

Complexity and Corruption:

**The need for a Synthetic Understanding
of Corruption in Mexico**

By

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Presented at the Conference:

Complexity, Legal and Institutional Change, and Rule of Law

Held at the

John Felice Rome Center, Loyola University Chicago on
December 1 & 2, 2017.

Rome, Italy - Monterrey, México



Thanks to Anthony Campagnano, Carmelo Cattafi, Gabriel Cavazos Villanueva, Tere González, Daniel Hurtado González, Andres Lozano Treviño, Jorge A. Lumbreras Castro, Ignacio Mendoza, Leslie Nájera, Carlos Eduardo Rodriguez Treviño, Diego Rodriguez, Luis Rubio and Walid Tijerina Sepulveda for valuable comments and suggestions, any errors are to be attributed entirely to me. Also thanks to all the people that sustain the Program in Rule of Law for Development (PROLAW) at Loyola University Chicago School of Law, as well as the organizers of the conference 'Complexity, Legal and Institutional Change, and Rule of Law' for their economic assistance and acceptance of this paper, especially Thomas McInerney, for all his support. Lastly, but most importantly, thanks to Bely, Mom and Dad.

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Abstract

This paper suggests that corruption should be studied as a complex, dynamic and non-linear problem. A first argument is dedicated to show that corruption behaves like a complex system and thus can and should be studied through the lens of complexity theory. The author also suggests that corruption has been studied from the standpoint of many disciplines, however there are no communicating vessels between fields and this prevents a synthetic or holistic understanding of the problem. The study also reflects on how a complexity approach to corruption can modify the way policymakers and development practitioners design and communicate anticorruption policies.

0. Introduction

Most studies on corruption have been carried out under the traditional scientific worldview in which problems, scenarios, situations, behaviors and everything in life is the linear effect of a previous cause. This worldview is what the specialized jargon calls the “newtonian” or “linear” paradigm. It is a mode of thinking, better yet, an established assumption which started in the realm of physics but also “dominates our thinking... in the mainstream of economics from where for better or worse, it casts a wider spell over the social sciences more generally”¹.

The newtonian paradigm enabled mathematicians, physicists and other “hard science” researchers to do extraordinary work by identifying causes for the natural phenomena they observed. Thus, we know that objects fall at a certain speed, and that water boils always at the exact same temperature. Thanks to the newtonian paradigm and its scientific methodology humans can go to outer space as well as design remarkable gadgets and buildings. All these achievements would not be possible without the scientific methodology born out of a view of the world in which things work in mechanistic, linear and predictable ways.

This scientific approach spilled over to the social sciences thus economics, sociology, criminology and other fields that deal with human affairs took the assumptions and linear methods from the natural sciences and applied them to the study of human and social phenomena. Accordingly, researchers conducted their investigations under a theoretical mindset which assumed a basic linear dichotomy: cause and effect. Torres Nafarrate described this mindset as a scientific approach that prefers unity over dispersion, order over chaos, equilibrium and harmony over conflict, thus in this kind of thinking there are first principles or causes.²

However, recently researchers from both the hard and social sciences have been dismissing traditional research assumptions because often problems do not show linear behavior. This has opened a whole new space that “complexity theory” has filled since the last four decades. Complexity thinking embraces nonlinearity, dispersion, chaos, uncertainty,

¹ Room, Graham (2011). Pg. 101

² Luhmann, Niklas. (1995). Pg. 18.

unpredictability and conflict. This new acknowledgment enabled researchers in the social sciences and in the development world to change their perspective as well as their methods and tools for understanding the world and its problems.

For Byrne and Callaghan (2014) the complexity paradigm “is a framework of understanding and not a theory of causation, although it can, generate theories of causation”³. This means that complexity is not an established step by step methodological research process but a mindset that allows researchers to view problems from a non-linear perspective. Until today there is no widely accepted definition for complexity, however I agree with Ramalingam (2013) when he says that “the most important lesson of complexity science is that the focus is less on potential solutions and more on the new mindsets we need to employ”⁴.

In this paper I take the insights and logics from complexity thinking and apply it to the problem of corruption. The goal of my study is to propose a transdisciplinary framework that will allow researchers from different fields to start a conversation with a new language and innovative approach about the study of corruption. My contention is that a complexity approach to corruption will lead to a synthetic understanding⁵ of the problem and will allow researchers to provide more thorough explanations of the phenomenon. Furthermore, I provide an argument on why a synthetic account of corruption is relevant for the process of designing and implementing anticorruption policies.

To achieve my objective, first I will comment on the issue of defining corruption in order to show that the linear mindset embedded in the social sciences has greatly influenced corruption research. The issue of defining corruption is important because policy breeds from academic research that in turn is founded on definitions. I will show that the most popular definition of corruption has underpinnings born out of the linear mindset, consequently, current anticorruption policies have, at their core, a newtonian logic.

The complexity researcher must not trouble himself with establishing an accurate definition of the problem he is addressing. A complex problem is a malleable substance which refrains from having an absolute or definitive form. In some instances it can be solid, other times it can be liquid or gas. For this reason I will not provide a definition of corruption since definitions run contrary to the logics of complexity which embraces uncertainty and ambiguity. Suffice to say that I understand corruption in its most broadest sense.

In order to understand complex problems research has to withdraw from traditional methods and turn into complexity thinking. I believe that corruption research has yet to make this shift, however to make this move I first have to answer: Is corruption a complex problem? For this reason, the second part of this paper will show that corruption is in fact a complex problem. This will be shown by describing three characteristics of corruption: 1. nonlinear, 2. emergent and 3. behavior that equates that of a dynamic organism.

To understand corruption as a complex system is truly an “eye-opener”. In complex problems, like in corruption, there are no linear cause and effect relations; upon experimentation there is no exact repetition; and sometimes the “solution” to problem exacerbates it or creates new ones. To emphasize, corruption has these and many other characteristics which make it a

³ Byrne, David and Callaghan, Gill. (2014). Pg. 8.

⁴ Ramalingam, Ben. (2013). Pg. xix.

⁵ To understand a problem as “synthesis” is to think about it in cross, inter, trans, and multidisciplinary terms, as well as to apply practices from different fields, to dialogue in multiple discourses, to overcome specialization, and to embody a highly and refined critical spirit. See (Maldonado, 2015)

complex problem and thus should be studied through the lens of complexity. I study the three characteristics mentioned above, however, further study is needed to show how corruption shares other complex characteristics such as autopoiesis, self-referential, self-replication, non stable, unknown, etc.

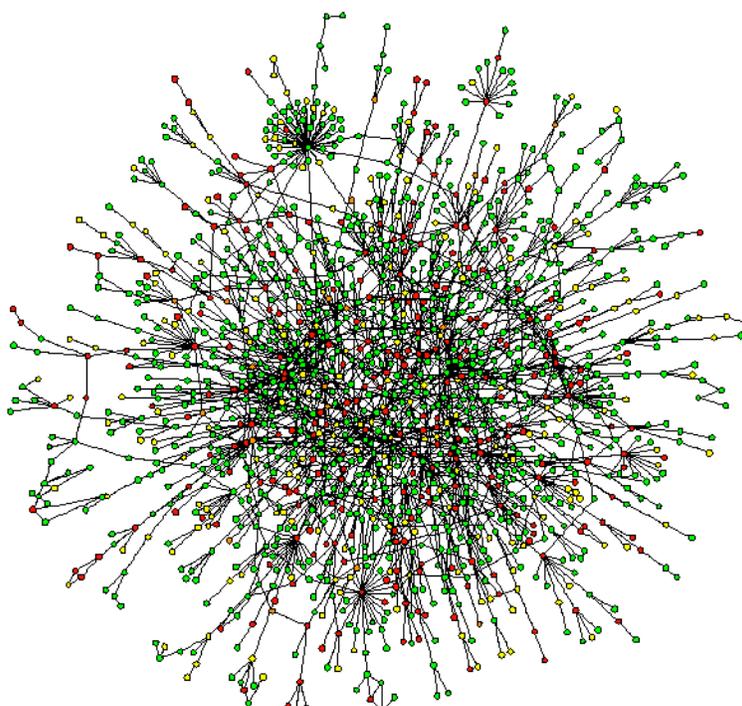
In the third part I will briefly reflect on current anticorruption efforts in Mexico crystalized in the *Sistema Nacional Anticorrupción* (National Anticorruption System). I will argue that a linear understanding of corruption produces linear public policies which inevitably will lead to failed results or even worse, an exacerbation of the problem. My focus is not the SNA in itself but the linear assumptions that underpin the whole system.

Lastly, I provide concluding remarks and suggest how anticorruption policies born out of a complex understanding of corruption, that is to say, a synthesis of corruption, can make a better impact. In the end, my proposal for policymakers is simple but profound: to design and implement policies that deal with local linear problems, while communicating that the policy is part of a complex system and that those measures will ultimately contribute to make a nonlinear impact to the network as a whole. This allows for local actors to design their own solutions to their specific problems, tuned to their particular contexts, in other words, micro-measures which have a minuscule contribution to alleviate the problem but when put together will slowly but surely change the macro environment.

Preliminary note

In the previous paragraphs I mentioned phrases such as “corruption as a complex system” and “the network as a whole”. These phrases represent my visualization of corruption. I share this visualization in the introduction because it is key in order to understand the argument. It is important for the reader to imagine a highly complex network where millions of nodes are interconnected and permanently exchanging information, where the connections can rapidly appear and disappear making it impossible to establish cause and effect relations.

The complex network I am talking about is something similar to this:



In this image, corruption is the whole network, not the lines, nor the dots. The dots represent people, history, institutions, psychology, discourse, natural catastrophes, personal situations, envy, peer pressure, moral blindness, incentives, and every other concept that can possibly (or impossibly) contribute to corruption. The lines represent the relationship between these concepts. Corruption emerges out of this relationship.

1. On the issue of defining corruption.

There are two basic elements in the majority of definitions on corruption: (1) a beneficial exchange between two people, (2) one of which is in a position of power or authority. Within this basic definition there are two clear linear underpinnings: a. The element of power or authority tends to encapsulate the problem to the realm of politics and government and dismisses every other area where corruption might also take place, i.e. it does not acknowledge the multi spatial aspect of corruption. b. It provides an image of corruption as an act or exchange, i.e., something tangible that occurs in the realm of the real. This latter issue is problematic for the complexity researcher because corruption is a product of the human capacity of volition, which starts in the realm of the mind.

I now reflect upon two examples of corruption that do not fit into this basic definition. Think of an employee which commits fraud towards his employer. In this case there is no “exchange” between two people, and although this hypothetical employee may be in a position of power (within the corporation he works for) this kind of behavior is not traditionally considered as corrupt, criminal yes, but not corrupt. Corruption is not necessarily an exchange and does not necessarily need a corrupter and corruptor. Corruption can start and end within a single individual.

I also identify corruption in acts that are not carried out from positions of power. Imagine a parent that asks for a “favor” to his lifelong friend who also happens to work at the ministry of education: to consider his son for a scholarship or entry to medical school. In this case, the parent did not use or abuse a power or authority vested in him. He simply asked for a favor. One can argue that the parent did not commit a corrupt act per se because it is not up to him to authorize the entry or scholarship of the child. However the parent initiated a corrupt act, and in this sense contributed to the corrupt network.

To be meticulous on this latter example, imagine that one rainy afternoon, while drinking coffee the parent was making up his mind about how to help his son enter medical school. The parent analyzed his options: bribery, tutorials, other schools, sabbatical year for his son. This cognitive effort concluded that the best course of action was to ask a favor from his best friend the head of the ministry of education which holds great influence in the entry processes. Once the parent decided on this course of action his mind started to create scenarios about the conversation to be had with his friend. Will he invite his friend over to dinner and coach his son to cause a good impression? Will he take his friend to the local bar and invite him a couple rounds of beer? Is it better to be frank and simply call him up and explain the situation?

This example lays out a real life situation from which the complex nature of corruption is plainly evident. It is an example of how corruption can penetrate social institutions in a way that it can ultimately evolve into an accepted practice. It is easy to blind ourselves about this kind of subtle corruption because a discursivity has created linguistic formulas and justifications to

overcome the moral obstacles that stand in the way of becoming corrupt.⁶ More importantly, these everyday life situations are blind to research because they happen in the realm of the unobservable. The complexity involved is just too overwhelming to observe and describe, even more so if the researcher was disciplined in the linear paradigm. For this reason, literature on corruption settles with basic definitions such as the one described earlier, so as to assign order and clarity in research.

The problem of defining corruption was made evident long ago by Nye (1967) and more recently by Navot (2014). Nye before providing his definition of corruption warned “The definition of corruption also poses serious problems. Broadly defined as perversion or a change from good to bad, it covers a wide range of behavior from venality to ideological erosion...But used this broadly the term is more relevant to moral evaluation than political analysis. I will use a narrower definition which can be made operational.”⁷ This encapsulating attitude breeds naturally from the newtonian or linear paradigm under which traditional researchers operate. Indeed, most research on corruption incessantly tries to understand the phenomenon by using all of the traditional scientific research methods; compartmentalization, classification, causation, thus researchers have assigned various definitions of corruption that aspire to be descriptive and reflective on their specific findings, rather than synthetic and holistic.

Traditional research methods have led researchers into understanding corrupt behavior in compartments, that is, in isolated areas of specialization. Some tackle the problem from the perspective of institutional design⁸, others political development⁹, behavioral science¹⁰, ethics¹¹, law or economics. The reality is that corruption emerges out of the conjoining of these and many other elements, but no one has integrated this fact into their studies^{12,13}. There are very few approaches to the problem of corruption from a transdisciplinary perspective, that is to say, from a complexity perspective. What I argue through this paper is that efforts should be made to establish communicating vessels among every field of research in order to reach a synthesis of corruption, which is the aim of any complexity study.

⁶ This is an idea for a future paper which will study corruption as discourse, in line with works proposed by Michel Foucault, Graham Gibbs, Teun van Dijk, and other discourse authors.

⁷ (Nye, 1967) Pp.419.

⁸ See for example (Krishnan, 2014) on corruption and political party financing. Likewise it is possible to find a study on corruption for every major governmental institution.

⁹ (Huntington, 1968) Pp. 59-60. ‘Modernization and Corruption’

¹⁰ (Ariely, 2008, 2012), Thaler (2015) and other behavioral economists which have written on the subject of dishonesty from a cognitive perspective.

¹¹ (Garzón Valdés, 2004) (Martínez Bullé Goyri, 2017)

¹² It seems that most researchers *acknowledge* this fact. Literature on corruption is aware that the problem is multidisciplinary, but it appears that this is just a passing and fun fact, when indeed it must be regarded as a central concern.

¹³ Two exceptions to this are: (Rabotnikof, 1999) which wrote a truly enlightening article on the different definitions of corruption that have been contributed from different fields and perspectives. (Warburton, 2013) more specifically wrote “I would suggest that to come to some fundamental understanding of the way corruption functions it is essential to understand it firstly from the individual’s perspective and to then build the individual into a complex social world. This has not been done to date, probably because it is such a difficult and complex task.”

As a result from the linear definitions and traditional research methods, as I will show in the third part of this paper, anticorruption policies are designed assuming that the problem can be solved in the same way that a machine can be fixed, that is to say, in a linear way. Another problem is that policies tackle corruption in isolation, that is to say, with disregard of how a particular policy contributes to fight the system as a whole. In military terms, anticorruption policies are isolated battles in the war against corruption. This would not be a problem if policies were thought of and designed from the start in a systemic manner¹⁴, but the reality, at least in Mexico, is that policy makers often mistake a single battle with the whole war.

I have found in complexity a innovative approach and a suitable language when applied to the study of corruption. As mentioned, research on corruption has yet to migrate from a mechanistic worldview into a nonlinear focus, but first I need to ask: does complexity research apply to the study of corruption? better yet, Is corruption a complex problem? I now turn to answer this question.

2. Corruption as a Complex System

Is corruption a complex problem? In answering this question it is necessary to consider the characteristics that make a system, problem or phenomenon ‘complex’ rather than ‘complicated’ or ‘simple’.¹⁵ Byrne & Callaghan (2014), as well as Cairney (2012) developed a glossary of terms that spans through the diverse disciplines and studies in complexity theory. In here I turn to this specialized language and ask if these terms apply to the issues that commonly arise when thinking about corruption.

Corruption and Nonlinearity

Cairney (2012) views non-linearity as a main theme in complex systems and summarizes it by saying that “non-linear dynamics (are) produced by feedback loops in which some forms of energy or action are dampened (negative feedback) while others are amplified (positive feedback). Small actions can have large effects and large actions can have small effects.”¹⁶ The butterfly effect is the most common example used to explain non-linearity; a single flap of wings of a butterfly in one part of the globe can cause a hurricane hundreds of kilometers away. What this example mainly tries to convey is the disproportion between the force injected into the system (input) and the outcome produced (output). Another image about non-linearity is when a single shove can turn into a catastrophic push, for example a gentle poke on a cable walker, i.e. “*The effect is not proportional to the cause.*”¹⁷

When thinking about corruption at a first glance it may seem that non-linearity has nothing to do with it. After all, one of the most basic representations of corruption is a linear exchange between people which benefits each other. However, careful analysis will show that corruption emerges from nonlinear elements (causes) and also produces nonlinear consequences

¹⁴ I am against “all encompassing or grand solutions”. A policy should tackle a local and particular problems (single battles), keeping in mind, that the policy is within a greater effort against corruption.

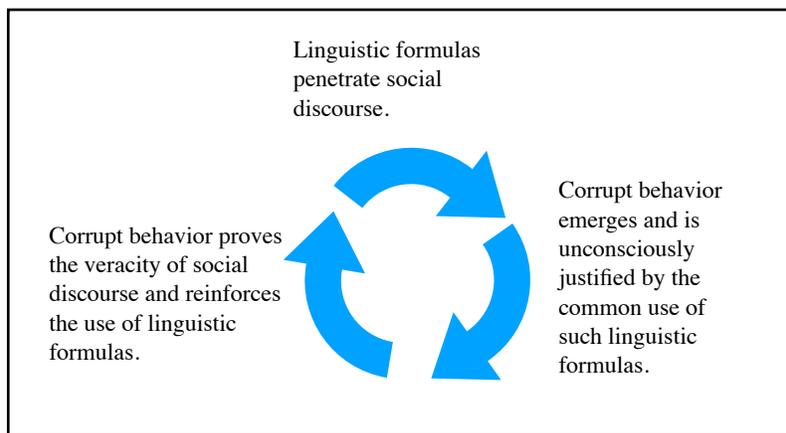
¹⁵ In here I follow the same logic as put forward by the Cynefin framework created by Snowden & Boone (2007).

¹⁶ Cairney, Paul. (2012) *Complexity Theory in Political Science and Public Policy*. Political Studies Review.

¹⁷ Ramalingam (2013) Pg. 226

(effects). In this sense corruption can be thought as both a nonlinear cause and as nonlinear effect.

Indeed, corruption is a phenomena that emerges out of many different and independent nonlinear elements. Adopting this view, a wide array of themes and issues from multiple disciplines arise. For example elsewhere I argue that discourse and cultural symbols are nonlinear elements that play a role in emerging corrupt behavior. Eloquent and sticky linguistic formulas which have emerged in Mexican culture such as “*el que no transa no avanza*” (He who does not cheat, will not advance) or “*un político pobre es un pobre político*” (A poor politician, is a dumb politician)¹⁸, are societal manifestations that evidence a deeply normalized attitude towards corruption. These linguistic formulas establish themselves in common discourse in the form of positive feedback loops causing a cycle where the final outcome (corrupt behavior) renews the whole cycle, in this way discourse reinforces the idea of corruption as a way of life. In other words, the consequences of hearing and repeating such phrases produce a cognitive reinforcement and unconscious justification of widespread corrupt behavior which in the end is normalized precisely because of the constant social bombardment of such linguistic formulas. The nonlinear characteristic in the example just described becomes clear by asking; Is discourse a direct cause of corruption? No one can demonstrate it, but it is plainly evident that it plays a role in the system as a whole.



Discourse as a positive feedback loop in the emergence and reinforcement of corruption. A non-linear element in the system.

It is important to keep in mind that discourse and culture is just one of the many (hundreds? thousands? millions?) elements in the system that play a role in the emergent phenomenon. For this reason the study of corruption as a complex problem has to merge different understandings of corruption from many disciplines, for example, economics, law, linguistics, history, cognitive psychology and every other scientific field which has to offer an explanation or comprehension on corrupt behavior. The task for the complexity thinker is to

¹⁸ The real sense in which this phrase was said had to do with the idea that a lack of personal resources translated into inefficiency as a politician. (“A poor politician, is an inefficient politician”). Thanks to Luis Rubio for this clarification. However I think that although the original sense of the phrase had nothing to do with corruption, Mexicans use the phrase in this sense.

provide a synthetic understanding of all the non-linear causes that may contribute to the corruption network.

It is also possible to observe corruption as a cause for all kinds of unintended consequences and it is in this sense that corruption shows also nonlinear characteristics in terms of the role it plays in other emergent phenomena, i.e. corruption as a nonlinear cause. Think for example in the corrupt relationship between construction officials and construction companies that result in defective infrastructure which collapses and kills innocent civilians. In this example one could argue that is hard to attribute direct responsibility to corruption, however it is easy to observe that corruption played a role in the catastrophe.

The relationship between nonlinearity and corruption is extremely difficult if not impossible to prove. In fact, it is difficult to grasp the nonlinear relationships of almost anything in every scientific domain. Ramalingam (2013), paraphrasing Jervis (1997), puts it nicely: “Non-linear phenomena are also not reducible to simple two or three variable equations, where all other things can be held constant. In such systems, it is impossible to look at just on thing or make only one change”.¹⁹ To think of corruption in nonlinear terms gives the researcher ample space to theorize and come up with innovative policy ideas about how to tackle corruption because he or she is not forced to “mathematically prove” the veracity or truth of the theory.

The concept of nonlinearity fits well with corruption research taking into account that the secretive nature of corruption is an additional layer of difficulty in the analysis. It is simply impossible to observe every corrupt act the occurs within a society. For this reason, anticorruption policies introduced in timeframe B cannot be measured and evaluated vis a vis with previous timeframe A. However this impossibility of “impact evaluation” seems like a dead end only because current anticorruption policies are linear in nature and evaluation methods are traditionally designed within the linear paradigm. A way out of this problem is to acknowledge the nonlinearity of corruption which will prove useful for policy makers and researchers when advising on anticorruption policy programs to explain that project evaluation should rely on methods and tools that allow for long term or medium term qualitative observation, rather than short-term, immediate and linear indicators.

Corruption and Emergence

Emergence occurs when the conjoining of individual elements produce a new phenomenon which cannot be comprehended by the analysis of its individual elements, i.e. the phenomena, to be understood has to be viewed as a whole, always. As Kaufmann puts it “The deep difficulty here lies in the fact that the complex whole may exhibit properties that are not readily explained by understanding the parts.”²⁰ To understand emergence it is helpful to think about mayonnaise.²¹ If you have no previous knowledge about the components that make up mayonnaise it is very difficult or even impossible to identify its individual elements. Mayonnaise *emerges* because on the one hand it is different from the parts that make it up and on the other it is impossible to predict. Can someone truly identify vegetable oil, egg and lemon flavors in mayonnaise? Can someone who has not tasted Mayo know its flavor if someone simply lists to her/him its ingredients? What if corruption is an emergent phenomena like mayo?

¹⁹ Ramalingam, Ben. (2013) Pg. 226

²⁰ Kauffman, Stuart. (1995) Preface.

²¹ This example is from Urry (2003). Pg. 25

Cairney (2012) writes that a “complex system cannot be explained by merely breaking it down into its component parts because those parts are interdependent: elements interact with each other, share information and combine to produce (*new*) systemic behavior.” It may be that corruption is so hard to define and explain because researchers assume corruption is an effect of linear causes when in fact corruption *emerges* from those multiple individual and interdependent elements but is different from them. Like a person who tastes mayo but does not know its constituent parts. If corruption is accepted as an emergent phenomena it would mean researchers would do better if they do not focus on explaining linear causes, simply because the whole is different from its parts. Moreover it may be that the real causes of corruption are counterintuitive. It is nearly impossible to deduce egg content (or any other ingredient) from simply tasting mayonnaise, as well as predicting mayo simply by mentally mixing its individual ingredients. This metaphor helps to understand corruption as an accidental mayonnaise; we are blind to its individual components because society did not consciously create corruption, rather it emerged from multiple and nonlinear individual elements.

Moreover, if you bear with us on this metaphor, it is easy to see that the analysis of corruption is infinitely more complex than the analysis of mayonnaise because mayo is a fixed and final result unlike corruption which is constantly emerging and evolving in new and unpredictable ways. Cairney (2012) again illustrates this point when he states that emergence is “behavior that evolves from the interaction between elements at a local level rather than a central decision. This makes the system difficult to control.”

Indeed, the analysis of corruption as a nonlinear and emergent complex problem is extremely difficult because of the internal characteristics to every corrupt act: uncertainty, unpredictability and non definable. Uncertain because, as a researcher, it is hard to know the facts in any corrupt exchange. Unpredictable because there is no legal way to keep under observation every action by every individual at all times and thus there is no way to predict when and where corrupt behavior will emerge. And non definable because it is impossible to define and delimit corruption in such a way that every case fits accurately a definition. In other words, corruption is malleable, liquid, and diffuse, thus it is difficult to construct a theory from the observation of cases because each case is unique in its own way.

The mayo metaphor also allows for hope in corruption research since it is possible to identify mayo’s individual components if taken to a chemistry lab. In the case of corruption the ingredients will emerge as patterns. Room (2011) regarding emergent social phenomena wrote that “The real world is in important respects composed of single elements that interact with each other at a local level according to some simple rules, but this in turn generates the complex and profound structures and patterns that we observe.”²² Complexity research is precisely the lab through which corruption can be studied in order to make sense of its individual components and look for patterns and structures which will allow researchers to better understand its multiple and nonlinear causes and effects.

Corruption as a Dynamic Organism

One of the most problematic characteristic of a complex system is that it responds to inputs in unpredictable ways. Under the linear mindset I would have said that complex systems produce ‘unintended consequences’, but I prefer to say “unforeseeable consequences”. In other

²² Room, Graham. (2011). Pg. 24

words, in nonlinear systems it is wrong to subscribe 'intentions' since it is impossible to accurately predict any outcome, any complexity researcher knows this as a given fact.

Literature on development aid is full of examples where projects designed to tackle a particular issue produced other problems in other areas, or what is worse, exacerbated that same issue which it tried to alleviate. The perfect analogy for this issue is bacterial diseases. Research shows that bacteria develop resistance against therapy compounds and over time evolve a defense mechanism. In other words, if we attack the bacteria, we will strengthen it. "Eradication and control strategies that do not take into account of these complex evolutionary dynamics may well make things worse, and could substantially exacerbate the significance of *malaria* in coming decades"²³²⁴ This exemplifies the difficulty in assessing complex problems and designing a strategy to solve them.

There are also many instances where development projects in areas such as farming, hunger and poverty alleviation display many kinds of unforeseeable reactions, and thus fail to achieve their stated objectives. Practitioners neatly design a policy agenda where problems are identified, objectives defined and strategies outlined on how to solve it. Projects are then implemented and a few years later practitioners and agencies reflect on whether they have actually help to solve the issue and for the most part their answer is no. Why? Because the project did not consider that problems are dynamically adapting to the environment and constantly evolving to the new circumstances, and thus halfway through the project the problem was subtly or hugely different. This adaptation and evolution is literally impossible to predict since it can go in many directions, which in turn are nearly impossible to predict.

I believe that corruption is a dynamic system precisely because the phenomena has shown to evolve in different ways. Experience shows that careful interventions on policy and institutional arrangements are simply not enough to solve the issue, moreover, in some instances what seems like a positive step towards development in fact results in greater corruption. What has come to be known as the "democratic transition" in the year 2000²⁵ in fact is now seen as a major contributing factor to widespread corruption at the state level. The loss of central authority produced the emergence of all powerful governors in states where weak institutions were not prepared to impose limits on authority.

It is not difficult to think of a scenario where an anti corruption policy backfires, in fact worsening the problem, precisely because of that same policy. Imagine that a renewed and reinvigorated political will against corruption is born and measures are taken to aggressively pursue crimes associated with corruption. As a result, bureaucrats, politicians, businessmen and everyone who benefits from corruption can either a) lessen their corrupt activities afraid that they will get caught OR b) increase the stakes (rob more) precisely because of the higher risks. It is simply impossible to predict which of the two options will be the picked by a single person, let alone by the majority. Moreover, these are only two options, in the real world, the number of consequences, unpredictable as they are, amount to every possible outcome and some would say, the impossible outcomes as well²⁶.

²³ Ramalingam, Ben. (2013). pg 31.

²⁴ Change the word 'malaria' for 'corruption', and the sentence makes complete sense.

²⁵ For the first time in 70 years there was a transfer of power between rival political parties.

²⁶ Maldonado (2016) argues that a complexity approach to any problem must think the unthinkable.

For now, these three aspects of complexity (nonlinearity, emergence, dynamic adaptation) and their relation to corruption will suffice to accept corruption as a complex phenomenon. I do not pretend to be exhaustive in pointing out every possible way in which corruption can be thought as a complex problem, this is an undertaking which should be carried out in another place (maybe a book or a series of articles). Rather my aim is to show how the basic intuitions and recurrent themes in complexity theory apply to the analysis of corruption in the hopes of starting a multidisciplinary conversation across the social sciences in order to better comprehend and understand the phenomenon and be in a better position to provide assistance on how to address the issue.

3. Corruption and Complexity: Policy Implications

A linear understanding of corruption has produced linear public policies that deal with the problem without a sense of how an effort in a particular area can make an impact on the whole system. An example of this is the *Sistema Nacional Anticorrupción* (National Anticorruption System, from here on SNA), which is the most ambitious anticorruption effort in Mexico's recent history. The creation of the SNA included the reform of fifteen constitutional articles, creation of four federal laws and three reforms to existing federal regulations. Just the regulatory dimension at the federal level was overwhelming, in addition each one of the thirty two states has to replicate these reforms. This is just the legislative aspect of the SNA, however the real effort and difficulty has arisen in the implementation phase.

There is a whole line of research on how implementation processes in themselves are considered a complex problem,²⁷ and the implementation of the SNA is a valuable opportunity for a case study in that line of work. However, for now I will not trouble myself with the complex aspects of implementing the SNA, rather I focus on the SNA as a policy designed within the linear paradigm, that is, a policy which mistakenly understands corruption as a linear problem and how this will eventually lead to a lack of any significant impact in the efforts to reduce corruption in Mexico.

As mentioned, the SNA is first and foremost a legislative reform. The legal transformation started from way up in the normative hierarchy (Constitution) all the way down to local regulations regarding transparency, accountability and similar anticorruption measures. Moreover, the SNA is also a political platform where six government offices and a committee of citizens can coordinate efforts and supervise the adequate enforcement of the legal provisions designed to reduce political corruption. Furthermore, during the SNA negotiations, policy makers created a special prosecuting office as well as specialized courts. It will suffice to say that the SNA is an extremely ambitious effort with ramifications extending through all three branches of government.

All of these efforts amount to a single objective: to reduce impunity in corruption cases. In other words, the SNA is designed to increase the chances of going to jail when caught committing a crime. This means that the theory of causation that policy makers had in mind when design the SNA was something like this: corruption occurs because there are very low probabilities of getting caught (not to mention prosecuted and punished). It is a theory of

²⁷ See (Bamberger, Vaessen & Raimondo, 2016). They identify five dimensions of complexity in development interventions. 1. Nature of intervention. 2. Institutions and Stakeholders. 3. Embeddedness and the nature of the system. 4. Causality and Change. 5. Evaluation.

causation related with incentives; since the risks of getting caught are extremely low, the benefits outweigh the risks. If true, it follows that in order to decrease corruption the system has to be rearranged so as to make the risks outweigh the benefits, i.e. increase the chances of getting caught.

This reasoning seems logically sound, and although incentives for sure play a part in the corruption network, I nevertheless consider that a theory of causation of corruption in Mexico must include a multidimensional, nonlinear and multidisciplinary perspective of the problem, and not be limited only to incentives. Indeed, corruption seen through the lens complexity enables us to consider nonlinear causal factors such as history, sociology, anthropology, education, psychology, language and many other contextual characteristics of the system. Furthermore, a complexity approach to the problem has to acknowledge its dynamic nature and embrace the uncertainty of the outcomes that will emerge after implementing any policy and thus the policy has to be flexible in order to address the arising problems using iterative adaptation strategies²⁸.

This does not mean that the SNA is a waste time. For sure, the SNA is needed in the construction of effective governance and development of the rule of law, however, understanding corruption through the lens of complexity, makes clear that the SNA is just one of many measures that can and should be taken. It is important not to mistake the SNA for an all encompassing and grand solution to the problem of corruption because the SNA is designed only to focus on a particular kind of corruption which occurs in the environment of government, and not on the system as a whole.

If all bets are on the SNA Mexicans run the risk of future disappointment towards governmental authorities, and ultimately contribute to the amounting disillusion towards democracy. An analytical reading of the narrative that has developed around the implementation efforts of the SNA leads us to observe that public and private actors have placed very high expectations in terms of what they think that can be achieved by the SNA. Indeed, the SNA has created high hopes and consequently ample segments of society expect to see tangible and immediate results to the problem of corruption.

My critique of the SNA has to do more with the basic linear assumption from which it stemmed rather than the SNA in itself²⁹. Furthermore I notice a problem in the amounting narrative that has developed around the SNA. Indeed, to think that the SNA will take care of the problem of corruption can lead to a relaxation of anticorruption efforts in other areas of the network. A comprehensive anti corruption effort must be designed as a cross sector policy that involves public and private actors. Future research must put forward ideas on what first steps should be taken in the fight against corruption. A first approach could be made in the field of language; leaders can construct a discourse designed to penetrate society in order to transform the way people think about the problem of corruption and thus empower each bureaucratic office, department, area, ministry, company, citizen etc. so as to let them know that they can contribute to alleviate corruption in their own, custom-made, micro measure.³⁰

²⁸ See (Andrews, Pritchett, Woolcock, 2017)

²⁹ A brief but solid critique of the SNA in itself is found in: (Cárdenas, 2017)

³⁰ A future paper will suggest several strategies to attack corruption by way of discourse through the use of cultural and media outlets such as film, music, art and mass entertainment .

4. Concluding Remarks

Regarding policy measures against corruption I identify a paradox. On the one hand I said that a linear policy measure against corruption (namely, the SNA) will hardly make a significant impact on the system as a whole, which is complex and nonlinear. On the other hand I also support the idea that the solution to the problem, from a policy perspective, relies on local policies designed to solve specific problems. The way out of this paradox is a cognitive one: people should know that his/her contribution to the problem is linear, but that this small contribution will have an nonlinear impact in the system as a whole. The challenge is to communicate this idea in relation to the SNA in order to eliminate false expectations about what can be achieved. People have to internalize the idea that anticorruption policies in the future will be designed to nudge micro-behaviors in order to change the system at the macro level.

Further research is needed in order to produce a synthetic account of corruption, that is, a complete understanding of all the domains which dynamically interact in the process of emerging corrupt behavior. A complexity approach to corruption should not aspire to identify a single, all embracing cause to the problem of corruption. Rather, the complexity thinker should be able to comprehend and explain the problem of corruption as a complex problem not to predict when it will emerge, but to raise awareness of how it has emerged in the past and be in a position to propose innovative measures that can cause a destabilization in the system.³¹

Lastly, I cannot stress enough that complexity theory has yet to “cast its shadow” on corruption studies. If corruption is studied through the lens of complexity it will readily become clear that the problem has to be explained from the point of view of a trans disciplinary workgroup. Every discipline from the social sciences has to provide its own explanation to the problem of corruption, not in isolation from every other discipline, but rather an explanation which makes sense when understood in conjunction. This means that economists, psychologists, jurists, sociologists, philosophers, political scientists and every other field which has an understanding about the problem should make their contribution to the “corruption as complexity” literature. This trans disciplinary understanding of corruption will eventually lead to a synthetic account of corruption which in the end can be communicated to society at large in order to begin a cultural transformation towards honest behavior.

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³¹ In this case “destabilization” of the system is a good thing, because the system is corruption.

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