ORGANS WANTED, DEAD OR ALIVE: A MORAL LIMIT TO PERFORMATIVITY?

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Abstract

With a shortage of organs available for medical transplantation in almost every developed country, economists have begun to suggest marketization as a solution to this problem, an idea that has recently gained traction outside of the economic community. Through the chosen methodology of document co-citation analysis, this paper seeks to uncover an emerging discourse of medical literature inspired by economic principles, arguing that economic performativity is the culprit behind the materialization of the recent conversation. By conducting a case study of Becker & Elias’s (2007) *Introducing Incentives in the Market for Live and Cadaveric Organ Donations*, this paper aims to contribute to the presentation of economic performativity as a moral problem. It makes the point that economic performativity operates through the mechanism of rationality which may have potentially adverse consequences for society. This work concludes with a discussion on the possible future of the organ market.

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All mistakes, errors and omissions remain my own.
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1. Introduction

Major advances in science and medicine over the last century have brought to the forefront several consequential debates in the field of bioethics on what should legally and morally be permitted. One of these debates concerns the permissibility of organ markets, in which body parts are treated as commodities that are bought and sold legally. After all, with current laws prohibiting this, there is a major shortage of organs in almost every developed country. From a purely economic standpoint, the current state of affairs is extremely inefficient. While live and cadaveric organs transplants are regularly conducted in most Western countries, at present, the organs must be sourced only from altruistic donors. A father's donating a kidney to a daughter with end-stage renal disease to save her life is perfectly legal, but the same woman's attempt to buy a kidney to save her own life is not.

The demand for organs to be used in medical transplantations has grown exponentially over the past decades, due to both an escalation in vital organ failure spurred by increasing rates of conditions such as obesity and diabetes and increased successes and advancements in the medical field, such as improved detection technologies and better post-operative outcomes (Abouna, 2008). Currently, 95,000 Americans are on the waiting list for a kidney transplant, and only 20% are expected to receive one, while 10% will die while waiting (The Economist, 2019). In 2015, the Madrid Resolution on Organ Donation and Transplantation urged national governments to take responsibility in meeting the medical needs of their citizens, including self-sufficiency in organ procurement. This is especially critical considering that the underground market for organs is thriving, with kidneys often travelling routes from poor Eastern countries to the wealthy Western world. Attached to this market is a plethora of social and ethical concerns. WHO estimates that one in every five kidneys used in transplantation is sourced from the black market (Lowrey, 2010).

The persistent problem of kidney shortages is not exclusive to the medical and ethical community, it is also an economic problem. As humans are born with two kidneys, yet only need one to live, the market-clearing equilibrium is theoretically reachable (supply far

\[1\] This is exclusive to kidneys, although other human body parts such as portions of the liver, eyes, bone marrow, and skin are also traded on the underground market, as well as organs sourced from cadavers as opposed to live
exceeds demand) but is strongly inhibited by social and moral complexities. From an economist's point of view, the key to increasing supply (and saving more lives) is thus making more kidneys readily available for transplantation. Academics have proposed several creative models to close this gap between supply and demand, drawing inspiration from a number of economic disciplines. Several economists (Barney & Reynolds, 1989; Kaserman & Barnett, 1991; Becker & Elias, 2007) have even gone so far as to propose overhauling current regulation and permitting a market for organs. After all, in the spirit of conventional welfare economics, a decentralized free market will theoretically lead to the maximization of social welfare and gains from trade. These proposals have received a variety of reactions.

Recently, policies inspired by behavioural economics, notably the ‘opt-out’ model of presumed consent, have begun to gain traction. However, despite increasing the donation consent rate to around 99.9% (Johnston & Goldstein, 2003), Abadie & Gay (2006) found that a presumed consent policy may in fact reduce the number of actual organs available for transplantation. In the absence of a clear directive from the deceased, the procurement of the organ is often blocked by the next-of-kin, leading to an artificial increase in the donor rate, with fewer organs transplanted overall. Additionally, for an organ retrieved from a cadaver to be acceptable for transplant purposes, the person must have had to be completely healthy at the time of his or her death. Because of this technical requirement, it is unlikely that the demand will ever be fulfilled from cadaveric donations alone. This dilemma has led Becker & Elias (2007) to advocate introducing monetary incentives into the market for live organs. Their reasoning behind this provocative move is that, “when an economist sees a persistent gap between demand and supply, [...] the next step is usually to look for obstacles to equilibrating that market” (p. 3). The authors’ fundamental assertion is that the societal efficiency gains provided by a conventional-style market far outweigh the potential moral and ethical quandaries associated with the buying and selling of body parts.

While their proposition was not a new or radical one, it was met with widespread criticism among both scholars and the general public after a short summary was published in The Wall Street Journal (Becker & Elias, 2014). Throughout time, there has been a general consensus...
in society that certain goods are sacred and should not be commodified. This philosophical notion was verbalized as far back as Marx (1847), who infamously proclaimed that capitalist structures corrupt the sense of value. He went so far as to propose abolishing markets to conserve the human capacity to recognize non-market values and keep them intact. Marketing citizenship and votes, paying for adoption, slaves, or prostitutes, and selling horse or dog meat are but a few examples of instances where society is, in general, against commodification. These are often referred to as repugnant transactions. Repugnant markets can be defined as ones that include commercial activity that society deems inherently immoral, even if such transactions may theoretically make everyone better off.

Though the idea of repugnant markets is a clear departure from traditional neoclassical economics, it has slowly gained acceptance among economists in recent decades. Economists such as Benabou & Tirole (2016) have attempted to quantify repugnance as a social preference through constructing belief-based models. This is a departure from the basic utility function used elsewhere in economics and it is able, to a certain degree, to account for sacred values and mental taboos that contribute to what we view as repugnant. While repugnant transactions under the name they are known today are widely agreed to have been brought into the academic conversation by Alvin Roth (2007), this concept can be seen as far back as the Bible in Acts of the Apostles, where Simon Magnus was excommunicated by Peter the Apostle for attempting to buy miracles from two disciples of Jesus (and from where the word ‘simony’, the act of buying and selling church positions, originates).

Repugnance is notably tied to time and place. Over the years, previously morally questionable practices, such as lending money for high amounts of interest, have slowly become widespread in the Western world, while acts that were once acceptable, such as buying and selling slaves, are now seen as repugnant. Roth (2007) notes that while repugnant transactions must be taken seriously as a real constraint on markets, repugnance can change over time and “some kinds of transactions are repugnant in times and places, and not in others” (p. 38). While Roth’s seminal work addresses several examples of repugnant transactions, such as dwarf-tossing in Canada and eating horse meat in California, and explains that social preferences are essentially the culprit of repugnance, it is lacking on how
this transformation actually comes about in society and how social preferences may evolve over time. He only notes (correctly) that repugnance is hard to predict.

Using the organ market as a case study, this research attempts to fill the gap, pointing to economic performativity as a driving force in the process by which repugnant transactions gain acceptance by stakeholders. This is done through the mechanism of rationality and performative discourse laden with economic terminology. Although many different interpretations of economic performativity exist (and will be discussed later on), the performativity thesis is generally considered to be defined as economics altering reality to become more in line with theory, rather than discovering underlying truths about the world. While Roth implies that a moral limit to performativity does indeed exist and may only be overcome by technological advancements, there are several real-world examples of economic theory and rationality prevailing over moral quandaries. This thesis seeks to investigate the role that economists play in the social acceptance of repugnant transactions such as the organ market, primarily through infiltrating the medical discipline with rationality. After all, as Arrow (1974) so eloquently points out, “An economist by training thinks of himself as the guardian of rationality, the ascriber of rationality to others, and the prescriber of rationality to the social world” (p. 16). This thesis therefore poses the question:

“In the field of bioethics, using the organ market as a specific example, how are moral boundaries and constraints negotiated and altered through economic performativity? How do these performative facts influence the social and moral in a real-world climate? Is there a moral limit to economic performativity?”

The contribution of this research is the investigation of the interaction between the technical and ethical aspects of the construction of economic facts, and how these may mutually affect each other with a resulting impact on the social and non-economic disciplines. This thesis aims to make a contribution to the relatively new consideration of economic performativity as a moral problem, and the question of whether there is an ethical limit to performativity itself (Roscoe, 2016; Brisset, 2016; Brisset, 2019). While a steady stream of literature exists on both the technical aspect (Becker & Elias, 2007; Roscoe, 2013) and the philosophical aspect (Dworkin, 1994; Radcliffe-Richards et al., 1998) of organ markets, there is a lack of literature
analyzing how technical calculations and philosophical arguments mutually influence and interact with each other and how this may affect the social world.

This thesis ultimately makes the claim that moral boundaries and constraints are negotiated through the mechanism of rationality and utilitarianism. Simply put, economic theory encourages and influences agents to think more rationally by presenting a previously moral problem as a rational dilemma, thus demanding a rational answer. While the moral dilemma demands an answer in terms of ethics, justice, and respect for individual well-being, the rational dilemma demands an answer in terms of utilitarianism, that the course of an action is determined solely by that which maximizes utility for society overall. This rhetoric brings about a performative discourse, pushing theory into being. Through imposing an economic view on a moral problem, this demands an answer in terms of efficiency, rationality, and numerics, despite adverse social consequences.

In the construction of economic facts and assignments of arbitrary values to organs through well-known economic principles, the technical and the philosophical go hand-in-hand, despite the appearance of nonpartisanship. They reinforce each other to create perceived truths and alter views of stakeholders, and therefore one may not be considered without the other. Technical calculations and rationality are used to push and validate philosophical statements, and philosophical and economic viewpoints influence the construction of technical “facts”, created solely to promote the utilitarianism-inspired philosophical stream of consequentialism. Setting the purely economic viewpoint against the moral viewpoint causes stakeholders to consider a new balance between the two. While the performativity thesis postulates that the constructed economic facts will penetrate the real world and thus cause markets to behave in accordance with these constructed facts (Callon, 2006), little research has been done on how this mechanism actually functions and how economics slowly infiltrates non-economic entities to result in real-life consequences.

This research will employ document co-citation analysis on Becker & Elias’s (2007) seminal work, using this article as a case study to show how economic and healthcare literature are increasingly being cited together in a new performative discourse. This discourse explores and explains the emergence of a new cross-disciplinary field to catch economic
performativity in the act. With the increasing influence of economics in the medical discipline, this could motivate scholars in non-economic disciplines to consider a rationally based economics perspective, and subconsciously subscribe to economic ideals (“by engaging in trade, everyone is better off”). This thesis will show that the beginning of this rationally based approach can already be seen today with small incentives being provided for organ donations, and how this situation may evolve into a slippery slope as it has with past examples such as the market for life insurance. The future of the organ market is also discussed.

This thesis is structured as follows. A brief summary of the theoretical background, including a short overview of economic performativity and the question of a moral limit to performativity follows the introduction. A detailed description of document co-citation analysis, the method employed in this research, is then given, followed by analysis and results. The subsequent discussion chapter includes an evaluation of the impact of scientific knowledge and economic thought on bioethics and the examination of whether there is a moral limit to economic performativity. This thesis concludes with a discussion of limitations and further research opportunities.

2. A short overview of economic performativity

“Economics does not have to describe reality; it’s mission is to say what the economy is supposed to be and propose solutions and devices to make it that way” (Callon, 2006, p. 19)

While economic performativity can be a vague and abstract concept, this chapter seeks to provide a short historical overview of the matter. The concept of performativity originated within the field of linguistics, with Austin (1975) distinguishing constative utterances from performative utterances. A performative utterance can be defined as a type of speech which has the effect of change and constitutes a social action. Both Austin (1975) and Bourdieu (1982) make the point that, while language itself is not per se performative, it becomes performative within a distinct social context (namely, symbolic or economic). Austin makes the significant conjecture that, for a theory to be performative, social conditions must also be
fulfilled, following the Marxist notion that general intellect is a product of the time (Marx, 1993 [1858]). This is what Austin (1975, p. 14-15) referred to as the ‘conditions of felicity’, the necessary conditions that an utterance must fulfill to become performative. Austin (1975, p. 14-15) argues that, for an utterance to constitute as performative, certain conditions must be fulfilled:

- **A1**: There must be an accepted conventional procedure having a certain conventional effect.
- **A2**: The utterance must be executed in an appropriate social context by the appropriate person to invoke the conventional procedure.
- **B1/B2**: The conventional procedure must be executed by all agents both correctly (B1) and completely (B2).

The performativity thesis is generally agreed to have first been applied to the discipline of economics in The Laws of the Markets (Callon, 1998). In its most basic interpretation, the performativity thesis argues that economics “performs, shapes, and formats the economy, rather than observing how it functions” (p. 2), claiming that economic theory may be made true by construction, i.e. the interference of theory with reality. Therefore, economic performativity can be defined as economics not only describing or interpreting the economy, but actively shaping the economy through performative practices (Boldyrev & Svetlova, 2016), essentially making reality conform to the theoretical constructs. In contrast to the natural sciences, economic theories are not true or false, but rather accepted or unaccepted, by agents and non-agents alike. Believing the theory is true, thus making it true by construction. According to Callon (2006), performativity contains two separate yet interconnected parts, the *singual existential statements*\(^2\) (of what should occur within a specific context) and the *sociotechnical agencements* (the socio-economic institutions and technologies that create conditions for fulfillment), showing that economic performativity is highly context-dependent. The correct configuration of the *sociotechnical agencements*, both human

\(^2\) A singular existential statement, first appearing in the Popperian school of thought, is a statement which contains its own context (“at X place, at X time, X can be observed when X is applied”) and contains what is referred to as a ‘shifter’ a statement which regards a shift in situations, operations, or contexts which can be described or observed. This is contrasted with universal statements (“all swans are white”). For further information, please see Popper (1959) and Callon (2007)
and non-human entities, are critical for the theory to come into being, bridging the gap between academia and reality, in order to make the theory true by construction.

According to Mackenzie (2006), a distinction must be made among four types of performativity: *Barnesian performativity* and *counterperformativity*, which resides in *effective performativity*, which in turn resides in *generic performativity*. Mackenzie (2006, p. 31) defines the four classifications as follows:

1. *Generic performativity*: An aspect of economics (e.g., a theory, model, concept, procedure, or data-set) is used by participants in economic processes, regulators, etc.
2. *Effective performativity*: The practical use of an aspect of economics has an effect on economic processes.
3. *Barnesian performativity*: The practical use of an aspect of economics makes economic processes more like their depiction by economics.
4. *Counterperformativity*: The practical use of an aspect of economics makes economic processes less like their depiction of economics.

The gist of Mackenzie's (2006) assertion is that, essentially, economics is not always performative. In the case of the organ market, several scholars point to the fact that offering extrinsic incentives such as money could lead to a crowding-out of intrinsic incentives, resulting in fewer overall donations from altruistic donors and making the market act in opposition to traditional economic theory. This is a key example of counterperformativity, which is an interesting area for further research.

The concept of economic performativity is often illustrated using the well-known Black-Scholes-Merton option-pricing model, where the empirical success of option-pricing theory was due not to the discovery of a true underlying theory by economists, but to the success of the model constructed by economists in changing the market itself to *make* option-price theory accurate. This was made possible by both human and non-human entities alike. Not only did traders act in accordance with these model, thus causing the empirical evidence to support it, but technological advancements in price dissemination and transaction
processing also contributed to the theory’s performative success (MacKenzie & Millo, 2003). Mackenzie & Millo (2003) argue that, while technological improvements certainly played a role in the economic performativity of the Black-Scholes-Merton model, the real success had much to do with the social consequence. This theory influenced the way that agents thought about pricing options. It imposed a sense of economic rationality, as well as gave the agents the ability to anticipate how other economic agents would act. This produced a sort of self-confirming equilibrium where no agent has an incentive to deviate (Fudenberg & Levine, 1993). The Black-Scholes-Merton model was widely used until the stock market crash of October 1987, which the model failed to accurately predict.

The Black-Scholes-Merton model is a notable example of economic knowledge and theories producing economic products, a process which Caliskan & Callon (2009) refer to as ‘economization’ and defined as “the processes that constitute the behaviours, organizations, institutions, and, more generally, the objects in a particular society which are tentatively and often controversially qualified, by scholars and/or lay people, as economic” (p. 370). They argue that the suffix -ization is intentionally added to imply that “the economy is an achievement rather than a starting point or a pre-existing reality that can simply be revealed and acted upon” (p. 370). The main point made by Caliskan & Callon (2009) is that there has been a noticeable shift in not only asking what the economy is, but what behaviour, activity, or institution can be defined as economic. They show the shift from use of 'economy' as a noun to 'economic' as an adjective, and give a name ('economization') to this mechanism.

The theory of performativity is deeply embedded in actor-network theory (ANT), otherwise known as the ‘sociology of translation’, which argues that sociotechnical networks are critical to the decision-making process by economic agents, creating the conditions for the enactment (Latour, 1993; Callon, 1999). The relationships between actors and agencements (technical devices that are assumed to possess agency) are a precondition to decision-making in situations with high degrees of uncertainty. Due to cognitive limitations by humans, these technical devices (which can range from computers to ideas to theories) are needed to facilitate computation. Economic models can be considered a type of agencement, able to continually calculate with ease, thereby informing the decision-making process and embodying itself within the agencement. The embodied knowledge within technical devices
causes individuals to behave in accordance with that knowledge, even if they themselves are unaware of the fact. Thus, performation can be considered a product of intermediaries, the complex interactions between human and non-human entities alike. While a strong criticism of ANT is the participation of non-human entities as *actants* in the network, ANT assumes equality of human and non-human entities participating in the network (the principle of generalized symmetry).

While the ANT perspective is not completely compatible with economic performativity, it brings up the critical role of the treatment of non-human entities (in this research, generally economic models and theories) by social and economic theorists throughout history. Of course, while the likes of Marx, Durkheim, and Weber never neglected to mention non-human entities (Marx’s technological determinism, or Durkheim’s totems come to mind), the agency of human entities was always viewed as superior, and in some cases, non-human entities were denied agency at all (Callon, 2009). The point that ANT brings to economic performativity is that non-human entities, the *agencement*, do in fact have agency through the knowledge that is embodied inside it, endowed with the power to transform, and the technical links to illustrate how economics builds and shapes the social world.

The sociology of performativity is contrasted with other sociological approaches such as Bordieu’s (1982) *effet de théorie*, where the adoption of a prescriptive theory leads to change in the social world. Bordieu (1985) gives the example of Marxism defining and conceptualizing the working class (and indeed class as a whole) out of a list of arbitrary attributes within an arbitrary assemblage (defined as the coming together of various and diverse components to create something new which provide meaning; the act of creating, bridging, and assembling). This led to the realization of the working class in the real world, a concept that may, without Marxism, never have emerged in the first place. The main concept derived is that: “*Economic theories make people act in certain ways, even if they are unaware that they are following them. People themselves do not necessarily adopt a theory; they behave as if they know the theory*” (Brisset, 2016, p. 163).

This is by no means to say that economics is always a self-fulfilling prophecy. Coming back to Austin (1975) and Bourdieu (1982), certain practical social conditions in which the
discourse is used must also be fulfilled in order for a theory to become performative. Thus, performativity can better be described as a prescription, which, “implies a medium, an intermediate device between theory and behaviour, between economics and the economy” (Callon, 2006, p. 18). This medium is generally considered to be, in the grand tradition of sociology, networks and institutions. These impose both constraints and incentives, showing that performativity not only influences through formal rules, but also through social norms (Callon, 2006), following North’s (1991) all-encompassing definition of an institution.

While networks and institutions cannot be denied as a critical link between theory and performative practices, an emerging field of research points to a different type of medium - calculating devices and methodology. In the words of Caliskan & Callon (2009):

“At the theoretical level, the sociology of economy prefers to focus on sociology’s favourite objects - networks and social relations, institutions, rules, conventions, norms, and power struggles. Yet the empirical research that it has generated increasingly points to the decisive role played by techniques, sciences, standards, calculating instruments, metrology, and more generally, material infrastructure in market formation” (p. 384)

This research seeks to further understand the role of materiality such as calculating tools in the process of economization. We move away from the notion that the construction of markets is a purely social exercise facilitated through networks and relations but rather a socio-technical construction, focusing on the importance of calculative devices within that construction and how they travel further through the social realm. While social networks are an imperative element in the performative process, this research also aims to show how calculative devices, focused on rationality, work within those social networks to influence economic agents to think in efficiency terms, especially when it comes to repugnant transactions.

Callon & Muniesa (2005) employ a broad definition of a calculation which goes beyond the quantitative definition preferred by neoclassical economists (which they argue, is a too abstract and formal view) and the qualitative definition used by anthropologists and
sociologists (which simply dissolves the problem of calculation in the detail of ethnography and cultural description). The authors argue:

“Calculation starts by establishing distinctions between things or states of the world, and by imagining and estimating courses of action associated with things or with those states as well as their consequences. By starting with this type of definition of the notion of calculation, we try to avoid the distinction between judgement and calculation.” (Callon & Muniesa, 2005, p. 1231).

Calculation is constructed in three steps. The entities are detached and ordered in a single calculative space (an algorithm, formula, invoice, spreadsheet, clearinghouse, or computer memory), subjected to transformations and manipulations through mathematical rules or mechanical calculations, with a result extracted at the end. This definition emphasizes the crucial role of material devices in calculation, such as economic theory, computer, or algorithms, without which they would not be possible. This definition does not only account for the actual manipulations, but the social space in which the calculation takes place. When this act is applied to a moral problem, it then too meets the definition of a calculation.

One of the main properties of a calculative economic device is that it is naturally cast in language familiar to economists. It is conducted in a familiar calculative space and manipulated with recognizable methods, and the result extracted is a means to an end. While this may seem an obvious statement, the role of language in economics should not be underestimated, especially when it comes to moral dilemmas such as a market for organs. McCloskey (1983), one of the architects of the discipline of rhetorical economics, claims that social acceptance of economic theory is not a matter of truth but rather a matter of persuasiveness. The theories that become mainstream are not those that are the most correct, but those whose creators are the best sellers.

Economists such as Blaug (2002) have criticized the reliance on mathematical proof, referring to this as “the disease of formalism in modern economics” (p. 50) and arguing that economics is becoming further and further removed from actual reality. So what happens when this ‘mathematical proof’ and process of calculation is applied to an ethical problem, a
repugnant transaction? Roscoe (2016) claims ultimately that performativity centers on the acts of description and classification. Economic utterances, or framing a moral problem in economic terms, are complicit in Caliskan & Callon’s (2009) theory of economization:

“I argue that descriptions alone represents a substantial enough instance of performativity to make us take note of moral quandaries that it produces; descriptions, as Muniesa puts it, ‘provoke’, act, and present us with a ‘new ontological deal’. Descriptions are facts, acts of classification with consequences in the world.” (p. 133)

This is exactly what Butler (2010) would refer to as a ‘hermeneutic phenomenon’, where the answer to a query is determined a priori. If a question is framed in economic terms, it demands an economic answer, one that may not be argued based on inquiries of exploitation, rights, or respect for human dignity, but rather on notions of ‘welfare’, ‘efficiency’, and ‘gains from trade’. This decreases the power of other valid, morally-centric arguments, through the coming-into-being of homo economicus and influences the agent to think in more rational terms, applying prices to sacred goods and quantitative value to life. If the organ market is presented as an economic problem of supply and demand, it requires an economic solution for facilitating the flow of supply (which of course, this being an economic problem, is through incentives), no matter the consequences. This thesis will later argue that description and classification of the organ market as rational and efficient has been the main culprit in the performativity of this programme.

As with many other provocative theories before it, economic performativity is not without its critics. Santos & Rodrigues (2009) argue, using the case of the FCC spectrum auctions, that there is a lack of proof of the performativity thesis. They claim:

“The case studies reviewed here have shown that engineering efforts of economics cannot make homo economicus true by construction. Economic agents do not become morally atomistic and calculative human machines in markets. [...] All things considered, one could be led to conclude that the performativity project has failed and that it has nothing going for it.” (p. 999)
However, the authors have the critical misconception that it is the economist, and not economics, that is making theories true by construction (Vosselman, 2013). It is not some economist, behind the scenes, dictating to the world how to act that is behind the concept of economic performativity. Rather, it is the economic theory that is ‘activated’ by the socio-technical network, the specific social context, which then brings rationality into being, a critical point that Santos & Rodrigues (2009) overlook. In today's world, it is not enough to say that economists design markets. From eBay to 3G spectrum auctions to kidney clearinghouses, that much is painfully obvious. Economic performativity is far more than that; it does not build the market, but it shapes the market, bringing *homo economicus* into being on its own. While Santos & Rodrigues (2009) are right that concrete proof of the performativity thesis may indeed be impossible to produce, this thesis attempts to provide some descriptive insights into the infiltration of economics into other disciplines.

This chapter has attempted to provide a short overview of the history of economic performativity. Indeed, the concept of performativity is wide-ranging and difficult to encompass within a single definition, as it spans many disciplines and produces much conflict and misunderstanding between them. Therefore, similar to Boldyrev & Svetlova (2016), this research seeks to determine not what exactly performativity is, but how it works within the “entanglement of knowledge, institutions, and practices” (Boldyrev & Svetlova, 2016, p. 7). It does so by specifically looking at the role of calculative devices in market formation and how this may penetrate other disciplines, evaluating the succeeding effect on the social.

### 2.1 Moral limits of performativity

Boldyrev & Svetlova (2016) state that studies in performativity have gone from simply analyzing “the link between abstract theories and economic reality toward empirical studies of how this link works in various applied fields” (p. 2). A recent debate in the domain of applied economic performativity is whether there is a moral limit to performativity. That is the main theme of this work, and we consider to what extent a theory may be performative and why one theory is capable of being performative (impacting the social world) but another
is not. While many different views of performativity exist among scholars, this thesis follows the view of Roscoe (2016): “performativity not simply as market design, but as the careful configuration of social life along the lines predicted by economic theory” (p. 132). In other words, this research looks at performativity as a moral problem.

Brisset (2016, p. 161) argues that a theory must fulfill three conditions to be performative (which he defines as implying a behavioural regularity which leads to a general coordination between agents) with an impact on the social. First, it must fit a specific ‘empirical’ form (allows agents to identify and discriminate between two or more coordination points, i.e. rational and irrational). Second, it must be self-fulfilling (the coordination point is common knowledge, and efficient in that it permits coordination, as in the Black-Scholes-Merton model). Third, the theory must fit with the conventional environment (satisfies the coherency condition; the convention created from the economic theory must fit with existing conventions).

Searle (1995; 2010) makes the distinction between brute facts, those that do not rely on human acceptance (“it is raining”), and institutional facts, those that need to be recognized and accepted by humans to be validated (“dollars are money”). These institutional facts may be simultaneously ontologically subjective, dependent on the acceptance of the society as a whole, and epistemologically objective, existing independently of the acceptance of an individual agent. Despite their reliance on the representations of agents, these facts are independent of the subjective opinion of each agent, thereby allowing them to have autonomous causal power. In other words, everyone conforms, because everyone else conforms, resulting in a newly formed convention.

Brisset (2016, p. 176) argues that economic performativity is limited by both brute facts (natural constraints) and institutional facts (social conventions). He distinguishes two social reality checks for economic performativity, arguing that any theory must fulfill one of these conditions to become performative:

(1) “The case of a new theory: To be self-enforcing, a social frame has to fit with other social frames already in place in society. This helps us understand how a
conventional environment selects between concurrent theories potentially performing the world.” (Brisset, 2016, p. 176)

(2) “The case of one theory which takes the place of another in performing the economy: How a theory can cease to be preformative, especially if we define a common frame as a self-enforcing status function, i.e. as a convention” (Brisset, 2016, p. 176)

Brisset (2016) goes on to apply this example to the case of the organ market, making the argument that institutional facts and social conventions forbid the marketization of certain goods such as organs, prohibiting market theories proposed by the likes of Becker & Elias (2007) from becoming performative. For a theory to become performative, there is “the necessity for a theory to fit with the institutional world” (Brisset, 2016, p. 177).

In this paper, we refute Brisset’s (2016) third limit of performativity and find that the author overstates the importance and non-flexibility of social convention. This thesis will make the claim that, rather than fitting in with the social conventions, the theory has the power to influence them, following Arrow’s (1974) notion of an economist as a “guardian of rationality, the ascriber of rationality to others, and the prescriber of rationality to the social world” (p. 16). While this outcome may not happen as obviously and as quickly as with the economic performativity of the Black-Scholes-Merton model, this does not mean that an economic theory contracting current social conventions may never become performative at all.

Economic performativity may also happen gradually over time. Roth (2007) notes that repugnance is significantly tied to time and place. For examples of this, we only need to look so far as the market for life insurance, or the lending of money for interest. In framing a problem in economic terms, the solution thus demands an economic answer, playing out the process of economization though description. This is the area where, as Callon (2010) proclaims, “the agonistic field, where the delimitation-bifurcation between economy and politics is constantly being debated and played out” (p. 165). In this thesis, we argue that, although the debate may happen very slowly and not be obvious, it is happening nonetheless and has the power to change the moral scene. By reclassifying more and more problems as economic ones rather than moral ones, this performative reclassification can substitute
powerful economic arguments for powerful moral ones, thus changing the conventional environment. As Roscoe (2016) argues, performative recategorization “involves the substitution of one set of normative arguments with another - the construction of rational economic calculations of worth and ethical action to replace existing claims and justifications” (p. 134). While Brisset (2016) underestimates the performative power of economics, this thesis seeks to shed light on the mechanism of social change performed by economics. After all, Callon’s (1998) original performativity thesis urges us to rethink how the boundaries of economics are constructed and negotiated. Rather than the social world limiting economics, economics has the power to change the social, and this thesis will attempt to demonstrate that.

3. Methods

Returning to the research problem, this thesis seeks to discover how moral boundaries and constraints are negotiated and altered through performative discourse, asserting that it is through the imposition of rational principles by economics on a previously ethical problem that these moral boundaries are renegotiated. For this purpose, this thesis will include a case study of Becker & Elias’s (2007) seminal article, Introducing Incentives in the Market for Live and Cadaveric Organ Donations, using document co-citation analysis to show how the idea of financial incentives presented in this article has penetrated the medical discipline, thus propelling societal change. While social change is difficult to measure and even harder to draw conclusions about, this research will attempt to refute the claim of a moral limit to performativity by attempting to capture the progress of economic performativity and revealing that rather than being limited by the social, economics has the power to change the social

The chosen methodology for this thesis is scientometrics, which is defined by Nalimov (1971) as “developing the quantitative methods of the research on the development of science as an informational process” (p. 2). In other words, it is the scientific study of scientific activity. The premise is that the development of science and technology is a process of communication (Mingers & Leydesdorff, 2015), and we can use scientometrics to “better
understand the nature of scientific discourse by employing and analyzing quantitative data as it emerges from scientific exchange” (Aistleitner, Kapeller, & Steinerberger, 2018, p. 3). The principal undertaking of scientometrics is citational analysis, which not only allows the researcher to interpret characteristic patterns and traits within an academic discourse, but also measure impact in a methodologically sound manner. This thesis will use the method of document co-citation analysis, to be discussed in detail later on.

In economics, citational data can be interpreted in two different ways. The first is to use the citational data as a gauge for the quality of the published work, known as evaluative scientometrics (Aistleitner, Kapeller, & Steinerberger, 2018). The second is to interpret a citation as an indicator of communication, an ongoing scientific conversation of sorts between academics. For example, this could be an evaluation, rebuttal or expression of (dis)agreement. Known as cognitive scientometrics (Hamermesh, 2018), this interpretation may be used to determine properties of scientific conversations and capture the development of new academic disciplines as they start to emerge. This notion is echoed by Klamer & McCloskey (1988), who called for “a new conversation replacing the logic of inquiry with a rhetoric of inquiry” (p. 10), conceptualizing economics (as well as scientific enterprise as a whole) as a conversation, relying more on the technique of persuasion than abstract methods. While both cognitive scientometrics and evaluative scientometrics may be used together (as they are not contradictory), this thesis will focus on the cognitive interpretation of viewing citational data as an indicator of communication between academics.

Scientometrics is commonly employed in technology and innovation literature, using patent citations to trace technological development and measure the interaction of scientific disciplines, but it also may be used in other disciplines as well. This thesis seeks to use the same methodology to trace the development of economic thought and the interaction between economics and non-economic entities. This is done in an attempt to measure acceptance and dispersion over time, capturing the societal change of a repugnant transaction by highlighting the infiltration into other disciplines, resulting in new discourses and conversations. Specifically, this thesis focuses on the use of research methods employed to address key themes and issues in the Becker & Elias (2007) paper, and then proceeds to analyze the further impact in an attempt to show the diffusion of economic concepts and models. It is true
that citation analysis is open to criticism. For example, citation numbers could include negative citations (citations attacking the original paper), self-citations (citations by the same author referring to previous works) and methodological citations (citations referring to the methods used rather than the ideas argued). Nevertheless, societal acceptance and diffusion of thought are notoriously hard to measure and citations may be a useful objective measure of the processes (Garfield, 1978). Another criticism is that different citation patterns and conceptual understanding of citation data among academic disciplines may cause a discrepancy in the results. For example, in economics and medicine, citations are very common, but in philosophy, they are rare. Additionally, it was found that citation patterns in economics differ highly across journal tiers, with a very strong emphasis placed on articles published in the top five journals (Anauati et al., 2018). While these criticisms are certainly valid, we argue that they do not diminish the power to identify the performative discourse.

In contrast to an earlier paper which advised against the adoption of organ markets (Schneider, 2018), this thesis seeks not to give an opinion on the ethics of organ markets, but rather to highlight the infiltration of economic thought and models into distinctly non-economic disciplines and show how scholars attempt to use the powerful rhetoric of economics (McCloskey, 1983) to push normative conclusions in the field of medicine and bioethics. This thesis differs from previous works in that we choose not to conduct a systematic literature review in order to come to an overall normative conclusion. Instead, the focus is on the methodological analysis, which concentrates not on the outcome, but on how that outcome was justified through the method of analysis, namely through rational economic principles. This work hypothesizes that conclusions were drawn using methods more familiar to economics than bioethics, and how then went on to influence articles in journals in the medical field, moving the organ from a disentangled entity within the economic model world to an entangled entity within medical literature.

The citation analysis was conducted using Web of Science (previously Web of Knowledge), an online subscription-based scientific citation indexing service by Clarivate Analytics with more than 90 million records. The collection includes six online databases: the Social Citation Index Expanded (8,500 reputable journals over 150 disciplines), Social Sciences Citation Index (3,200 journals in 55 social science disciplines plus 3,500 scientific and
technology journals), Arts & Humanities Citation Index (1,700 arts and humanities journals plus 250 scientific and social sciences journals), and Emerging Sources Citation Index (5000 journals capturing scientific, social science, and humanities trends beyond high-impact literature). This tool was chosen because of its ability to consult multiple databases simultaneously, facilitating cross-disciplinary research and measuring impact most efficiently.

Web of Science is considered to be the most commonly used method of acquiring citation counts within economic literature, along with Google Scholar (Hamermesh, 2018). It was chosen over Google Scholar as the quality of data provided by the latter has a tendency to be poor, with many duplicates of articles and citations coming from non-academic sources (Mingers & Leydesdorff, 2015). While Google Scholar consistently produces more citations than Web of Science, it was found that 16.5% citations on Google Scholar were found to be incorrect due to reasons such as phantom citations, broken links, or duplicates of the same article due to small differences in spelling and punctuation, or reprints of the same article in a different source. Web of Science, in contrast, was found to have fewer than 1% incorrect citations (Garcia-Perez, 2010). The entry barrier is also set much higher for Web of Science. The selection process for journals to be included is quite strict, while Google Scholar automatically scans the Internet for publications, resulting in the aforementioned problems of duplications, phantom links, and non-academic sources.

This thesis relies primarily on documentation co-citation analysis to gain insight into transdisciplinary fields, allowing us to discover trends which may be overlooked in traditional scholarly research (for example, by only searching journals residing in a specific discipline). Consistent with insights from Schumpeter that innovation results from recombination (combining already-known insights in a new and innovative way), emerging academic fields of research often cross disciplinary boundaries. Documentation co-citation analysis is therefore the ideal method to uncover emerging academic conversations. A co-citation is defined as “the frequency with which two items of earlier literature are cited together by later literature” (Small, 1973, p. 265), and may be used to generate networks of co-cited papers to indicate similarity and measure association. If a significant number of authors cite the two earlier articles, these articles can be considered to be strongly co-cited.
and thus defined by the algorithm to be similar. A relationship is then established between the citing authors, indicating a sort of on-going academic conversation. Similar papers, as determined by an algorithm, are grouped into clusters on the network (visualized using nodes and colours). The network can then give insights into the speciality structures of science, as well as allow us to map out the key concepts and ideas within a field and the relationship between them.

Because scientific papers are perpetually being produced and published, citation networks are constantly evolving. When viewed over a period of time, co-citation analysis also sheds light on our understanding of how academic fields evolve over time and incorporate new insights from various disciplines. This makes it an interesting method to use for this research, as it is able to model very recent developments and catch the co-occurrence of ideas. As Small (1973) states, “co-citation patterns change as the interests and intellectual patterns of the field change” (p. 265), making this an ideal methodology to answer the proposed research question of how the ethical boundaries of economics are negotiated. Co-citation analysis thus provides an advantage over other scientometric techniques such as bibliographic coupling, which is only limited to articles published during a certain time period and is unable to capture new developments.

The co-citation analysis and visualizations for this thesis were constructed using VOSviewer, a freely available software tool for creating and visualizing bibliometric networks. VOSviewer uses colour coding to highlight groups of related publications, based on direct citational relationships. To determine the cluster to which a certain publication should be assigned, a quality function algorithm is maximized. For more information on the algorithm used to cluster publications in VOSviewer, please see van Eck & Waltman (2017, p. 1055-1057).

3.1 Hypothesis

This thesis hypothesizes that economics, under the guise of ‘economic imperialism’ (Becker, 1976; Stiegler, 1984; Lazear, 2000), presents the value of an organ as an economic fact,
constructed according to well-known market principles such as the risk-premium model often employed in the insurance market or the willingness-to-pay/willingness-to-accept model often used to compensate for negative effects such as pollution. This fact complies with the widely accepted definition of economics as proposed by Lionel Robbins: “Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses” (1932, p. 16). This allows economists to reason for a Kaldor-Hicks optimality solution (gains are made by society as a whole, even though certain agents may be made less well-off by the transaction), again, seeing themselves as Arrow’s (1974) “ascriber of rationality” to the public (p. 16). By applying rational economic principles to a previously ethical problem, economists can make the argument that, by allowing a market for organs, society as a whole is better off. They can the powerful rhetoric of economics to come to an influential conclusion which could potentially have societal consequences (McCloskey, 1983).

By applying well-known economic models to a previously moral problem, economists can make economic- and utilitarian-type arguments, showing that, if the agents voluntarily engage in a transaction, this makes both agents better off. However, these conclusions were notably constructed with the boundaries of a ‘credible world’, “a counterfactual world which the modeller has constructed” (Sugden, 2000, p. 1). Sugden (2000) makes the critical point that, while abstract theory models with unrealistic assumptions may be useful to inform conclusions, they should not be used to make empirical claims about the properties of the real world. The author goes on to argue that “the gap between model world and the real world can only be filled by inductive inference, and we can have more confidence in such inferences, the more credible the model is an account of what could have been true” (Sugden, 2000, p. 1).

Unfortunately, many economists do not heed Sugden’s (2000) advice. Despite the economic model treating the organ as a disentangled entity, the economist uses the model to make contextual claims about whether organs should be allowed to be sold and bought as regular commodities. The economist takes the conclusion created within the credible world and applies it within the real world, without accounting for the inductive inference. By prescribing and encouraging this rationality, the rationality is then taken into account by the
medical community (as demonstrated through an increasing number of co-citations among prestigious medical and economic journals, with the algorithm determining a strong degree of similarity). This leads to the theory slowly becoming performative, not simply through construction of the models, but by its influencing the acceptance process of agents through normative arguments from the model-world. This allows the theory to move from unaccepted to accepted through its altering the informal institutional environment (or in other words, changing norms) in bioethics from an individual perspective (Primum non nocere, or “first, do no harm”) to a societal perspective (a view inspired by utilitarianism). This follows the definition of performativity by Callon (2006) that “performativity is not about creating, but about making happen” (p. 22). Although societal acceptance is a difficult concept to measure, this claim will be justified by forward citation analysis and the citation of economic papers, based on economic ideas and models, in various medical and other non-economic journals.

Through an analysis of various calculations of the valuation of an organ, this thesis seeks to illustrate how economic facts are constructed through technocratic discourse and legitimized through “a hermeneutic phenomenon” (Butler, 2010). By framing the question in economic terms, it requires an economic answer based on optimization, welfare, and calculations, and it disregards any philosophical or moral arguments, from the realm in which the subject matter had previously resided. Furthermore, this supposed technical legitimacy allows these economic facts to penetrate the philosophical and moral discipline, used to prop up certain viewpoints and delegitimize others. This happens most dangerously, in disciplines outside of economics, where the model-world ceases to exist. The interaction between the philosophical and the technical is where the focus point of this thesis lies. The later chapters of this thesis thus seeks to illustrate how economics has worked to change the notion of repugnant transactions through preformative discourses, using the example of a market for life insurance. This research ultimately hypothesizes that, although buying and selling organs is no doubt considered a repugnant transaction in today’s world, economic performativity may work to change this in the future, thus raising the question of whether we have really achieved better living through economics (Plott, 2011).
4. Results: Identification of key communities

This research will focus on a seminal article in the argumentation for organ markets, Becker & Elias’s (2007) *Introducing Incentives in the Market for Live and Cadaveric Organ Donations*, authored by the renowned Gary Becker, an economist who is known primarily for applying economic reasoning to disciplines that were previously thought to be outside the realm of economics. This article was chosen because of its direct application of economic principles to the medical discipline, its significant number of forward citations as determined by Web of Science, and the controversy it caused among readers when a short summary was published in *The New York Times*. This article was originally published in the *Journal of Economic Perspectives*, a publication of the American Economic Association which consistently receives a high impact factor.

In comparison to other articles making similar points, this article has no qualms about its obvious employment of economic methodology. It is not shy in its use of economic discourse, despite its discussion of a topic clearly in the medical discipline. They start their article by saying:

“When an economist sees a persistent gap between demand and supply - as in the demand for and supply of organs for transplants - the next step is usually to look for obstacles to equilibrating that market. Such obstacles are obvious in the market for transplants since very few countries [...] allow monetary incentives to acquire organs either from living individuals or from cadavers. This paper argues that monetary incentives could increase the supply of organs for transplant sufficiently to eliminate the large queues in the organ market, and it would do so while increasing the overall cost of transplant surgery by no more than about 12 percent” (Becker & Elias, 2007, p. 3)

The authors go on to discuss how the price of an organ should be determined within the model world. This is done through compensating for factors such as the increased risk of mortality, decreased risk to perform both market and nonmarket activities during the recovery
period, and the decrease in the individual’s quality of life. They create a handy economic formula to calculate this based on principles often found in the insurance market. The first factor would be calculated by the risk of dying multiplied by the money premium required for an increase in the individual’s probability of dying. The second factor is calculated through forgone earnings during the recovery period. Finally, the third factor is calculated through the expected change of the quality of life times the monetary premium to compensate for the expected decrease (Becker & Elias, 2007, p. 10).

The authors justify these calculations by using several different arguments based on the concept of economic efficiency. They argue that many more lives would be saved under their proposal compared to the current system, a view inspired by utilitarianism. Additionally, instead of crowding out intrinsic incentives, providing extrinsic incentives would simply give altruistic donors that extra push to donate. However, most of all, they argue, if this policy were not to be implemented, we will be denying dying individuals the opportunity to save their own lives. Under traditional economic theory, if an individual agrees to transact in a market they value the money more than the good (the good here being the individual’s bodily organ), and thus trade makes everyone better off.

As this article was published in a prestigious economic journal and is based heavily on economic insights (and goes on to make normative claims based on those insights), it is a perfect candidate for document co-citation analysis to identify how the main idea within the article (the legality of the organ market based off of economic principles) has travelled through space and time. We can explore how this article and the insights created within the model-world left the discipline of economics and dispersed into the medical domain, informing the academic conversation there.

The visualization of the bibliometric network can be seen in Figure 1. This network visualizes documents commonly cited together with Becker & Elias (2007). The colours of the nodes represent the results of the algorithm applied to the co-citation matrix in order to determine the cluster of the article. The closer the distance between each article, the more they were deemed to be similar by the algorithm. This assignment of clustering was done by maximizing a quality function based on direct citational relationships, as previously described.
in the methods chapter, and was not allocated in advance (van Eck & Waltman, 2017). Each cluster represents a key community concerned with questions relating to the organ market, and allows us to visualize relationships between works.

Figure 1: Co-citation map of Becker & Elias’s (2007) *Introducing Incentives in the Market for Live and Cadaveric Organ Donations*, created with VOSviewer. This article is often cited alongside articles published in medical journals.

We will now dive a little deeper into the key communities which were identified by our algorithm. However, before this begins a short discussion of the terminology of the maps, as described in the VOSviewer manual is in order. The maps created and visualized by VOSviewer contain *items*, which are the objects of interest. In this study, the items are publications, but could also be, for example, researchers or terms. Between items there can be a *link*, which is defined as a connection between the two publications. In this case, the link is co-citation, which is defined as when publication $i$ and publication $j$ are cited together in another publication $k$. Because there cannot be more than one link between two publications,
the link also has a *strength*, depicted by a positive numerical value. The higher the value, the stronger the link. The link represents how often publication *i* and publication *j* are cited together by future publications. The strength of the link is visualized through the distance between publications on the map, with the closer two publications are, the stronger the link and thus the similarity. Each item is assigned a *weight*, represented by a numerical value indicating the importance of the item. This can easily be visualized within the map, with the items carrying a higher weight more prominently displayed. The importance is indicated on the map by the size of the bubble, meaning that the larger the bubble, the more frequently that article and Becker & Elias (2007) are cited together. While both the strength and weight of an item are interpreted as a frequency of co-citation, the strength indicates similarity between publications as determined by the total amount of co-citations between *i* and *j*, while the weight indicates only how often that article is co-cited with Becker & Elias (2007). Each item is part of a cluster, which is a set of items on the map grouped together based on similarity as determined by the algorithm. An item may be allocated to only one cluster. All together, this creates a *network*, which is the map as a whole.

In summary, document co-citation analysis measures the frequency of jointly cited documents, and closely connected groups of co-citations allow us to deduce emerging academic communities and visualize the density of citations. By looking more closely at the citation map, we can identify four distinct proposals or groups of thought in the organ market today, based on articles which are commonly cited together along with Becker & Elias (2007). A short overview is provided below, which will then be discussed cluster by cluster in more detail.
<table>
<thead>
<tr>
<th>Cluster</th>
<th>Arguments</th>
</tr>
</thead>
</table>
| Green Cluster| ● Use of insights from market design and economics to overcome the repugnance of the organ market  
               ● Kidney pairwise exchanges, kidney clearinghouses                                                                                   |
| Red Cluster  | ● A neoclassical, free-market in organ sales  
               ● Empirical methods, such as case studies of Iran and surveys of public opinion, to come to conclusions                        |
| Yellow Cluster| ● An increase in incentives to stimulate organ donations which are not directly financial or highly controlled and regulated by governments and institutions |
| Blue Cluster | ● A neoclassical, free-market in organ sales  
               ● Theoretical methods to come to conclusions; insights from philosophy and ethics                                                      |

*Table 1: Short overview of key communities as identified by the algorithm*

**4.1 Market design as a solution?**

We will begin with the green cluster. At a quick glance, the topic of this academic conversation is clear with the inclusion of Roth, Sonmez, and Unver (2004; 2005a; 2005b). This cluster is centered around the question of market design, specifically, how economists
may use kidney clearinghouses based on pairwise exchange and matching theory as a method to overcome the repugnance of the commodification of bodily organs.

Alvin Roth, Tayfun Sonmez, and Uktu Unver (2004; 2005a; 2005b), the founding fathers of kidney clearinghouses and pairwise kidney exchanges, are featured as prominent authors throughout for their contributions to the field. Llyod Shapley & Herbert Scarf (1974) are also featured for their seminal work in trading commodities that are inherently indivisible and for matching theory, the mathematical framework that is often employed in these kidney clearinghouses. Shapley was also a winner of the Nobel Prize in Economics alongside Alvin Roth in 2012. While matching theory and market design reside primarily within the field of economics, it is not surprising that most of these publications were published in economic journals. However, contributions from medical journals do make an appearance, mostly concerning how to apply the theory proposed by Roth, Tayfun, and Unver (2004; 2005a; 2005b) in practice. For example, Rapaport (1986) proposes a rough outline, a blueprint of a potential institutional arrangement of an international kidney donor exchange in *Transplantation Procedures*, and Leider & Roth (2010) conduct surveys related to the public
opinion of market design and disapproval of certain market practices in *American Journal of Transplantation*. Satz (2010) also makes an appearance, which at first glance may seem like a strange addition, considering that she is an ethicist who argued against markets in certain domains and not a market designer. However, upon closer inspection of the market design debate, it can be noted that kidney clearinghouses were first designed in an attempt to overcome the repugnance of an organ market. However nonrational the viewpoint may seem, society believes that certain things should not be for sale and we must find a way to work around that restriction. Roth (2007) urges his readers to accept repugnance as a real constraint on markets, and the rationale behind designing a kidney clearinghouse in the first place is rooted in Satz’s (2010) work, and therefore an ethics-based article is not so out of place as originally thought.

However, due to the relatively low number of articles within this key community and the fact that the majority are sourced from economic journals, we can deduce that, while the concept of market design is highly revered in economics, it has yet to make a significant contribution or be taken seriously as a potential solution outside of the economic community. This may be a result of the fact that market design is a relatively new endeavour, only gaining prominence within the last two decades and is still being investigated today. This situation shows another advantage of document co-citation analysis. Using it, we can keep up with current trends and innovations within a field and watch how citation networks evolve over time. Therefore it is possible that, in a decade, this cluster will contain many more publications, including contributions from medical journals describing studies where this is applied in practice. This creates an exciting opportunity for further research, which will be discussed in further detail in the conclusion chapter.

### 4.2 Organ markets: theory and practice

A quick perusal of the abstracts of the articles allocated to the red cluster show that this key community is primarily concerned with the marketization of organs from both a theoretical and practical perspective. This section features equal contributions from both economic and
medical journals, with plenty of input from the *American Journal of Transplantation*, a leading journal in the field.

**Figure 3**: Co-citation map of Becker & Elias (2007), close-up of organ market cluster.

**Figure 4**: Co-citation map of Becker & Elias (2007), close-up of organ market cluster. The marked area in yellow indicates articles that were published in medical journals, yet relied heavily on economic insights to come to their conclusions.

Upon closer inspection of the map, we note that within this key community exists two distinct sub-communities which were determined by the algorithm to be very similar. One of these sub-communities houses primarily medical journals (*American Journal of Transplantation,*
Clinical Journal of American Society of Nephrology) and the other primarily economic journals (American Economic Review, Journal of Health Economics, Contemporary Economic Policy, and Journal of Economic Perspectives). It is here that we can view the link between theory and practice in organ marketization.

The articles to the right side of the red cluster were published primarily in economic journals and discuss the theory of organ marketization from an economic standpoint. Howard (2007) argues that current regulation was formed in an era in which waiting lists were non-existent and that we are constrained by historical customs, norms, and institutions. O’Byrne & Thompson (2001) conduct an empirical analysis of financial incentives on organ supply, coming to a positive conclusion while only noting that offering financial incentives may lead to time-inconsistent choices. Abadie & Gay (2006) criticize the current behavioural economics inspired model of presumed consent used in many countries, arguing that, in the absence of a clear directive from the diseased prior to their untimely death, opt-out models increase the donor rates but decrease the number of organs transplanted due to interference by the next-of-kin. While the authors rely on different mechanisms to reach their conclusions, one aspect that all these articles have in common is that the economist applies traditional economic methodology to a healthcare problem, to propose a solution that supposedly increases the efficiency of the activity and can thus procure more organs. Applying a rational perspective to the problem demands a rational answer and disregards potential ethical consequences. This act is an example of a hermeneutic phenomenon (Butler, 2010) in action.

On the left side of the red cluster of the map, highlighted in yellow, is where we can see these economic insights as applied in medical journals. Gaston et al. (2006) discuss limiting the financial disincentives in live organ donation (or rather, increasing the financial incentives). Boulware et al. (2006) conduct a survey among American ethnic minorities to find that racial minorities are more accepting of monetary incentives in organ donations. Israni et al. (2004) discuss four different types of market models, while Ghods & Savaj (2006) execute a case-study of the Iranian model of paid organ donations in the only country where such a practice is legal. While these articles were published in medical journals, written and read primarily by medical professionals (every author within the yellow box is a licensed physician), we can see that the theme of rationality is a constant across the domain. This
shows the influence of rationality that the economic articles had on the medical practice, indicated by the strength of the link denoting the articles' similarities.

The observation just described is a provocative finding from the research. Through the map, we can see that the line is increasingly being blurred between medicine and economics, and that a new discipline is emerging which applies insights from economics to medical literature. Economists, fulfilling their role as the “ascribers of rationality”, construct a hermeneutic phenomenon by presenting the organ shortage as an economic problem of supply and demand, which requires an economic answer. Medical experts go on to remove the organ from the disentangled model-context presented in the economic literature to an entangled context, without applying inductive inference (Sugden, 2000), thus leading to utilitarianism-inspired results which are not consistent with the historical philosophies of bioethics. Medical professionals, influenced by economists, are creating a cohesive body of literature of “health economics”, inspired by the principles of rationality and efficiency and ridden with economic discourse, the most notable aspect being a move away from the welfare of the individual and towards the welfare of society. The move is away from what has been a fundamental principle of bioethics across cultures for centuries, the concept of nonmaleficence or *primum non nocere*, a Latin phrase meaning “first, do no harm”, and toward an economically-inspired view of utilitarianism, the doctrine that actions should be taken if they benefit society as a whole. While rationality and efficiency are often concepts encouraged by economists, a utilitarian perspective to the ethical problem of the organ market could have grave consequences for a marginalized group of society. We will elaborate on this in the analysis chapter.

### 4.3 Non-financial regulatory incentives

The key community depicted by the yellow nodes concerns publications which argue for an increase in incentives which are not directly financial, to be achieved using regulatory instruments installed by governments. It is noted that every publication within the yellow key community was published exclusively in a medical journal, authored by medical scholars and
doctors with no contributions from economics (which is not surprising, considering neoclassical economics does not look kindly upon government intervention).

![Figure 5: Co-citation map of Becker & Elias (2007), close-up of the regulated incentives cluster](image)

Articles within this cluster include, for example, Rodrigue et al. (2009), who conducted a survey of the American Society of Transplant Surgeons and found that, while the majority supports indirect incentives (such as guaranteed health insurance, an income tax credit, and reimbursement of funeral expenses) to induce an increase in donations, membership was very strongly opposed to direct cash payments. The authors are quick to point out that, while there is a strong support among surgeons for an overhaul to the National Organ Transplant Act which forbids monetary incentives, the application of incentives would need to be vigorously regulated by the government to avoid the potential harms of financial incentives. Matas & et al. (2012) propose an internationally regulated system for introducing incentives into the market. However, rather than proposing a concrete solution, the article focuses on how the solution should be implemented, including the critical components of protection, regulation and oversight, and transparency. While every article in this key community makes it very clear that the members are still outright opposed to direct financial incentives, this could be seen as a first step towards the acceptance of a previously repugnant transaction which will be discussed in more detail later on.
4.4 Commodification as an ethical right

The key community depicted by the blue nodes also advocates for the marketization of organs but takes a more philosophical approach than the red cluster, arguing less about the benefits of economic efficiency and more about the importance of treating an organ sales as an autonomous and free-will centered decision. Beard, Osterkamp, & Kaserman (2013) focus heavily on the social benefits of transplantation, undertaking an ethical evaluation of the current system and concluding that one should compensate donors through a publicly controlled monopsony. Halpern et al. (2010) conduct an empirical assessment of ethical concerns, coming to the conclusion that the subject's willingness to donate increased as the risk of subsequently developing kidney failure themselves decreased and as the amount of payment they would receive increased. Perhaps unsurprisingly, every article within the blue cluster was sourced from a medical or ethics journal, with no contributions from economics, which tends to focus more on the utilitarian benefits rather than the philosophical notions.

While the citation map allows us to identify four distinct streams of thought, it is interesting to note that all four clusters are highly connected and increasingly co-cited, indicating an emerging discipline that is a combination of medical and economic insights. Of course, limitations exist within this methodology. The algorithm is not always the best allocator. Goyal et al. (2002), while assigned to the blue cluster, conducts a survey of the economic and health consequences of kidney sellers in the black market in India, and come to the conclusion that selling a kidney did not lead to a long-term economic benefit but instead led to a significant decline in health. The authors go on to advocate against using financial incentives to increase supply, a conclusion that goes against most other articles cited. However, the citation map nicely illustrates the main claim of this work, which is that medical and economic literature is becoming increasingly co-cited, with medical and health policy relying on insights traditionally found in economics, notably the utilitarian school of thought, despite going against widely held ethical beliefs. This also supports the idea that innovation is occurring through recombination, as ideas from the different disciplines of medicine and economics are combined to create something new (Schumpeter, 1934; 1939).
The next chapter will discuss the implications of this development, and how it may affect the social.

5. Analysis

Through the co-citation analysis, we can see that articles from medical journals and articles from economic journals are increasingly being cited together. This can indicate an emerging academic discipline and ongoing conversation between the two fields, the innovative process of recombination taking place, where medicine is inspired by concepts developed within economic thought, primarily of rationality, efficiency, and utilitarianism. While economists may applaud this infiltration, the invasion of rationality on a discipline built upon the principle of *primum non nocere* is not without societal consequences and potential dangers. This section seeks to elaborate on this infiltration and the potential consequences thereof, and provide a warning of the dangers of unrestrained economics.

5.1 The Janus face of rationality

The individual as a rational being is a ubiquitous element of Western social thought, something that Weber referred to as “the specific and peculiar rationalism of modern culture” (1978[1922], p. 26). Rationality is generally assumed to be defined as engaging in maximizing behaviour, as is acting in accordance with reason. Utility maximization models have long been commonplace within economics and have since spread to other areas of the social sciences (rational choice theory in political science is one such example). They are a fact of life in our twenty-first century world.

While Weber has been criticized by some scholars for failing to provide a coherent and consistent definition of rationality (Wallace 1990), Brubaker (1984) interprets Weber’s rationalization to consist of “the depersonalization of social relationships, the refinement of techniques of calculation, the enhancement of the social importance of specialized knowledge, and the extension of technically rational control over both natural and social processes” (p. 2) Brubaker (1984) then defines three key aspects of rationalization as seen
throughout Weber’s works: scientific technological knowledge as a basis for social action, impersonality as a result of capitalism and market relations, and the control and manipulation of bureaucracy in all aspects of life (Miles, 2001). These three tenets can be seen clearly in the case of the organ market: the application of algorithms and mathematical proofs as a valid argument to permit the commodification of organs, the decreasing value placed on the sacredness of the human body, and the wish to apply a market-like structure to everything.

Weber recognized a significant move toward instrumental rationality (defined as the pursuit of a specific end using any means necessary to achieve the goal, so long as the goal aligns with society’s ultimate objective) in the West, which this thesis argues has become increasingly visible. In The Protestant Ethic and the Spirit of Capitalism (1905), Weber, swayed by life in Post-Bismarck Germany, expressed the sentiment that he feared rationality was coming to dominate modern life. Weber viewed rationality as a threatening byproduct of capitalism, scientific inquiry, industry production, and particularly, bureaucracy that would lead humanity into a stahlhartes Gehäus (iron cage) from which it would be painful to break free. With the imposition of rationality crushing previously sacred values, this warning is still valid today.

Weber (1978[1922]) recognized the limits of rationality, the co-existence in humans of the rational and the biological/emotional, the former being subject to constant threat and interference of the latter. Weber recognizes four major types of distinguished social action, two rational (zweckrational, rationally purposeful action, and wertrational, rationality with reference to values), and two emotional (affective action, resulting from emotional states, and traditional action, resulting from previous customs and habits). However, he argued primarily that zweckrational was taking precedence.

In Economy and Society (1978[1922]), Weber discusses how the creation of a monetary economy leads to the development of rational techniques that could not exist in a moneyless society, equating calculations with rationality. However, he argues that it is not merely the existence of calculations that leads to rationality. As Hindess (1991) so nicely sums up, Weber argues that “Rationality not only requires the existence of rational techniques but also specialized training in their use, the development of expertise” (p. 224), which only then may
allow rationality to flourish. This is coupled with the growing significance of impersonal, formal, and disentangled relationships, inspired by bureaucracy and prominent in modernity, reinforcing economic rationality. Herein lies the connection between rationality and performativity that is exhibited throughout this article. We argue that a similar phenomenon is occurring within the medical discipline, with economics training medical professionals in the art of rational thinking, leading them to take on a utilitarian perspective as opposed to *primum non nocere*. Economists do not only create the economic models which facilitate pricing of the organs, but they also must move these constructed economic “facts” from a disentangled entity residing within the model world to an entangled entity, making and communicating claims on the basis of efficiency and betterment of society. By influencing rationality, this creates a performative discourse, promoting utilitarianism in the medical discipline.

Various insights from behavioural and experimental economics support these claims. By economics “training” stakeholders (which includes both medical professionals, as well as regular civilians) in rationality, this may result in a shift of perspective, moving from affective action and traditional action to *Zweckrational* in pursuit of a utilitarian communal goal, despite the serious societal consequences.

Founding fathers of behavioural economics Kahneman & Tversky (1984) illustrate this concept in action through a simple experiment in the framing of outcomes. Often referred to in academia as the Asian disease problem, the authors presented participants with a riddle:

> “Imagine that the U.S. is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. [...] If Program A is adopted, 200 people will be saved. If Program B is adopted, there is a one-third probability that 600 people will be saved, and a two-thirds probability that no one will be saved” (p. 343).

As the authors assumed preferences to be risk-averse, it was no surprise that a clear majority (72%) chose Program A. Then, the question was reformulated:
“If Program C is adopted, 400 people will die. If program D is adopted, there is a one-third probability that nobody will die, and a two-thirds probability that 600 people will die.” (p. 343)

While when examined side-by-side it is clear to the reader that there is no difference in real terms between the two formulations, surprisingly, in the second round only 22% chose Program C. While a very simple experiment, this shows the power of decision framing. The simple transition from “lives saved” to “lives lost” exhibited a stark shift in preferences, causing agents to move from risk-averse to risk-seeking.

Despite the Kahneman & Tversky (1984) experiment's being very abstract, it has been applied to experiments specifically within the domain of organ marketization to determine whether framing and providing positive information on economic mechanisms have an effect on the supposed repugnance of the transaction. Elias, Lacetera, & Macis (2015a; 2015b) attempt to show that economic rhetoric can play a key role in moving toward the acceptance of repugnant transactions by inducing rational thinking in the agent, which may preclude other moral concerns. Their study attempted to discover if preferences in agents changed when participants were provided with more information about market mechanisms. In an online survey experiment conducted with 5,324 US residents, Elias, Lacetera & Macis (2015a; 2015b) found that specialized information about the positive effects and increased efficiency of a price mechanism broadened an individual’s stated support on both providing payment to organ donors as well as indoor prostitution. By classifying a supposedly moral problem as utilitarian and thus making society better off as a whole, they were able to override earlier ethical concerns. In a separate study, Elias, Lacetera & Macis (2016) conducted an online survey among 2,918 US residents through Amazon Mechanism Turk, and found that after providing information about the estimated net taxpayer savings randomly to half the participants, views of repugnance changed significantly. These studies conclude that, while the repugnance of the organ market will certainly not change overnight, by inducing rational thinking within the agent, we may eventually move onto the path of acceptance.
5.2 Examples from the past

Organ transplantation is a fairly new phenomenon. In order to gain an understanding of how the repugnant classification of organ markets may progress in the future, we can look to the past, specifically at the market for life insurance, a transaction that was previously repugnant (mainly due to religious reasons) but widely practiced today. Through this example, we can trace the process of repugnance to acceptance and see how the influence of rationality was implicit in the process of economization. It may provide an indicator for how the repugnance of organ marketization may be viewed in the future.

Life insurance is not a new concept, and the idea can be seen as far back as Ancient Rome. In *Philosophie des Geldes*, German sociologist Georg Simmel (1978 [1900]) discusses the historical conceptualization of the *wergeld* (or ‘man price’). He talks about how the utilitarian criterion of a monetary price on life manifested itself through social relations until Christianization started to push out this practice in the ninth through twelfth centuries. He argues that the rise of individualism in society during this time, the idea that money has the property of fungibility while humans do not, and the inability to establish a monetary price on life and death led the practice to become repugnant. This mindset carried on for centuries, with Marx (2014 [1844]) making a similar point using prostitution as a deplorable example of applying market models to humans beings.

Zelizer (1978) looks at the diffusion of life insurance throughout the nineteenth century and specifically at how economic theories were used to establish a monetary value for a sacred object (life). Though not specifically calling it by name, he provides a historical overview of economic performativity at play. She notes how the first life insurance organizations were established as charitable causes, in order to help widows and orphans of low-paid church ministers avoid economic destitution. Until the late nineteenth century, life insurance was not considered in economic terms or looked upon as an investment in the case of adversity, but rather as a morally righteous act, marketed in altruistic terms similar to those applied to organ donations in our current world. This is echoed in writings from the time:
“The term life insurance is a misnomer [...] it implies a value put on human life. But that is not our province. We recognize that life is intrinsically sacred and immeasurable, that it stands socially, morally, and religiously above all possible evaluation.” (Holwig, 1856, p. 4)

It was not until the early twentieth century that life insurance gained widespread acceptance, when life and death were starting to be redefined in economic terms. It is here where we can see that the application of a rational perspective, constructed in language familiar to economists, had a significant effect on changing life insurance from repugnant to widely practiced. As Huebner (1924) argued, “The most important new development in economic thought will be the recognition of the economic value of human life” (p. 18). Retirement was seen as “economic death” (Huebner, 1959, p. 18), exceptional lives were seen as creating financial value in the community, subpar lives were seen as financial burdens, and disease was seen as an economic depreciation of the value of life (Dublin & Lotka, 1930). Returning to the notion of a hermeneutic phenomenon (Butler, 2010), by framing the dilemma in rational terms, taking out life insurance did not seem like such a bad idea overall.

Looking at the case of the organ market, it is possible to see a similar path playing out. Zelizer’s (1978) historical account allows us to see how the repugnance of a sacred commodity, life, changed throughout time depending on how it was viewed in a specific historical context. This reinforces the notion that performativity is highly context-dependent. Today, life insurance is widely practiced, and in fact even somewhat encouraged throughout society. Returning to what this means for the organ market, the practice of medical professionals’ defining organs through economic terms could be part of a slippery slope. When economists begin to tack a monetary value onto body parts, just as was done with life, the value is redefined through a performative discourse, resulting in consequences for how that item is viewed. Just as in the case with life insurance, what was originally seen as an altruistic act (saving widows and orphans of the church from economic destitution and poverty) slowly but surely fell prey to Caliskan & Callon’s (2009) “economization” as financial values for human life were developed, which led purchasing of life insurance to be seen as a rational decision. In this thesis, we argue that, similar to the case of life insurance,
the process of economization is already taking place in the organ market, and will be described further in the next section.

5.3 A slippery slope?

Despite the National Organ Transplant Act of 1984 clearly outlawing the sale of organs, we can already observe a slight shift in attitudes toward financial incentives for organ donation based on rational insights and arguments. This is evidence of the process of economization already taking place.

Currently, in the United States, donors of regenerative tissues such as blood and semen are already able to receive small cash compensation in return for their donation. In 1988, proposed bill no. 5456 in the Connecticut General Assembly called for refund of the $10 driver’s license renewal fee for citizens who agreed to donate their organs in the case of an untimely death, offering a small financial incentive to encourage residents to donate. More recently, there have been calls for state incentives and the use of regulatory instruments to promote organ donations, most notably in the form of tax breaks or reductions. Indeed, the empirical analysis of this research discovered an emerging academic conversation surrounding this topic, which blurs the line in the gift-versus-market dichotomy. Titmuss, however, warned us that providing financial incentives, no matter how small, can be a slippery slope. He notes that, if blood were able to be bought and sold, it would soon become “morally acceptable for a myriad of other human activities and relationships also to exchange for dollars and pounds” (1977, p. 198)

In the area of public health, attempting to induce behavioural change through positive or negative financial incentives is not a new or novel idea. Many governments have implemented a tax on cigarettes and alcohol to discourage such behaviour, and in 2018 the UK put a controversial ‘sugar tax’ on soft drinks in an effort to reduce the growing rates of obesity within the country. Recently, academics have proposed using the same regulatory instruments to motivate organ donations by providing a positive financial incentive through a tax break.
Lippert-Rasmussen & Petersen (2012) are two academics who endorse such a proposal but are quick to point out that “our views do not commit us to endorsing a free organ-market” (p. 463). Levy (2018) justifies this idea by adopting a sociological standpoint and arguing for the concept of reciprocity in a gift-giving exchange, citing the Maussian gift-exchange theory of which reciprocity is a key element in addition to giving and receiving (Mauss, 1954). She argues that the current system perceives organ donation as a unidirectional act, which “does not sufficiently take into account the symbolic meaning of the act of donation and its relational dimensions” (p. 410), failing to account for the reciprocal social action taking place between the various players. Therefore, providing financial incentives for organ donations using regulatory instruments is seen as reciprocating the goodwill of the donor, and therefore does not fall outside the realm of an altruistic act. However, just as life insurance was first seen as an altruistic way to help widows and children avoid distribution, small financial incentives can be seen as a first step on a long process to economization.

The following question arises. Can this recent push for financial incentives, no matter how small, be seen as an example of economic performativity at play, a move of social acceptance of a previously repugnant transaction? Furthermore, what does this mean for the future? After all, examples from the past show that markets that were previously considered repugnant are widely accepted today, after undergoing a process of economization spurred by rationality. At the close of this section, we come to the conclusion that economic rhetoric has the power to change the notion of repugnant transactions through applying a utilitarian perspective and presenting an organ market as a problem of efficiency, rather than a problem of ethics. This thesis therefore disputes the notion of Steiner (2010) and Brisset (2016) that there is a moral limit to performativity, which will be discussed next.

5.4 The limit does not exist

This thesis aims to contribute to the relatively recent discussion in academia of economic performativity as a moral problem (Steiner, 2010; Roscoe, 2016; Brisset, 2016). Following the line of thought presented by Munesa (2014) and Roscoe (2016), this thesis ultimately
argues that performativity centers on the acts of description and classification which are highly complicit in the act of economization, resulting in unintended consequences to the social. With economists such as Becker & Elias (2007) constructing their arguments for the legality of the organ market on the basis of words such as ‘efficiency’, ‘gains from trade’ and ‘welfare’ and constructing their analysis on concepts such as WTP/WTA and risk-premium models, they have effectively turned what was previously an ethical problem into an economic one, taking the organ from a disentangled to an entangled context when cited within non-economic literature. This allows the authors to argue for a utilitarian perspective, a viewpoint native to economics and inherently contradictory to most concepts within bioethics, which was historically concerned about the welfare of the individual rather than society. The previous sections have shown that we can see evidence of this in literature, with economic and medical journals increasingly being cited together, as well as in the real world, with small incentives for organ donations slowly moving toward acceptance.

Roscoe (2016) summarizes this concept nicely, arguing that economic theory not only has the power to shape the social world, but it is also laden with normative force:

“Economic arguments, in short, demand economic answers, deflecting attention from other means of accessing difficult problems. Moreover, if taken seriously, it involves the substitution of one set of normative arguments with another - the construction of rational economic calculations of worth and ethical action to replace existing claims and justifications” (Roscoe, 2016, p. 134)

By framing the organ shortage in the Western world as a problem of supply and demand by economists, it becomes a classic case of a hermeneutic phenomenon (Butler, 2010) and demands an answer which involves removing the barriers to supply. This allows the normative argument of utilitarianism to replace the previous ethical arguments against an organ market, arguments which referred to the sacredness of human life and body parts.

Therefore, this thesis disputes the argument by Steiner (2010) and Brisset (2016) that a moral limit to performativity exists, and asserts that the authors have taken a very narrow view toward the matter. Steiner (2010) argues for a restricted version of performativity, that “the
implementation of economic theory no longer requires a transformation of the economic representation and beliefs of participants in the market” (p. 249). Regarding Brisset’s (2016, p. 161) third limit of performativity, this thesis argues that the theory need not fit with the conventional environment and satisfy the coherency condition (that the convention created from economic theory must fit with existing conventions), but rather that, through acts of description and classification, the theory has the power to change the conventional environment. After all, Roth (2008), the founder of repugnant transactions as they are known today, rightly argues that repugnance can change drastically over time. Propelled by economic rhetoric, we are moving towards social acceptance. Performativity does not happen overnight, and while the proposal by Becker & Elias (2007) may not fit with the conventional environment now and has not succeeded in changing the economic representation and beliefs of market participants yet, that does not mean that this proposal will never become performative. Indeed, we can already seen slow notions of organ marketization happening.

Returning to the empirical analysis, the co-citation maps provide evidence for fulfillment of A1 and A2 of Austin’s (1962) conditions of felicity, confirming that the necessary conditions of the institutional and social context have been obtained for the organ market theory to become performative. This allows this thesis to make a cautious claim in support of performativity. The conditions of felicity are as follows:

“A1: There must exist an accepted conventional procedure having a certain conventional effect, that procedure to include the uttering of certain words by certain persons in certain circumstances;” (Austin, 1962, p. 14-15)

“A2: The particular persons and circumstances in a given case must be appropriate for the invocation of the particular procedure invoked.” (Austin, 1962, p. 14-15)

The condition of the conventional procedure is key here, because this allows the act to manifest itself through societal validation. Framing the problem of the organ market in performative discourse laden with economic terminology determines an economic answer based on efficiency, with previous arguments against the organ market based on moral quandaries holding no force. This is related to the fulfillment of condition A2. By being
invoked within academic journals, a specific institutional context, the procedure is executed by personnel deemed to have authority in the field who can determine the direction of future research, and perhaps, societal direction.

Austin (1962) takes a very strict view of performativity, invoking conditions B1 and B2 in addition to A1 and A2, namely that the procedure must be executed by all participants both (B1) correctly and (B2) completely (p. 14-15). Essentially, Austin argues that performativity comes down to who is allowed to give statements power, and that the conventional procedure must be accepted by participants (which is, in this case, society). However, if this condition is taken at face value, one could argue that no statement is performative, as it is unlikely that any procedure could be executed correctly and completely by every single member of society. After all, if one sole trader had chosen not to adhere to the Black-Scholes-Merton model, does this discredit the performativity of the entire model? We argue that the evidence exhibited by Elias et al. (2015a; 2015b; 2016) is enough to at least fulfill this condition in the loosest sense. When participants were provided information about market mechanisms in both the organ and prostitution market by economists, their repugnance toward the matter lessened. This study provides evidence that agents have accepted the conventional procedure, and therefore tentatively supports the main argument of this thesis: performativity is emerging in the world as a coordination of forces, resulting in an emerging market for human organs.

Coming back to the Black-Scholes-Merton model, Mackenzie & Millo (2003) assert that, while technological advancements in price dissemination and transaction processing certainly helped fulfill the performativity thesis (along the lines of Callon, 1999, and Latour, 1993 that non-human actants are also players in the production of phenomena), the main reason behind the model’s performative success was the impact on the social construction, and how it influenced agents to think more rationally through description and classification. This is imperative in the process of economization in interpreting more and more behaviours and situations as economic (Caliskan & Callon, 2009). If economists were able to convince option traders to act and think more rationally, should they not be able to convince medical professionals? Essentially, economics is producing homo economicus, not only by providing
the calculative devices produced by economics on the price of the organ, but also by urging for a utilitarian concept of efficiency which can overrule previous moral justifications.

6. Conclusion

To summarize, this thesis has attempted to answer the research question:

“In the field of bioethics, specifically the organ market, how are moral boundaries and constraints negotiated and altered through economic performativity, and how do these performative facts influence the social and moral in a real-world climate? Is there a moral limit to economic performativity?”

This research has asserted that moral boundaries are negotiated through imposing economic rationality on a previously moral problem through the intrusion of economic discourse, leading to an answer more inspired by utilitarianism than bioethics. Therefore, this thesis makes the final point that, in refutation of the arguments by Steiner (2010) and Brisset (2016), a moral limit to performativity does not exist.

This thesis has shown proof of an emerging trend toward performativity through document co-citation analysis. This justifies the main point that economic thought has infiltrated the medical discipline, pushing the notion of rationality and utilitarianism on a discipline that was built on the principal of *primum non nocere*. Through a case study of Becker & Elias’s (2007) *Introducing Incentives in the Market for Live and Cadaveric Organ Donations*, we can see that medical and economic literature are increasingly becoming co-cited, a signal of an emerging discipline built on rationality which may have adverse consequences for the social. This thesis argues that, rather than fitting the conventional environment, as is the view among most scholars who argue for a moral limit to performativity (Steiner, 2010; Brisset, 2016), economic theory can change the conventional environment through the acts of description and classification, causing agents to view a previously moral problem as economic. Although this may be a slow process, we can already see evidence of this happening today, both in academia and outside of it.
This thesis contains limitations as well as possibilities for future research. On the empirical side, a limitation of this thesis is that only cognitive scientometrics were used to evaluate the emerging conversation. As a possibility for future research, these cognitive scientometrics could be combined with evaluative scientometrics to also account for the weight and impact of the articles. As Gibson (2014) argues, economics is unusual among academic disciplines in the emphasis it places upon publication in a top set of journals, and that publication in these journals has a strong influence on the direction of the field. Applying evaluative scientometrics and cognitive scientometrics simultaneously could further confirm the emergence of a combined medical and economic discipline. Another limitation of the empirical study is that it used the methodology of a case study, focusing on one seminal article (Becker & Elias, 2007) to draw conclusions. The same methodology of document co-citation analysis could easily be applied to many similar articles in the field, thus constructing multiple citation networks as a measure of robustness, which could also be used to inform further conclusions.

Because of time and space constraints, the concept of counterperformativity is largely ignored; yet it could be an intriguing topic for future research. There is a certain group of economists that believe that offering financial incentives may in fact lead to counterperformativity, or in other words, that allowing organs for sale could actually decrease supply. A wide body of literature exists on this crowding-out phenomenon, arguing that there is often a hidden cost of rewards (Weibel, Rost, & Osterloh, 2007). Rothman & Rothman (2006) apply this rationale to the organ market, suggesting negative effects on the social relationships of gift-giving and altruism due to newfound tensions between intrinsic and extrinsic motivations to donate. This could be an intriguing topic for future study.

In regards to the performative discourse, an interesting opportunity for future research could be to watch how the citation networks evolve over time. As articles are constantly being produced and published, citation networks are continually changing. As previously discussed in the analysis section, the green cluster representing the key community of market design has a relatively small number of publications, with the publications residing primarily in economic journals. However, market design is a fairly new endeavour, which continues to be
investigated and researched today. If market design is able to overcome the current practical barriers that it faces today in the organ market, it could be possible that, in a few years, this cluster will contain many more publications, including contributions from medical journals of studies where this is applied in practice. Alternatively, should society move more toward the direction of rationalization and utilitarianism, the red cluster could increase, indicating an ever-increasing acceptance of the organ market. Only time will tell.

The final limitation, and one that is often ignored by performativity scholars as a whole, is that by engaging in this research, we are also contributing to the performative discourse. While performativity of research is widely researched in the discipline of philosophy, it is rarely mentioned in economics, and would thus be an interesting field of further study.

Connecting this to the scientific and policy debate, it is difficult to determine the future of the organ market. While this research has concluded that, through an increase in citations in non-economic journals, acceptance is slowly starting to come about, following Roth (2007), repugnance is very difficult to predict. However, we conclude with a quote from Phillip Roscoe on the future of economic performativity:

“As it is uninteresting to say that economists build economic objects, our attention should instead focus on the framing, overflowing, and reframing that occurs as they do so. Ours lens must slip from the market itself to the organizational settings it configures and the behaviour it engenders; away from the trivial observation that a market designer builds markets to the weightier truth that in building markets she restructures society. For we must, in the end, ask what kind of world we wish to see performed” (Roscoe, 2016, p. 132)

While attempting to avoid any strong normative analysis, this thesis has sought to warn of the potential dangers of economization, a bid to reconsider the use of economic rhetoric in moral issues amid the potential unfavourable consequences. While the medical sector was previously defined by *primum non nocere*, with a focus on the individual above all else and the undefinable value of a life, the economization of healthcare may lead to some potentially shocking dilemmas - most notably, if a life is worth more than the cost to save it.
Economization is indeed a slippery slope, and one that must be undertaken with caution considering the performative rhetoric with no moral limit. It is not a bad thing to recognize the power of performativity. Indeed, many developments of the 21st century have arisen out of this concept, from 5G spectrum actions to kidney clearinghouses. It is, however, important to keep in mind the dangers of rationalization and wield performativity in a responsible way, to ask what kind of world we wish to see performed.
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