this case, expressed as a map that simplifies and reduces the forest into something graspable and partakes in the physical delineation as well. However, importantly the forest is still always present, ready to challenge the map's visions.

3.1.4 Sociological Boundaries

Within social sciences the idea of boundaries is an evolving research area (Lamont & Molnár, 2002). The most influential analysis carried out within this scientific field is that of Max Weber and his analysis on ethnic and status groups (ibid). In relation to this there are sociologists who see borders as the in-between state where a constant construction of "the other side" is taking place (Borneman, 1992). Other scholars in this vein focus "*on the place and space of visible and literal borders between states, and the symbolic boundaries of identity and culture which make nations and states two very different entities*" (Wilson & Donnan, 1998, p. 2 in Lamont & Molnár, 2002). Thus if one follows this track the boundary can be seen as a symbolic entity that represents something beyond its mere appearance, a hermetical area of associations, traditions and connections

that can be used to enforce delineation. However, other streams of literature within sociology maintains that the boundary should also be seen as a means to communicate, instead of simply being a divider. These theories will be elaborated on further below, but in short Bowker & Star (1999) show how classification systems underpins delineations and by providing us with the term “boundary object” (Star & Griesemer 1989) depicts how marginal objects systematizes communication between different worlds.

Another highly relevant theory within the sociological field assumes that there might be social boundaries without social entities. The making of an entity is simply the connecting of oppositions and differences into a single whole - a quality Abbott (1995) denotes as “thingness”. Abbott (1995) further argues that things always exists with regard to a context, even though it might be context of difference. The definition of a boundary could then be seen not as something which is a “boundary of” anything, but is rather what we could call “sites of difference”. One example is how social workers organized themselves in early 19th-century. The profession of social worker came to stem from various other disciplines that coalesced into one entity where the work assignments overlapped. So social workers were defined on the premise that they could be put into a context where it was different from other dimensions.

“Entity-status among occupations involves more than one dimension of difference or structure. It may well be that social entities cannot exist without the tension provided by the differing pulls of difference or structure. That is, what gives entities their structural resilience is their defensibility, their endurance in several different dimensions of difference” (Abbott, 1995, p. 21)

In conclusion, Abbot’s “zones of differences” underpin a dimensional structure that pinpoint an important aspect brought up in the law-section, which is the approach that suggests that boundaries are dogged by conflict. This means that with regard to what Abbott writes, the *“entity-status among occupations involves more than one dimension of difference or structure”* (Abbott, 1995, p. 21) boundaries should in one way be seen as dividing entities of difference and framed through this dimension of difference. However, as noted by Star & Greisemer (1989) a boundary should on the other hand be seen as a means of communication, that by separating entities also create ways for things to interact. As we will see going forward, the communication many times also depends very

much on arguments defensibility which defines the boundary's strength as an entity - *"it may well be that social entities cannot exist without the tension provided by the differing pulls of difference or structure"* (Abbott, 1995, p 21) - the other side of a boundary is many times what creates its strength.

3.1.5 Economical Boundaries

In classical economic theory boundaries is commonly referred to as national frontiers and barriers of free trade (Strassoldo 1977). From an institutional perspective, boundaries can also be seen as the *"humanly devised constraints that structure political, economic and social interaction"* (North 1991), where institutions both refer to informal constraints such as traditions and code of conduct as well as formal ones applied through law and constitutions. From this perspective, boundaries are seen as a necessity to create order and reduce the uncertainty and risk related to economical exchanges. Thus economy is the means through which delineation is conducted. A complementing view argues that markets organize themselves in order to reduce transaction costs (Williamson 1973) and that economical organization is the response to market failures. All of these aspects provide different explanations of how boundaries are created through various enactments by actors on the markets, either through institutions or even the market participants themselves.

Another important aspect to bring up here is the classification mechanisms used to transform and retransform entities into things and then goods (Callon et al 2002), and where *"a deep divide has been created and maintained between these objectified things and the generally human agencies that produce, exchange and consume them"* (Callon, 2006, p. 42). An example of this is the Norwegian fisheries community, which through classification, categorization and commodification "created" new beings through entanglements with a boundary, or rather through disentangling them from the their network, making them their own agents to a degree (Holm, 2007).

Returning to the notion of performativity, Callon gives us the concepts of categorization and overflowing (Callon, 1998). This approach suggest that the market is not simply expanding but is also continuously emerging and reemerging, and that this sort of consolidation requires substantial investments. As a market becomes framed, it puts the outside world into brackets, but still remains linked to it. Callon (1998) uses Goffman's interaction theories to describe this bracketing,

postulating that “*framing would be inexplicable if there was not a network of connections with the outside world*” (Callon, 1998, p 4). A key aspect here with regard to a frame is that its “*setting also guarantees, simply by virtue of its presence, that the outside world is also present*” (ibid). Returning to the notion of socio-technical agencements, one could then say that within the agencements definition the outside world is in some ways also a part of that definition. This claim is something which I will continue to build on through the next section. Moreover, the representation of the agencement’s world is also then what presupposes that actors can make transactions, but that does not in any way mean that the prevailing socio-technical agencement and frame of the world is absolute. In other words, Callon summarizes:

“A totally successful frame would condemn the contract to the sterile reiteration of existing knowledge. It is therefore illusory to suppose that one can internalize every externality by drawing up an all-embracing contract that provides for every eventuality, just as it would be erroneous to equate the incompleteness of the frame to the incompleteness of the contract: the potential sources of overflow are to be found in precisely those elements that give its solidity; rather than any areas left unmentioned” (Callon, 1998, p 8)

All in all, what we can gather from this part is a very important aspect that constitutes the socio-technical agencement, which is its inherent capacity to reincarnate itself as the world it is supposed to depict changes. Callon’s quote saying that: “*the potential sources of overflow are to be found in precisely those elements that give its solidity; rather than any areas left unmentioned*” (Callon, 1998, p 4) interlinks with Abbott’s notion of what it is that give a boundary its solidity - namely it’s defensibility. As a boundary invites all the aspects that might cause a socio-technical to refute, it also opens up for communication between opposing context, and it is somewhere here the boundary always balances. The complexity and spatial fusion opens up for a discourse around the boundary as an own space and entity, which will be done when conceptualizing the model of boundaries.

3.2 Conclusion of Review - Boundaries’ Plasticity & Market’s Practice

If we now simply recap the questions aimed to be addressed, this above section builds a fundament to answer the first research question; *how can boundaries be conceptualize as performative objects in markets?* The main features from the section show the overlap between materiality and

conceptuality in the boundary formation, it has also addressed the inherent conflict that resides in the boundary which makes it possible for entities to communicate and finally pin points “the other side’s” constant presence, these aspects will now be refined in order to also address the second question; *in what ways is it possible to suggest that boundaries are socio-technical agencements?* This will be done in section 4, but before doing that I will here create an overlook of the relationship between markets and the conceptualization of boundaries made in the literature review.

The enactment process of how markets are formed and delineated depends to a great extent on the activities that constitutes markets (Kjellberg & Helgesson, 2007). These activities can be discussed from a conceptual model with a threefold distinction between what is called exchange practices, representational practices and normalizing practices (ibid). This model is shown below:

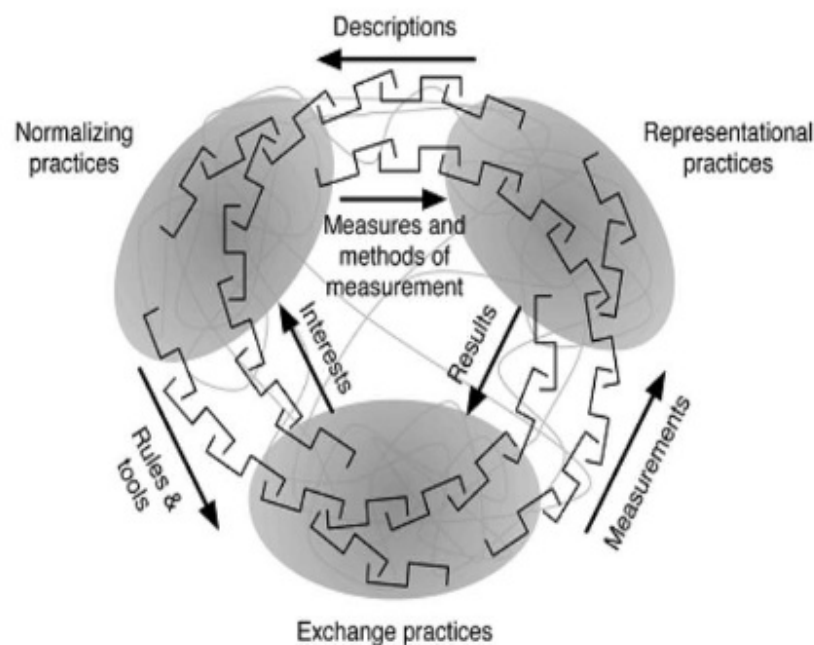


Figure 5: Original model of Markets-as-practice (Kjellberg & Helgesson, 2007)

The first one assembles the activities that are attributable to the economic exchanges undertaken in a market (Alderson & Cox, 1948). Most importantly, these activities are those that “*temporarily stabilize certain conditions*” (Kjellberg & Helgesson, 2007 p 6) as they are the physical activities and measures that can be undertaken to secure a boundary’s resilience. In one of the cases, it will be

shown how authorities used exchange practices in order to enforce the normalizing practices (for instance the law) to materially support the law's utterance. The second practice, that of representations shows us again why the performative approach is relevant (however, it should be noted that performativity affect all the practices to different extents) as the representations we create of boundaries are part of creating both the market which they represent (Latour, 1986) and themselves as entities, we have seen examples of this throughout the whole previous section - representations of the real world that are then used to delineate it. Again the land surveyors notes serves as a good example here. The third, normalizing practice, shows how the establishment of rules and norms contribute to forming markets. Among other things it includes efforts "*to specify general rules of competition and marketing and the application of such rules to specific cases*" (Kjellberg & Helgesson, 2007, p. 7) which more specifically could be antitrust law for instance. These processes are as mentioned before, continuously enacted in the system of markets through translations between the different practices. However, as refutation or overflowing is such an important part of how boundaries are enacted, it is also important to briefly discuss what happens when they are deteriorated.

As Nenonen et al, 2014 points out, the fluidity and eventualities that are to be found in markets evoke a way of looking at them as things with malleable form. Markets should therefore, just as argued with relation to Callon (1998), be seen as continuously evolving entities that due to their plastic nature shapes in accordance with its surroundings. This also implies of course that a boundary that frames a market is continuously enacted and reconstructed. In terms of markets, as changes occur, the above mentioned practices aids the shaping of the new form of the market and their boundaries. It shows for instance how a law, which is categorized as a normalizing practice (Kjellberg & Helgesson, 2007) through translations interlinks with how exchange practices are carried out and what representational practices that are created. This will be discussed more in detail in the case with legalization of cannabis, but first I will now describe how we could start to think of boundaries as socio-technical agencements.

3.3 Understanding Boundaries as Socio-Technical Agencements

In this section, three proposals are made with regard to the state of boundaries. First of all, a boundary is in accordance with Trías' philosophy an entity in its own right. The second proposal is that what constitutes this boundary is the continuous ongoing conflict between entities. Thirdly, the conflict-to-boundary relationship is a fundamental fusion between the first and second proposals that together become two sides of the same coin. Thus these two fragments can ultimately be seen as a whole symbol, bringing together an unknown hermetical area with the known accessible area. These two sides work in tandem, simultaneously presupposing and deteriorating each other. This philosophical dimension is then contrasted against examples of how to apply the concept of performativity and socio-technical agencements to that of boundaries.

3.3.1 The Boundary Line - What is it?

The fact that market plasticity and the definition of the boundary in its own right have rather clear overlap is enforced by philosopher Eugenio Trías' notion of the boundary line. However, in comparison to what has been brought up earlier, Trías defines the boundary as its own entity, meaning that rather than separate two entities from each other, the boundary opens up for a continuous conjugation and dis-conjugation among three entities (Trías, 2003), where the boundary, in other words, presupposes the connection between the three entities. Trías' philosophic approach, called "Philosophy of Limit" suggests the "state of boundary" as the truth that appears as a double-sided process in which symbolic power of conjugation and dis-conjugation is what creates each force's productive opposing context (Eriksson, 2000). It is suggested that the forces that stabilizes and keep our world intact also work in tandem with the things that destroy it. These conflicting forces, however, will always work toward creating differences, which is why our world continuously reconstructs and thus these forces can do nothing but induce differences, dislocations, boundaries and veils (ibid). This formulation actually traces Abbott's suggestions concerning dimensions of differences. Thus what this could imply is that as the world of entities is continuously challenged because entities are different. These differences are what stabilize things if they are kept intact, and their resilience makes a boundary stronger, yet at some point the same differences that have held these entities together might also become the very thing that destroy that boundary.

The concept of the boundary is something that Trías gathers from the modern era's canon; Kant's critique of reason and Wittgenstein's *Tractatus*. Both offer a definition of the boundary that is to be seen as a limitation—a frontier for that we can know (Kant) or for what we meaningfully can express (Wittgenstein). The other, hermetical side of what we in day to day language call “the unknown” is thus withdrawn from what can be thought and belongs to an unpronounceable metaphysic. It is something we bundle off as theological matters and even superstition. However, what Trías wants to emphasize is that as this might very well be the case (there are admittedly numerous aspects that are inaccessible to the human intellect), the boundary between the two entities still plays an important role for what we actually do know. In other words, even though there are certain things that we cannot know, the boundary for unknowing coludes with what is knowable. Trías offers a way of considering the boundary as a separator but also a link. The duality of a boundary and its two-sided front is key in describing any relationship between two entities, between something and something else. The boundary presents itself as the thing in-between. This in-between however, should not be seen as a line but as a place—a thing if you will, in its own right. Thus instead of sealing and separating one specific area, the boundary opens up three (Renqvist in Trías 2003)

Trías' approach to how the boundary arises pertains to this analysis in the line of three events that can be described through three principles. The first principle, “The Materia”, is rooted in the world's outset as a chaotic place where the act of creating a boundary through lawmaking is what offers order to the wild, anarchistic and unwieldy stratum. The second principle, “The Formal” is thus expressed as a form of written law that insists on representing a truth and where lawful and institutional boundaries are drawn from a somewhat blind and random division of things. In other words, in this formal principle we aspire to create order, believing to have rendered ourselves that order when we impose a strict law. The third principle offers a resolution between these two; however, this resolution also implies that we are continuously torn in an in-between state of this esoteric and exoteric dimension. This relates to what was discussed earlier in terms of the double sidedness of the boundary. The boundary is a continuously ongoing conflict and though we try to create order with its construction, it is ultimately an impossible state to reach. Our strive towards it might even fool us into believing that we have created a stabilization, which may not necessarily be

the case. Thus the law imposes an idea of self-fulfilling order, that in many ways can be devious. Grant Gilmore concludes it nicely in the book *The Ages of American Law*:

“The quest for the laws which will explain the riddle of human behavior leads us not toward truth but toward the illusion of certainty, which is our curse. . . . The function of the lawyer is to preserve a skeptical relativism in a society hellbent for absolutes. When we become too sure of our premises, we necessarily fail in what we are supposed to be doing” (Grant Gilmore, 1977 p. 100 & p 110)

Moreover, Trías denotes this phenomena of boundary-creation as a “sym-ballein” which entails fusing the accessible fragment of what can be symbolized with its corresponding unknown fragment. Here, the etymological implication of the word symbol is of importance as it refers to the act of fusing something. The metaphor Trías uses of this “thing” is a coin that has been split into two fractions and thus the symbol is originally a divided entity that is introduced as a reality when two fragments of the coin are fused together. This is a symbolic event denoted as a “sym-ballein”. The dialectics between these two fragments, the differences that are yet the same, is the boundary limit (Renqvist, 2011) The boundary is the entity capable of enforcing the duality and asymmetry between two entities: the hermetical area and the accessible area. Thus when we talk about “logos of boundary”, logos must be of symbolic character which in its duality can enfold the boundary’s two extremes; the symbolizing part as a sign of the boundary’s accessible area, and that which at the boundary is symbolized with reference to the boundary’s hermetical side. This act of symbolization is relevant for the model in this thesis. The “trinity” depicted in our model in the beginning—the interrelations between The World, The Utterance and The Socio-technical agencement—offers an interesting juxtaposition to the Three Principles offered and described by Trías that results in the symbol.

3.3.2 Boundaries as Socio-Technical Agencements - How is The Boundary?

The reason the idea of Trias’ “sym-ballein” bears relevance on the subject of boundaries and their constituencies is because it is possible to formulate a connotation between the symbolic event as described by Trías and the discourse around performativity. In other words, I am suggesting that the concept of performativity, and more specifically the concept of socio-technical agencements, is applicable to the notion of the boundary. Performativity offers an interesting juxtaposition to Trías’

theories due to that fact that the socio-technical agencement could be seen as actually *being a boundary*. If we take markets for example, they are brought into existence as we continuously try to define them through utterances that become socio-technical agencements. The utterance frames the market, which then is represented in the agencement. However, as noted earlier, a framing never disconnects with the outside world (Callon, 1998) and so the boundary presupposes that the outside world is present.

A good example of the meaning of this is law-enforcement. A law stems from an utterance of how a specific world ought to be classified. If we take the “formal rules of property” for instance, this rule has the performative power to determine what is legal or illegal, and what is a market and a non market (Mitchell, 2007). However, as this delineation is carried out through stated utterances around its specific world, the resulting socio-technical agencement expressed as law excludes other socio-technical agencements. It does not, however, abolish other agencements’ existence. In other words, boundaries that are used to identify, separate and exclude one entity from another still allow for things to prosper outside of their frames (ibid). The performativity approach offers us a way to grasp the continuous ongoing struggle between “*worlds that are trying to prevail*” (Callon, 2006, p. 28) and more specifically; “*It makes the struggle for life between statements visible...In reality this struggle between statements is a struggle between socio-technical agencements*” (ibid).

With all of this mind, how then does the boundary actually function? We can attempt to answer this by looking at a rather general notion of how the boundary actually is in terms of the delineation of a market vs a non market. If we take the capitalistic era of financialization, this would at its outmost imply markets that exists outside or inside the capitalist economy (Mitchell, 2007). If we apply Trías’ notion of the boundary as its own entity, then the frontier that delineates a market from a non market, could be described as broad terrain and as a “*frontier region that covers the entire territory of what is called capitalism. The region is the scene of political battles, in which new moral claims, arguments about justice and forms of entitlement are forged*”. (Mitchell, 2007, p. 247)

As an entity, boundaries enrapture that which it defines as a representation of the world, but as an entity the boundary also connects this definition with the hermetical side—the rest of the world which continuously enacts and changes. If we recall Goffman’s interaction theories described in the

literature review, a bracketing or a frame “*would be inexplicable if there was not a network of connections with the outside world*” (Callon, 1998, p 4). A key aspect here with regard to a frame is that its “*setting also guarantees, simply by virtue of its presence, that the outside world is also present*” (ibid). Thus by virtue, the boundary as a socio-technical agencement offers a snapshot of what is excluded vs included in the market, yet by excluding it makes sure that the things excluded are always included, and The World will always be present and cause overflows that challenges the frame. That is part of the boundaries’ constituency.

When a market enters a dimension of molding, one could then argue that it returns to a form of its quasi-chaotic outset which was previously stabilized by external factors like exchange practices, law enforcement or geographical boundaries etc. What Trías shows us is that there are adjacent entities that resides within the boundary that continuously challenge its status quo—the unknown or hermetical side. These are the things that are not yet represented within the frame of what constitutes a specific market, yet these things are also what contributes to the boundary’s significance (Abbott, 1995), which is also postulated by scholars within the area of performative economics. Let’s recall Callon’s quote: “*the potential sources of overflow are to be found in precisely those elements that give (the frame) its solidity; rather than any areas left unmentioned*” (Callon, 1998, p 8). Arguably this becomes relevant from Trías viewpoint of both how and what it is that stabilizes our notion of the world, as well as what keeps it in intact as these things create each other’s productive context. It is through the differences manifested by the boundary things can exist. How this relates to market in a sense is well captured by Mitchell in this passage:

“The frontier has been a battleground. It is not a thin line marking the barrier between market and non market or formal or informal. It is a terrain of warfare spread across the entire space of the market. If there is an outside, then it is an outside found everywhere, a scene of battle that seems to define every point at which the formal or the capitalist can be identified. It is therefore a zone of “inclusive exclusion” since what is declared to be outside the market already plays a role within it, through the declaration of exclusion and the continuous battle over its inclusion” (Mitchell, 2007 p. 254)

“It is therefore a zone of “inclusive exclusion” since what is declared to be outside the market already plays a role within it, through the declaration of exclusion and the continuous battle over its inclusion” - is a key passage that proves why Trías notion of the state of boundary lends itself nicely to this connotation. Trías denotes that there is a relation between the hermetical (unknown) and accessible (known) area that takes the form of a boundary limit as the fragment of coins are fused together - yet this hermetical area, even if unknown, affects what we also know - recall: *“In other words, even though there are certain things that we cannot know, the boundary for unknowing coludes with what is knowable. Trías offers a way of considering the boundary as a separator but also a link”*. Again actualizing what was proposed in the very beginning of this thesis, that the premise for a boundary is that there are actual things to be divided, just for the cause of having them interacting, either by dismissing or agreeing with each other. By viewing boundaries as socio-technical agencements the battle between various worlds and statements, as well as the continuous adjustments that needs to be made to actualize the fit of the boundary to the world the statement delineates by its utterances becomes somewhat clearer.

The notion of the boundary as a frontier advices that in one way a market’s frame presuppose some sort of traumatic suspense that is based on a conflict between two (or more) parties that resides in the chaotic nature of the world. In Actor-Network theory one would talk about that these things exists and create agency based on their contradictory arguments. As Latour postulates: *“agencies are part of an account; they are given a figure of some sort; they are opposed to other competing agencies”* (2005, p. 53) and continues by suggesting that *“without accounts, without trials, without differences, without transformation in some state of affairs, there is no meaningful argument to be made about a given agency, no detectable frame of reference. An invisible agency that makes no difference, produces no transformation, leaves no trace, and enters no account is not an agency. Period.”*

Marginality, spatial division and existing at the boundary - the complexity in discussing boundaries admittedly arises through its duality and multiple dimensions. However, with the tools offered by The performative approach and by seeing the boundary as an entity with its own constituencies, like a socio-technical agencement, we might start to come closer to what and how they are. In the next

section, a model is developed based on the suggestion of how we could start to think of boundaries as exactly this, assemblies of things.

3.4 Proposed Model - The Boundary and “Sym-ballein”

So how can we grasp the notion of the boundary as a socio-technical agencement? I’m suggesting treating the boundary as a symbol that both fuses one side with another, which greatly resembles the make up of the socio-technical agencement. In the model below, an attempt is made to visualize this suggestion. It is the same model presented in the beginning of the thesis that explained the performative approach, only now Trías’ notion of the boundary and the “sym-ballein” has been added to it.

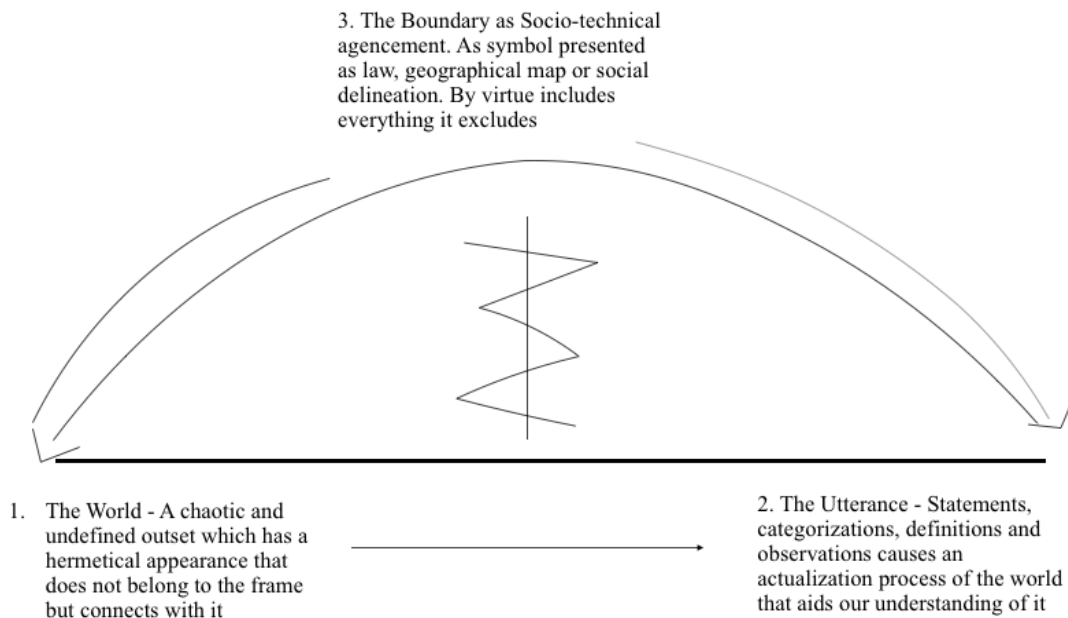


Figure 6: Model of the interrelations between The World and Words expressed as Socio-technical agencements but now analyzed through the lenses of Trías "Philosophy of Limit"

In stage one just as before, we find “The World”, a disorganized, anarchistic system with a chaotic outset that continuously evolves and changes due to unknowable circumstances, Trías denotes this stage as the first principle, “The Materia”.

As we strive to make sense of this unwieldily world, we begin to define it, create statements around it, observe it and categorize it, all of which happens in stage two during “The Utterance” which Trías calls “The Formal”. Let us for the sake of simplicity then, call the process of going from the statement to the third stage, the socio-technical agencement as the formalization process. The formalization process is in many ways very similar to the “sym-ballein”, the fusion between the hermetical and accessible area that provides the symbol, the boundary, the connector between “The World/The Materia” and “The Utterance/The Formal”, which in the performative approach is called a socio-technical agencement. In accordance to Trías philosophy, this boundary is the symbol that connects the hermetical side with the accessible. This is how the boundary is a socio-technical agencement. By virtue the boundary also includes that which it excludes. This is due to the fact that the boundary—the frame, the frontier—presupposes that “The World”, the other, is also present. This aspect is even more conceptualized by Latour’s notion of circulating reference and transformation processes who’s concept both the models below depict, taken from the book Pandora’s hope (1999). This concept elicits our sacrifice in terms of detachment from the material world as we move into the world of words, statements and utterances. Yet these words are what makes it possible for us to access the material world, which otherwise is too complex, too intertwined and too chaotic for us to grasp.

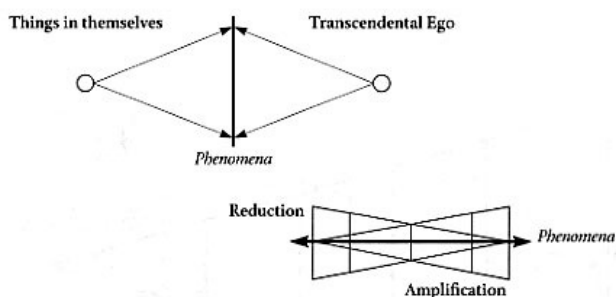


Figure 7: Model taken from Latour’s book *Pandoras Hope* - Ch. Circulating Reference, 1999 p. 71 contrasting Kant’s theory of the phenomena with Latour’s model of how the notion of the phenomena is continuously enacted and transformed to be accessible

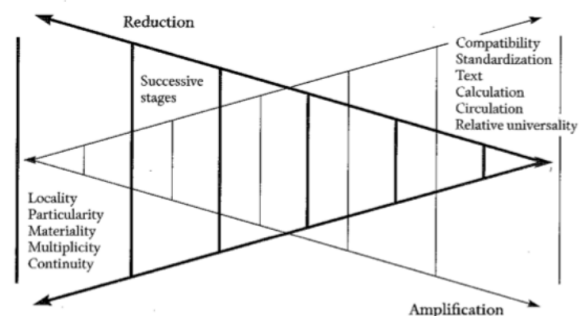


Figure 8: Close up of Latour’s model depicting the “Circulating reference” aspect of how the complexity of things are reduced as they become more accessible. Also taken from *Pandoras Hope* - Ch. Circulating Reference, 1999 p. 71

Furthermore Latour postulates that in accordance with Kant, the notion of the phenomena as “*the meeting point between things themselves and categories of human understanding*”(Latour, 1999 p. 71) is a misconception. Rather a phenomena, which is in this thesis appearing described as a socio-technical agencement, is to be seen as that which circulates back and forward between world and statements. These are enacted through statements that are continuously tried and measured against the real world, only to be refuted and refined, “*truth-value circulates here like electricity through a wire, so long as this circuit is not interrupted*” (Latour, 1999, p. 69). I could here go further into explaining the philosophy behind these models and translation processes, yet, it would run the risk of bringing even more confusion into an already delicate discussion. Thus, let it here be said simply that a socio-technical agencement is the knowledge transaction created in-between world and statements, and it travels back and forward between what is for us possible to know and the unknowable (Kant), or as Wittgenstein suggests; what we can meaningfully express (Trías, 2003). This is the definition of the boundary that Trías philosophy also makes possible to conceptualize.

What this section aims at deciphering is what a boundary is and how it is. What has been formulated in this model is the constitution of a boundary, which is anything but straightforward. Actually, within the definition of boundaries, as we saw earlier in the literature review, there are two conflicts to be detected in terms of boundaries: firstly, it is the boundary in relation to other opposing definitions, and secondly the constituency of the boundary as an internal conflict as well, constantly enacted in its own materiality (Christophers, 2015). These two distinctions are incredibly difficult to distinguish from each other even, as in some instances, one could say that the first conflict also is a part of that which actually constitutes the actual boundary and vice versa (ibid). But as we start to look at the boundary as a terrain—its own entity—we might be able to at least try and separate the two, which will be done in the next section, only in order to in the analysis see, that a separation between them is impossible to do - but let take one thing at the time. So, in order to make the suggestion a bit more clear then, in the next section, two empirical examples are used to decipher how a boundary as a socio-technical agencement firstly is subjected to conflicts with other socio-technical agencements and also secondly how its default materiality is dogged by conflict.

4. Boundaries as Socio-Technical Agencements — Application of Model

4.1 Cannabis Market - The Conflict Between Agencements

Returning to what was described earlier, the delineation between a market vs a non market, offers in many ways valuable insights into the relationship between the world and that which we wish to describe in statements. It also gives us a way to address the boundary's constituency. As already mentioned, its constituency namely covers the whole spectra of both the world that it excludes, and that which it includes. In order to exemplify the suggestive approach to what and how boundaries are, I will now first discuss a specific market situation, and from this try and extract insights to support this suggestion. The insights from the case is taken from an extensive analysis made by Kjellberg & Olson (2016) on the U.S. cannabis market to which I am much obliged for the discussions conducted in this thesis.

The US cannabis market finds itself in the middle of an enactment and actualization process as it moves previously undefined aspects into the regulated market. This market is in the formation process of legalizing production and sales of medical and/or recreational cannabis in certain U.S. states (Kjellberg & Olson, 2016). This process has been foregone by a political battle with actors coming from various perspectives in the legalization process, addressing the idea brought up earlier with regard to the differing statements of the world. If we recall Callon, statements and their socio-technical agencement are "*worlds that are trying to prevail*" (Callon 2006 p 28) and more specifically, the ongoing conflict in the political sense "*makes the struggle for life between statements visible...in reality this struggle between statements is a struggle between socio-technical agencements*" (ibid). For instance, a competition law could be seen as a socio-technical agencements that battles with other antitrust definitions over how to delineate the actual market, where historically in court the definition of a market structure is constructed by "*opposing lawyers fighting to make the market look smaller or bigger, in order to bloat or to shrink the defendant's percentage share within*" (Rowe, 1984, p. 1537 in Christophers, 2015)

The underlying process and state of the material world that resulted in an enactment process of redefinition of the cannabis market was due to U.S. jurisdictional failures to control the black

market's continuous growth. In other words, the U.S. jurisdiction did no longer fulfill the conditions of felicity with respect to how the cannabis market was constituted. This resulted in a situation where an enactment had to be made and the goal was to achieve regulatory control through legalization and a reframing of market formation. Externalities such as a continuously flourishing business for drug cartels would in this way be restrained (Kjellberg & Olson, 2016). However, not everyone seemed to agree with this viewpoint. Actors opposing the legalization included those within pharmaceutical industry, alcohol, police and private prisons.

Despite the opposition, the pro-legal group managed to gain ground and was among other things supported by consumers creating collectives to procure medical cannabis. They were able to create incentives that in the beginning were continuously shut down by the local and federal law. However, in 2003 a Senate Bill was passed that restricted local law enforcement's ability to interfere with these collectives' procurements processes. This nitty gritty description of the back and forth of banning and legalizing pinpoints the delicacy of the statement and the agencement's success. The strains forth-live through legal battles with regard to what should be framed within a market and what is to remain outside of it. In other words it pinpoints which socio-technical agencement program was to win the definition-battle, so *"the regulated market for medical cannabis in California thus gradually developed through trial and error via legislative loopholes and law enforcement intervention"* (Kjellberg & Olson, 2016 p. 10)

Moreover, the geographical aspects also come into play in the actualization process in terms of how the legal aspects interconnect and differ from each other. As some states decided to obtain a more relaxed approach, others were influenced to do the same, which is what happened when State of California decided to legalize medical cannabis. Yet depending on rules and norms the approaches varied, even across cities like Oakland and Los Angeles where the latter decided to maintain a relaxed approach that resulted in more cannabis dispensaries than Starbucks outlets. The strong boom in market growth again caused the authorities to intervene, which pinpoints the continuous battle among actors. This also addresses the complexity concerning the market as a continuously evolving object, as the examined market *"does not sit idly by and wait for the law to do its work; it is forever changing and the law's effort to keep up add a dimension of complexity both to the law's practice and effects and to our attempts to decipher the latter"* (Christophers 2015, p. 14). For

instance, in Colorado and Washington, differences could be detected in terms of how the regulatory design affected markets. The differences appeared in how the authorities decided to approach the medical market, which strongly influenced the recreational market as well. Here's an example:

“Colorado’s elaborate medical regulations, including “seed to sale” monitoring, allowed it to quickly establish a recreational market by licensing existing medical dispensaries “in good standing” to sell cannabis to non patients, albeit at a higher tax rate. While Colorado permitted home cultivation for personal recreational use, Washington banned home cultivation and struggled to integrate its loosely regulated medical market into the new recreational framework”
(Kjellberg & Olson, 2016, p. 11)

A process like this is enacted when the socio-technical agencement is both no longer fulfilling the conditions of felicity, and when it puts an actualization process into motion to make the statement performative again (Callon, 2006). In these types of situations, which Callon (1998) would describe as “hot situations”, actors work intensely to create categorizations, delineations and measurements in their strive towards stabilization. As we have seen, the actors participating in the actualization process—in a situation where a market is evolving—are many, they *“fluctuate in the course of the controversy itself, and they will put forward mutually incompatible descriptions of future world states”* (Callon 1998 p 11). With everything from the consumers creating their own collectives for purchase, market actors opposing the legalization to federal authorities, the many participants voicing their opinions in the matter proves the numerous of actors that tried to influence the definition of the cannabis market (Kjellberg & Olson, 2016). However, as we leave the conflicts of how to define the actual market aside, and instead turn to the boundary as an entity and a frontier, it is also interesting to analyze how the adjacent zones in the boundary affect each other more closely through the lenses of transactions of the actual product cannabis.

In terms of the actual exchange practice, these are namely in some cases hardly distinguishable between the two markets (the regulated market and the unregulated one). One example of this is how one approaches patient privacy, where the covert nature of black market exchanges has followed into the medical market veiled as “care for patient privacy”. Other practices explicitly break from the black market with actors marketing themselves as the “Starbucks for pot”. Another

example brings the difficulty in delineation between the black and the regulated market in terms of cash. Federal law still prohibits the exchange of cannabis resulting in banking services becoming more difficult for market actors to obtain. Were any financial actor to provide these services anyway, they would probably end up under federal screening due to suspicion of aiding money laundering.

This contributes to cannabis being equivalent to purely cash-based assets and the risks this entails has sparked new market actors to offer services with new type of security within “high-value asset industries”. Leaving the delineation from black market rather fuzzy as “*economic exchanges involve large sums of cash, protected by heavily armed guards, rather than invoices and wire transfers*” (Kjellberg & Olson, 2016, p.14). These matters point out the issues with substitutable goods, which causes the delineation to become even more problematic.

In the case with cannabis, classic economic theory fails to delineate legal and illegal market based on its substitutability, as the markets must separate goods which are otherwise completely substitutable (Kjellberg & Olson, 2016). In this case the representational separation needs stronger material support in terms of physical measures and activities to underpin and strengthen the boundary that has been drawn by the law. The solution, just as the problem, is then found within exchange practices that are labeling the legal products so that they can be traced, monitored and quality checked. Within product development and research, new product forms are tested to differentiate the actual legal product from the illegal and marketing initiatives are continuously finding new ways to assure that consumers purchase from legal suppliers. This is how the legal market are supported by various tools to infiltrate and eventually displace the black market, and in other words materially enforce the depicted frame or boundary between illegal and legal cannabis.

What this last example in terms of exchange practices aims to show is the constant presence of the rest of the world, despite the fact that a conceptual delineation has taken place, which continuously challenges the socio-technical agencement (or in other words the boundary). Yet, these types of material measures found within the means of exchange can also be used to delineate the market. The connection between the black and white market depicted here, both in terms of serving as a connector as well as a source of conflict, is what constitutes the boundary, and here we begin to be

able to extract the paradox of the boundary's entity and own materiality. This paradox, of how a frame presupposes that which excludes and vice versa are also the things which constitute the boundary's materiality. That is what will be further discussed in the next section through Agamben's notion of "inclusive exclusion".

4.2 Freeportism - The Boundaries' Materiality as Conflict & Fusion

In this section the notion of the boundary's constituency and the relationship between its inside and outside will be discussed. The example used to analyze the complex issue of the boundary's paradox is Freeport-storage facilities which are subjected to a form of "state of exception", which will also address the law's performative impact as a boundary. The background material used here is to a great extent taken from an (unpublished) essay authored by me in 2016 called "Art's Futures as Secret" and other sources that are brought in to support this thesis outline. Freeport facilities are located in free trade zones where valuable objects are placed and protected, even from the state itself, as these objects are not subject to any taxation or identification. More specifically "[Freeports'] attractions are similar to those offered by offshore financial centers: security and confidentiality, not much scrutiny...and an array of tax advantages...Goods in freeports are technically in transit, even if in reality the ports are used more and more as permanent homes for accumulated wealth"²

This is relevant from a market perspective, as it proves the law's capacity to delineate a specific area and exclude it from something which it ought to otherwise be interlinked with. For instance, state of Switzerland is held for being one of the largest holder of gold reserves in the world, with an import estimated to account for a worth of \$650 billion in real value, accumulated since 1960's³. However, these figures are not presumed to be very accurate as no one knows which type of amounts that are stowed away in the hangars. The interesting thing is that this legal escapism is performed in the name of state system itself (Palan, 1999).

Also, even more interestingly is the fact the conditions created within these spheres, that are excepted from law in the name of the state, deploys many of the uncontrollable market failures that

² <http://www.economist.com/news/briefing/21590353-ever-more-wealth-being-parked-fancy-storage-facilities-some-customers-they-are>

³ ibid

the law otherwise is set out to mitigate. There are no price mechanisms for instance that can actually determine what things are worth, so objects are bought at prices way over their estimated market value⁴. There are neither tools for identification, buyers and sellers are not known to each other⁵ (due to the confidentially listed as simply "private collection"⁶) and it is also said that transactions are settled similarly to black market exchanges in the cannabis case - in cash.

All in all, this black hole constructed by a regulatory vacuum creates an own form of unwieldy market within an otherwise controlled location - *"it is one of the last wild-West businesses"* says an insurer to The Economists ⁷. Also, the connotation with the reference of a black hole is interesting as this lacunae creates a portal to other markets. It has for instance be described how Italian authorities suspected the Geneva Freeport to host numerous of valuable gems belonging to the

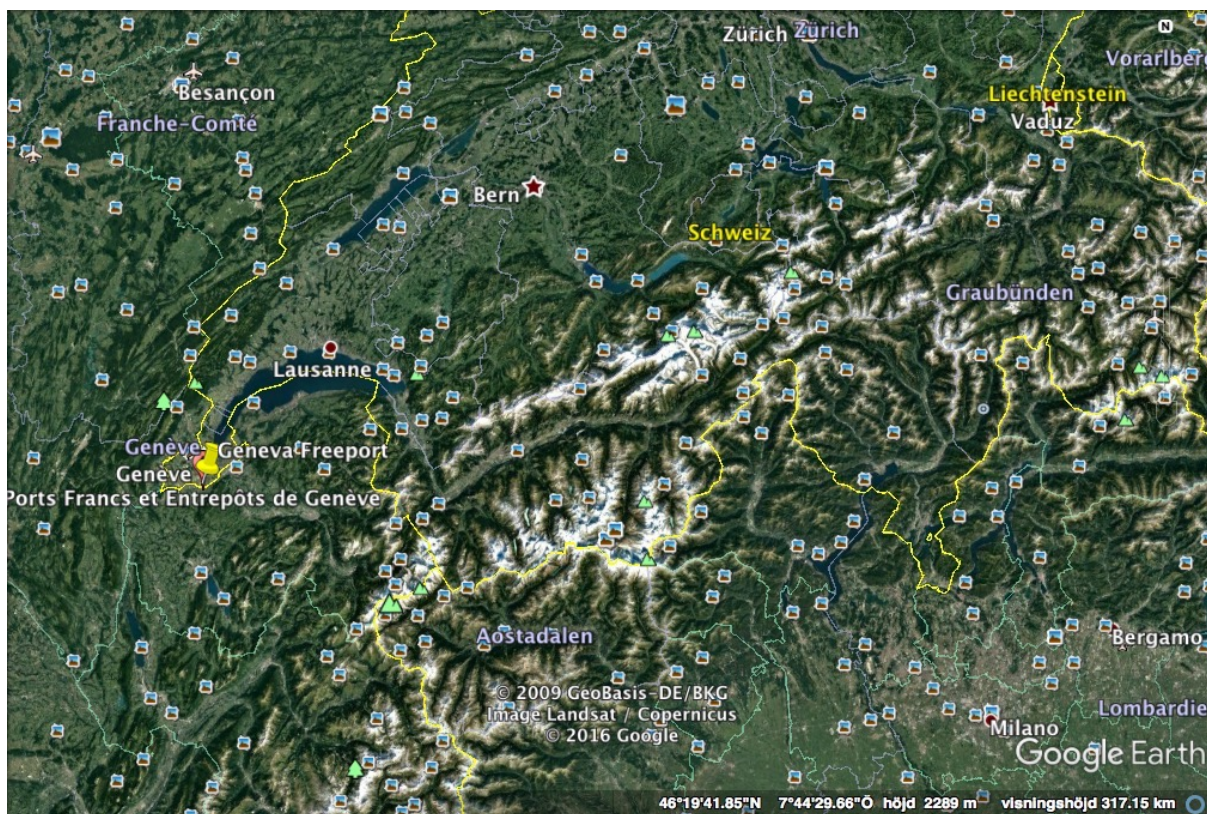


Figure 9: Map over Switzerland marking the Geneva Freeport storage facility close to the border. Retrieved from Google Earth February 15th 09:18

⁴ <http://www.newyorker.com/magazine/2016/02/08/the-bouvier-affair>

⁵ https://www.nytimes.com/2015/09/24/arts/design/the-billionaire-the-picassos-and-a-30-million-gift-to-shame-a-middleman.html?partner=rss&emc=rss&_r=1

⁶ <http://www.economist.com/news/briefing/21590353-ever-more-wealth-being-parked-fancy-storage-facilities-some-customers-they-are>

⁷ ibid

Italian state, which had during the course of history gotten in the hands of kleptocrats that opportunistically stowed them away. Another case shows how in 2003, stolen Egyptian treasures (two mummies) were found in the Geneva Freeport⁸. In other words this lacunae is a geographical enclave created by the state of Switzerland, becoming a black wormhole affecting markets and states of Italy and Egypt.

Steyerl (2015) describes that a Freeport is often located in transit zones of airports or simply in tax-free zones. The Geneva Freeport is geographically located in a free-trade zone close to the border, as shown in the picture above. This storage facility “*includes parts of an old freight station and an industrial storage building*” (ibid). The building is divided into two zones as the backyard and the fourth floor of the building contain the offshore zone, whereas the other area does not, so “*different jurisdictions run through one and the same building*” (ibid). The geographical location and the law are the two interesting features to be analyzed in this case. This also addresses the question of what is denoted as onshore and offshore, as in the very same building two differing jurisdictions operate to separate those things which one for instance historically have used remote geographical locations for (Mejling, 2009). As noted however, this is not done here but the facility itself is of course placed strategically for things to travel in and out, officially, yet they do not really seem to do so. Again, geography and law run in tandem.

How this is interesting in terms of boundary creation more specifically, is that it depicts the capacity of the state to suspend the applicable area of the law within its own boundaries, in other words it shows the law’s performative power to declare something to not exist, outside its boundaries. Philosopher Giorgio Agamben presents in his work “State of Exception” a way to think around this abstractly. Agamben suggests that through the suspension of the law, it becomes something to be characterized as a “*lacuna*”. He then asks: “*How can such a suspension still be contained within it? ...And if the state of Exception is instead only a de facto situation, and is as such unrelated or contrary to law, how is it possible for the order to contain a lacuna precisely where the decisive situation is concerned? And what is the meaning of this lacuna?*” (Agamben, 2005, p 23)

⁸ ibid

What is the meaning of this lacuna indeed? The boundary in this case is created through the power rendered by a sovereign, who by definition has the power to proclaim a state of exception (Carl Schmitt, 1922 in Agamben, 1998). The paradox declared in the name of a sovereign in some ways also unveils the paradox of the boundary, of its inclusive exclusion, as *“the paradox of sovereignty consists in the fact that the sovereign is, at the same time, outside and inside the juridical order”* (Agamben, 1998, p.17) and furthermore this paradox can henceforth be formulated as *“the law is outside itself”* or: *“I, the sovereign, who am outside the law, declare that there is nothing outside the law”* (ibid.)

Thus when the sovereign state of Switzerland proclaims a state of exception, which it does in these Freeport hangars by purposely re-creating “failed” states and constructing a space of permeated regulatory vacuum (Steyerl 2015), it creates an exclusion. However, this exclusion is on account of being excluded, still included in the socio-technical agencement of what is declared to be excluded. Meaning *“what is excluded in the exception maintains itself in relation to the rule in the form of the rule’s suspension”* (Agamben, 1998, p. 18). So through a means of exclusion which is what a boundary does, it separates one part from another, it simultaneously includes the other by fusing things together as a link, if we are to return to Trías’ notion of what constitutes the boundary. These dense passages by Agamben on the notion of sovereignty and inclusive exclusion offers a way to look at the socio-technical agencement of the boundary as something that presupposes that which it excludes (The World) through its statements, as the world must always present. It also shows the power of the law in terms of market delineations, since it is what can declare something to be outside or inside - due to its sovereignty.

In other words, the law very much depicts the complexity of how the boundary is, as the particular “force” of law consists in this capacity of the law to maintain itself in relation to something exterior (Agamben, 1998). The law, formulates itself in relation to its other, to its outside, which again brings up the bracketing and its condition, that its *“setting also guarantees, simply by virtue of its presence, that the outside world is also present”* (Callon, 1998, p. 4). The state of exception which this thesis suggests that the Geneva Freeport is an example of, is created in the name of the law, made possible by its sovereign nature. The jurisdictional difference drawn up on one and the same

storage building shows this fundamental localization, the complex relations here denoted as a threshold, in Trías philosophy described as an entity, and by Mitchell denoted as a frontier which all could be claimed to be depicting the same thing, that the boundary is not a thin line but a threshold that by virtue exclude and presupposes that which it includes. This traces us back to our formulated model of the relation between the world, utterance and socio-technical agencement, as shown above - the law has the performative power to declare that nothing exists outside its frame, it can declare that which is to be our reality and how we perceive for instance the market.

Through the lenses of performativity and seeing boundaries as socio-technical agencements I have in the above text formulated the paradoxical nature of the boundary's constituency. It has given us two distinct conflicts that arises in a boundary creation, first the conflict between statements of the definition of the boundary and secondly it has also given us tools to analyze the materiality of the boundary, which is, in the eyes of the performative approach at least, closely interlinked with how we define it. Continuing into the analysis, there are still some questions remaining, or maybe they could be seen as new ones that are arising from the conceptualization put forward above. For instance; *how can we understand the interrelationship between the material boundary and its representation? And how does the market's other affect the boundary drawing?*

5. Analysis - The Market's "Other"?

In order to answer the two questions arising from the two empirical cases the analysis will firstly discuss what kind of interconnected affects that can be denoted in the actual objects that are being delineated as well as the conceptual boundaries that are used to delineate (in this thesis, mostly the law). Secondly, when having done so it will also be analyzed what the residing conflict yet connecting aspects that are to be found in a boundary tells us about the market's other side, and how this presuppose the boundary's framing. It will also compare the two cases presented above, by showing how they in different ways depict a market's relation to the law.

What is depicted in this thesis is how the representations of the boundaries we create are continuously challenged by the adjacent entities that are not yet in the actual framing, causing the representations to shift, which then in turn also affects the material entity. But what one must not

forget here is to also think of *how* boundaries actually relate to the actual thing they are delineating, and what does this frontier, threshold, boundary actually constitute of? From Trías we know that we have three entities to decipher. The World, which in this case can be seen as the market, calls for being divided, one type of market needs to be delineated from another, which presuppose the boundary - if there are no things to be divided, there can neither be a boundary. Yet the boundary also act as a participatory agent in the presupposition, because various objects are defined and given agency due to their difference - they must be divided by the boundary and the three linking objects constitutes the entities of the relation between the boundary object in-between something and something else.

Relating these conceptions back to the topic at hand, the notion of a boundary object, briefly mentioned in the theorization part (and literature review) is something which needs a bit more attention. A boundary object is an analytical concept developed by Star & Griesmer (1989) and is defined as something that inhabits more than one world. The complex task these boundary objects face, is that they must maintain the integrity of the interest of the opposing context, for without it, no communication between entities can be reached, yet this must be balanced against the own centrality. Thus a boundary object is created when opposing views collaborate to create a representation of nature, a geographical boundary on a map, property arrangements, field notes depicting the structure of the sand in the land between the savanna and rainforest in the Amazons produced by three different experts, are all boundary objects. They are the representations of the complex intersecting structures in the World rendered by us in order for us to grasp it and *“when participants in the intersecting worlds create representations together, their different commitments and perceptions are resolved into representations”* (Star & Griesmer, 1989, p. 28) but even more importantly (own emphasis) *“This resolution does not mean consensus. Rather, representations contain at every stage the traces of multiple viewpoints, translations and incomplete battles”* (ibid).

In one way, this definition of boundary object, which is a representation of intersecting yet opposing views, might be as close to the materiality of the boundary we will get. It is in its own right a representation of the things I am here trying to explain, the boundary as an object as a boundary object. The boundary object is in other words the representation of the socio-technical agencement, that is the boundary. If we should try and find resemblances with this description of the boundary

and Trias definition, we could turn to philosopher Anna-Lena Renqvist's description of the boundary creature as the mythological animal, the centaur. This animal is the embodiment of primitive nature and humanity, which also could be seen as the fusion between the hermetical side and order (Renqvist, 2011). Bringing in this figure might seem somewhat farfetched, yet, if one looks closer, this boundary creature could in many ways be seen as the embodiment of the law (which is a suggestion retrieved from the history of Germanic law (Agamben, 1998))

This also moves us further into the second question posed above, for, in what ways does the black market presuppose the white market's existence - does the white market need the black market in any way? Returning to Agamben's book *Homo Sacer* (1998), he, just as Renqvist, traces references to mythological creatures. In ancient Germanic law one has used the term *Friedlos* "man without peace", in depicting the opposing state of order. As Agamben shows us, Germanic and Anglo-Saxon sources defined the human status of this bandit a wolf-man, not a wolf, which is a very important distinction. Just as the boundary creature could be seen as a centaur, the wolf-man who becomes banned from the city, still has a relation to it. He is still half-human, and so *"The life of the bandit... is not a piece of animal nature without any relation to law and the city. It is rather, a threshold of indistinction and of passage between animal and man...exclusion and inclusion: the life of the bandit is the life of the loop garou, the werewolf, who is precisely neither man nor beast, and who dwells paradoxically within both while belonging to neither"* (Agamben, 1998, p. 63). Sounds a lot like our boundary creature, does it not?

In many ways, the illegal market could be seen to resemble this creature that embodies what we would refer to as a ban. The law frames a legal market for cannabis and that which falls outside is subjected to banning, but this is how the black market still plays a role within the white market as: *"He who has been banned is not, in fact, simply set outside the law and made indifferent to it but rather abandoned by it, that is, exposed and threatened and the threshold in which life and law, outside and inside, becomes indistinguishable. It is literally not possible to say whether one who has been banned is outside our inside the juridical order"* (Agamben 1998, p. 23).

In the cannabis case Kjellberg & Olson (2016) pin points the interrelation between the legal and illegal market, through the difficulties of conducting a proper delineation that successfully depicts

the relationship between the two of them. Moreover, the negative exemplification made of the illegal market, for instance that it could be seen as a gateway drug to heavier use, might however also fill a role in the structuring of the legal market, in the sense that the illegal market becomes the scapegoat (Gerard, 2006). It is an example of why we must follow the letter of the law, because the law is what saves us from our wild and anarchistic nature that our desires draws us towards (Bjerg, 2014). Thus the law has a disciplining function and act as a gatekeeper into the regulated world where rules and order are posed, but the wild, uncontrolled, unregulated market is through its exclusion still included in the frame as well as used as a metaphor to align actors to the regulated market. Yet, how does this then relate to the state of exception found in the case of Freeports?

Here again, Agamben's philosophy with regard to the nature of the law and logical systems proves hugely helpful. He introduces two concepts to describe the definition between outside and inside - the example and the exception, that together form a structure that underpins the system. I will here argue that the reasoning Agamben postulates concerning the exception, can be applied to the Freeport-case, which is as we have seen, a form of *inclusive exclusion* whereas the black market functions as an example, an *exclusive inclusion*. The example is defined as something that belongs to the frame by being different from it. Agamben shows this by the usage of a grammatical example from Millier's "L'exemple (p.176): *"the paradox here is that a single utterance in no way distinguished from others of its kind is isolated from them precisely insofar as it belongs to them"* and so *"the example is truly a paradigm in the etymological sense: it is what is "shown beside" and a class can contain everything except its own paradigm"* (Agamben, 1998, p. 20). One could argue that in terms of performativity, how a market is framed by a conceptual boundary such as the law, is done so in relation to the example, to the other, to the ban. The strive to delineate the black market from the white is challenging precisely because as for instance an authority bans the purchase of recreational cannabis, they have created a relationship between what is legal and illegal and so the black market will forever play a role in the white market, because they are interconnected by the example - a performative utterance that by excluding the example, makes sure that it will always be present.

The case with Freeports and the exception has a different nature as *“while the example is excluded from the set insofar as it belongs to it, the exception is included in the normal case precisely because it does not belong to it”*. This can be exemplified by the relationship between the Freeport and its other, which in this case is the regulated market. The reason things can travel into a regulatory vacuum is because there is another side, that is regulated, which presupposes the exceptions existence. The state of exception cannot exist if there is no law to create an exception from. Retracing it back to Palan talking about the mutually dependent spaces - *“Offshore signals a profound fissure in the life of the state system: it denotes nothing less than the bifurcation of the juridical space of sovereignty into mutually dependent relative spaces.”* (Palan 1999. p 25). More importantly, these two models, example and exception are interconnected in their own right, they *“are ultimately indistinguishable and come into play every time the very sense of the belonging and commonality of individuals is to be defined. In every logical system, just as in every social system, the relation between outside and inside, strangeness and intimacy, is this complicated”* (Agamben, 1998, p. 20). Yet, even though the distinction between an example and exception might be difficult to make, what we can take away from this discussion is the suggestion which this thesis has set out to perform, the boundary as an own entity, as an object, as a creature even, is as socio-technical agencement that constitutes of opposing arguments and worlds that need each other to exist.

6. Discussion & Conclusion - The Boundary's Beautiful Balance

“Am schönsten ist das Gleichgewicht, kurz bevor's zusammenbricht”

(Balance is most beautiful just at the point when it is about to collapse)

(Fischli and Weiss - Der Lauf der Dinge 1987)

In the above analysis, I have aimed to depict the complex relationship exhibited by the concept of the boundary. The boundary object, which is to be seen as a representation of a boundary's constituency yet at the same time, by being performative also plays a part in the boundary's formation, is a paradox. The capacity of including something by excluding it, or vice versa, proves its contradictory form. The most important thing however, in terms of the delineations created by boundaries, are their inclination to change - that is the definition of them being socio-technical agencements that find themselves in a constant enactment process to fit what they depict. When a socio-technical agencements fails to reincarnate itself, it is very much as Grant Gilmore (1977, p.

100) warns: *“The quest for the laws which will explain the riddle of human behavior leads us not toward truth but toward the illusion of certainty, which is our curse”*. Because if the representations, the statements, the utterances that we use to describe our world is no longer cohesive with how it is constituted, then the frame does not fit the picture and we might very well lose sight of the new formats necessary in order to inform ourselves. The balance is beautiful in its ultimate felicity, yet if we conform to it too strongly we will be blindfolded and not taking notice of when it collapses.

One important delineation noticeable during the past decades is for instance between the Northern and Southern economies. The political connotation would denote this as the rising of Neoliberalism, which began in the late 70's. A project which has had paradoxical implication, as Neoliberalism in one way has been successful in supporting economic growth between 1982 and 2008. However, this growth was not evenly distributed because the emerging economies in the South did not enjoy the same type of growth as the industrialized economies in the North (Ougaard, 2015). This has relevance for this thesis specifically due to that the type of globalization that Neoliberalism as a socio-technical agencement has supported during its later years. The project has grown performative in its own right and stirred many of the Western processes towards continuous investment in whatever statements that support the current hegemony. However, what we might want to ask is - does the neoliberal project actually do a good job in depicting the world and how it is constituted in 2017? The continuous division between rich and poor and the allocation of global resources spurred by an incentivized profit-maximizing behavior that has come to build such fortunes that they are hidden away (Morgan, 2015) hints towards a structure whose backbone is fundamentally skewed towards a view which due to its format is incapable to adjust to a new world. Moreover, for markets specifically it is as Mitchell (2007) has shown us, that the law contributes to the capitalistic structure by differentiating between market and non markets, yet, non markets as we have seen are not necessarily not a market - they are just not framed in the picture of the market.

These aspects are extensive topics, worth a whole discussion on its own, and is something which needs to be treated in another paper. Thus I will now instead tie back to what this thesis is set out to discuss more specifically and conclude this body of work. All in all, boundaries can be seen as performative objects in the sense that they through their representations affect how markets are

delineated. For instance, as a market formation is enacted (as in the case with a cannabis market) the law framing it must be changed to fit this new structure. Yet, at the same time, as the statement is made these *words* forces its meaning and implication upon the material market, making the statements become a reality through the enforcement of the law.

In between the material world and the statement which we create of this world, we find the socio-technical agencement - that which make the complex nature of the material chaos accessible to us. This thesis proposes, that one could see the boundary as a socio-technical agencement, and argues against the back drop of Trías thoughts that the socio-technical agencement is a “sym-ballein”, something that fuses an unaccessible area together with what is accessible. That which we can access however, also presupposes that the rest of the world is present, even though we have delineated a space which becomes sort of a generalization of the world. Yet, as the boundary in its essence is a balancing act of a constantly residing conflict, it is continuously challenged and changes. It just has to, that is simply how the world works.

6.1 Implications & Future Research

As argued in the methodology part, this thesis has performed a conceptual analysis to develop a model for how one could think of boundaries more concretely. It has given a guidance to how we can understand the relationship between the market and its other, and the implications for creating “another side”. The goal has been to create a better idea of what happen when we exclude things, and to some extent align the arguments with that of the critical researchers such as Timothy Mitchell and Brett Christophers in terms of how we look at market boundaries and their effects. Yet, this is just the beginning of the thinking that needs to be done in this field. Further research should in order to validate the statements made include more empirical observations based on the conceptual outline made here. Just as presented in the model in the methodology section, this body of work has conducted the first step of the analysis in terms of conceptualizing boundaries and making observations of real life examples depicting the relationship between markets and law. A next step would be to apply this concretization to more empirical examples such as done by Christophers (2015) in terms of antitrust law. But the suggestions put forward can also, as have been shown, be applied to other areas to aid our thinking around the implications of boundaries, in a world where boundaries seem to come to play a larger role than it has for decades.

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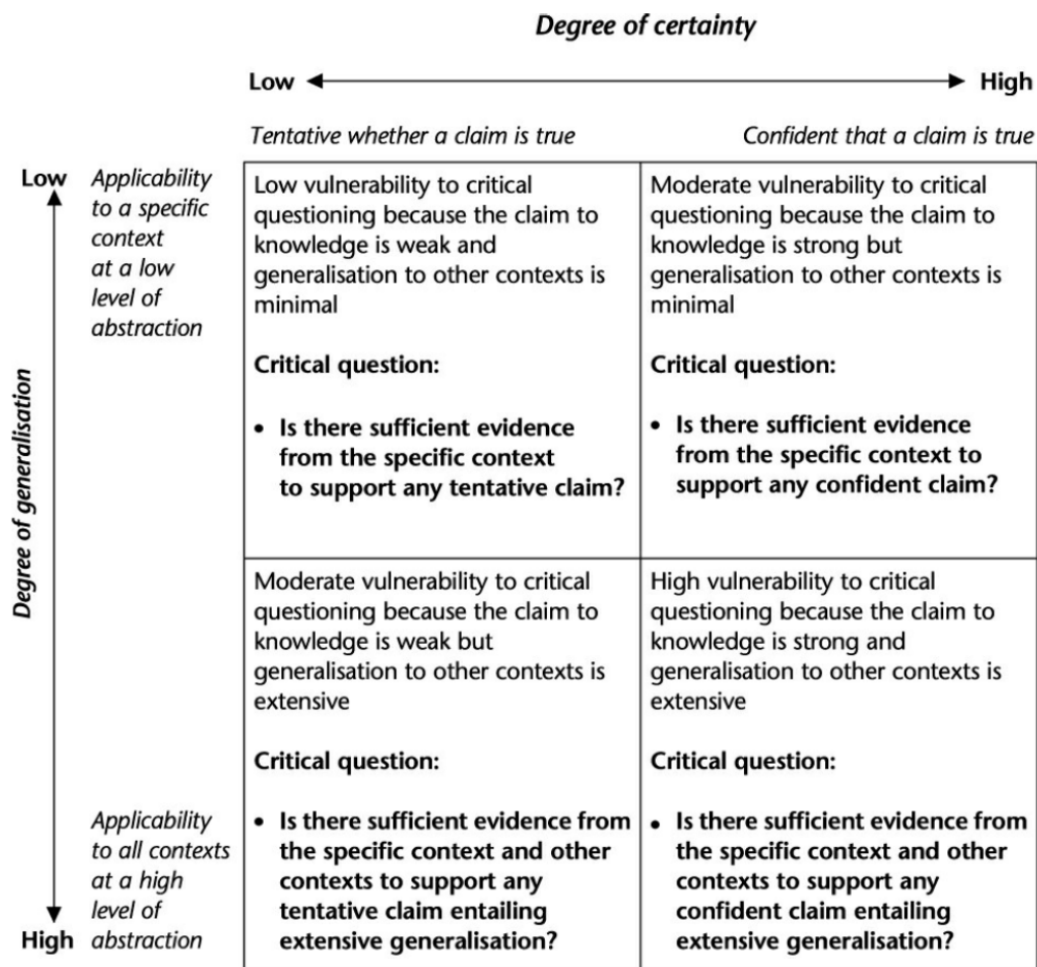
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8. Appendix



(Figure 3): Original model by Wallace & Poulson from 2011