

The Grammar of Institutions: The Challenge to Distinguish Between Norms and Rules

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Abstract

This paper discusses the grammar of institutions developed by Sue Crawford and Elinor Ostrom and tries to show avenues where the grammar could be extended. One of the ambiguities in the grammar is the clear distinction between norms and rules. The paper compares the distinction made by Crawford and Ostrom with other distinctions made between norms and rules. Apart from minor additional criteria the distinction between rules and norms in the grammar is the or else statement. We argue that on the one hand, apart from routine based behaviour we can always assume an or else characterising institutional statements and, on the other hand, we are often not aware of the possible consequences of disobeying a rule and act due to internal and external emotional factors. Therefore, the distinction between norms and rules becomes difficult. We propose to draw a line between rules and norms based on the continuous seriousness of sanctionability of the or else, we distinguish between automated, internal and external emotional and more tangible fine sanctions. It is argued that internal and external emotional factors, the delta parameters in the language of the grammar, are the ones on which we should focus if we want to understand the reasons people follow or disobey an institutional statement.

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The Grammar of Institutions:

The challenge to distinguish between norms and rules

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Introduction

The aim to be reached by the grammar of institutions, developed by Sue Crawford and Elinor Ostrom, was to find a common and more precise language for institutional analysis, similar as the grammar of human language. The grammar should allow us to analyse and understand the role of institutions and processes of institutional change by being able to dismantle an institution into its various building blocks. The syntax systematises what is at the heart of the IAD framework, the explanandum, the institutions that characterise a certain action situation.

According to Crawford and Ostrom the central pieces of an institution are strategies, norms and rules, which can be distinguished by their grammatical texture. Many scholars, including us, still have difficulties to differentiate properly between norms and rules within the syntax (Ostrom 2005, p. 140). It is clear that norms and rules are the two important building blocks of an institutional system. The aim of the paper is to take up this distinction between norms and rules and to work out the differences between the two, pointing out first the boarder line, as seen by Crawford and Ostrom and then discuss various alterations.

We do this by first explaining briefly the syntax of institutions. Second, we discuss the use of the terms strategy, norms and rules in the grammar and in the institutional economics literature. Third, we go through the various puzzles we encountered while trying to answer our key question, how to differentiate properly between strategies, norms and rules? Guiding questions we raised in approaching this issue are:

- Can we distinguish a rule and a norm with the help of the or else statement?
- Is a deontic discrete or continuous and assuming the latter, where is the difference between an external delta parameter and an or else parameter of an informal institution?
- Do the mentioned additional conditions of monitoring and collective action processes clarify, what a norm and a rule is?
- Do we follow rules mainly because of fines or because of delta parameters?

Finally we try to see, what the questions answered above would mean for an adaptation and possible extension of the grammar and we draw some conclusion. We think that the development of a grammar of institutions is a particular challenging, interesting and necessary task to do, for advancing with institutional analysis. We hope that our contribution can add to the discussion about the development of a consistent grammar of institutions.

The Syntax and the ADICO framework

The ADICO framework is so far a rather simple universal grammar, as it consists only of five different parts/types. There are:

- **Attributes:** which mainly tell us, who is addressed by the institutional statement.
- **Deontics:** which tell us something about the status of an institutional statement. If a deontic exists, we know that the statement has something prescriptive and we do not deal anymore with a simple strategy, which may or may not be taken. There are three different deontic statements, which are obliged, permitted and forbidden. We identify a deontic by words like may, should or must (should not; must not) or its synonyms. The use of the particular word tells us something about the “seriousness” of the institution.
- **Aims:** which tell us what to do due to a particular institutional statement.
- **Conditions:** which tell us under what circumstances the attribute does or should do, what is quoted in the aim.
- **Or else:** which tell us the sanction of what happens, if the attribute does not follow the institutional statement described by the attribute, deontic, aim and condition. In short, the institutionally assigned consequence for not following a rule. According to Crawford and Ostrom there are three additional conditions for a proper or else (Crawford and Ostrom 1995, p. 586 Ostrom 2005, p. 150). First, there needs to be any form of “official” monitoring taking place (official in that sense, does not mean state), otherwise the or else runs into the void. Second, there needs to be a norm or a rule about the duties and rights of this monitor. And third, all this has to be agreed upon in any form of collective action process.

A strategy consists of an attribute, an aim and a condition. A norm consists of those three components plus a deontic. A rule needs to have additionally an or else. According to this grammar:

- When I have dropped off my child at the nursery (**C**), I (**A**) put myself immediately to work (**I**), is a strategy (which I would love to follow every day).
- All members of the Institute (**A**) must (**D**) put their used cups into the dishwasher (**I**) when they have finished their tea (**C**), is a norm.
- All users of the tram (**A**) must (**D**) buy a ticket (**I**) before getting on (**C**) or else they have to pay a fine of 40 € in case they get caught by a monitor (**O**), is a rule.

Most of the strategies, norms and rules which surround us are not formulated in such an easy to detect way as in those examples. However, with a little bit of search and rewording, one will find in every institutional statement those building blocks identified here.

Additional to those five parts of grammar (Wortarten), two further factors are central for the understanding of the grammar of institutions. Those two factors are on the one hand the delta parameters and on the other hand the fines¹ associated to a

¹ The word fine is used by Ostrom, when characterising a rule in a decision tree (Ostrom 2005, p. 162). It is clear that a fine does not need to be monetary, but could also be taking a right away from the attribute or a change in the deontic in case the or else applies (Ostrom 2007, p. 150).

rule. Delta parameters are the elements, which alter the pay off matrix (or trade of situation in an empirical case) of an actor, in relation to the obeying or disobeying of a norm. It is therefore associated to the deontic in the grammar when no or else yet exists. It is a psychic factor, dependant on the psyche of the individual and the context this individual is acting in. Delta parameters can be positive or negative. And we can distinguish between internal deltas, which rely on our individual norms, values and preferences and external deltas, which rely on social norms, values and preferences, within a particular situation we are acting in.

An *internal delta* in relation to our norm presented above, would be that I put my cup into the dishwasher, because my mother, any important philosopher or ethicist (who is not around in this moment) has told/convincing me that putting cups into a dishwasher is the right thing to do and therefore this gives me a “warm glow” if I do. Otherwise I feel guilty towards myself, if I do not put the cup into the dishwasher. Apart from the work spent in putting the cup into the dishwasher there is an additional change of “private utility”, depending on if I put the cup into the dishwasher or not (Andreoni 1989, p. 1448).

An *external delta* is a pay off that I feel in relation to people surrounding me. A colleague, e.g. coming from another cultural context, or having had another mother, believes that it is not the duty of academic staff to put cups into the dishwasher, but the University employs secretaries for this duty (at a much lower opportunity cost). Nevertheless, the person might perceive a negative pay off from grumpy views of our secretary, or possibly more powerful by any signs of dislike by our boss. However, yet again we see how the delta parameters are an individual psychic phenomenon. One colleague is ashamed so much by the views of the secretary that he stops the non-cooperation. The other colleague perceives no negative pay off by any view, no matter how grumpy it is.

The *fin*es instead are associated to the or else specification. They exist obviously only for rules. They are a more tangible or in many cases, even material sanction applied, in case not adhering to the institutional statement and being monitored. It might be a monetary fine (40 € in the example to free ride in the tram), it might be a particular workload (cleaning the canal in an irrigation system) or it might be that a certain right is taken away from the person, who has violated the initial institutional statement (Ostrom 2005, p. 150).

Institutions, norms and rules in the general literature

Institutions

Before we discuss the use of the words strategies, norms and rules, let us briefly look at the term institution. We do not go through the endless definitions about institutions, which are perfectly summaries elsewhere (Kaspar and Streit 1998, Scott 2001, Vatn 2005), but as we deal with the grammar of institutions, we nevertheless have a look at the term institution and how the key terms – strategies, norms, and rules – relate to the term institution.

Institutions are according to Ostrom (2005, p. 3):

“... the prescriptions that humans use to organize all forms of repetitive and structured interactions including those within families, neighbourhoods, markets, firms, sports leagues, churches, private associations, and governments at all scales.

Individuals interacting within rule-structured situations face choices regarding the actions and strategies they take, leading to consequences for themselves and for others.”

The probably best known definition of institutions within New Institutional Economics, on which the grammar is scientifically based on, is from Douglas North. According to him, institutions are “the rules of the game in a society or more formally are the humanly devised constraints that shape human interaction (North 1990, p. 3).

A third definition which is important in the field of common property research is the one given by Bromley (1989, p. 3). He defines institutions as “rules and conventions of society that facilitate coordination among people regarding their behaviour”.

Additionally institutions are often described as something relatively stable. Only then they reduce uncertainty and allow to predict the behaviour of others in a particular situation (Kaspar and Streit 1998, Williamson 2000). This combines with the necessity that “rules” to become an institution must be widely known, shared and followed. In the process of institutional change Knight proposes to take as an indicator for change that a certain percentage rate of people has to be given, who know and follow the “rule”. Before this percentage is reached, we cannot yet speak of an institution (Knight 1992). Empirically this kind of litmus test is difficult to pursue. Nevertheless, it seems obvious that, if institutions are able to organize and structure interactions, then there is the necessity that they are stable, and widely known.

This aspect of sharedness and common knowledge is not addressed in the grammar of institutions. In relation to rules it is clear that only a rule-in-use is for relevance of the grammar, but not a rule-in-form, which exists just in a written form, but nobody follows it (Ostrom 2005, p. 138). When we look at strategies and personal norms (Ostrom 2007, p. 14), which rely on internal deltas alone, those could be just known and followed by one single individual. Whenever external delta or or else parameters are involved, then any form of sharedness and common knowledge must be given. However, in the case of social norms this sharedness can reach from being very weak, to being completely binding for everybody, as the explanations on the deontic will show later on.

Even if there is no built in mechanism in a strategy or an individual norm that it becomes widely known, it nevertheless can be predictive and regularises human behaviour. A strategy is followed, because it pays to follow the strategy from an individual point of view and there are neither norms nor rules, which prevent us from following the strategy. If this view is shared by nearly everybody it becomes a kind of convention, like driving on the right side of the street, it is followed by everybody and it organizes and structures interaction.

Also individual norms, which rely on internal deltas and therefore, have no form of social monitoring, can nevertheless often be shared (Nelson and Sampat 2001, p. 36). The “feel good factor” of finishing a plate might arise to nearly everybody in our cultures (e.g. North America and Europe), even if it relies, at least from a certain age onwards, entirely on internal sanctioning. Max Weber has shown how the role of internal or divine deltas, can lead to a shared regularised and structuring behaviour.

A common classification is the distinction between *formal* and *informal institutions*, the former are written and the latter are unwritten. The importance of this distinction seems to come from the fact that many institutional scholars have long since thought that a sorrow institutional statement (similar to the tradition in law) needs to be

formalised. Otherwise it can't be taken serious. An important contribution of the Workshop in Political Theory and Policy Analysis and Ostroms' work is to show that the degree of formality does not necessary correlate to the seriousness or degree of applicability of an institution. Nevertheless, the distinction between written and unwritten institutional statements is clear cut. There is no doubt possible. It also often implies the use of different action arenas later on in the analysis. The non-consideration of the formal/informal distinction in the grammar is a challenge. The pure focus on the or else as a distinctive factor leads to the fact, that a law of a country could, for example, be a norm and not a law in case the or else is missing (Crawford and Ostrom 1995, p. 588).

This is an important issue in particular if we consider informal rules which are not written down. Then it becomes very difficult to distinguish between external delta parameters and or else parameters.

Strategies

The term strategy has a whole variety of meanings within realms like military, business administration, etc. In the grammar it is used as in game theory. It describes the behaviour of a player in the game. A question is, if strategies can be subsumed under the term of institutions. In a loose sense, strategies can be seen as institutions, as they "facilitate our coordination". The strategy mentioned above to start work immediately after having dropped of the child helps the colleagues to communicate with me, as they can rely on, when I will start to work. On the other hand, a strategy in the grammar sense has nothing of a prescription (Ostrom) or a constraint (North), as I could also swap my strategy from one day to another (what I do), without any further announcement or without having to fear any internal or external consequence (otherwise it would be a norm).

Norms

The word norm seems to be used in many respects similar in the grammar than in other writings. The Encyclopedia Britannica (2005), for example, writes that a norm (social norm) is a "rule or standard of behaviour shared by members of a social group. Norms may be internalized —i.e., incorporated within the individual so that there is conformity without external rewards or punishments, or they may be enforced by positive or negative sanctions from without". So it also divides norms into those that are enforced internally to the individual (those with internal deltas) and those that are enforced socially, e.g. by a group. Ostrom (2007, p. 14) distinguishes into personal norms which are only enforced by internal deltas and community norms, which would correspond to social norms. As described above, the aspect of sharedness is important in most definitions of institutions and respective norms. Posner and Rasmusen (1999, p. 369) write that "a norm is a social rule² that does not depend on government for either promulgation or enforcement". So a norm in this understanding is an institution not sanctioned by any state. It is an institution, which is not a law. This involvement of the state is no criteria in the grammar of institutions, where the missing or else classifies an institution as a norm. Norms are usually understood as non-state involving institution (West 1997, p. 167 Vatn 2005, p. 13).

Rules

² Here the word rule is used as a synonym for institution, see the argument below.

The first thing which struck us reading those definitions above, was that the term “rule” is often used as a much broader term, than in the grammar definition. As in North’s (but also in Ostrom’s) definition the word is first used as a synonym for the term institution (Nelson and Sampat 2001, p. 33). Second the term is used for describing any form of regularised behaviour, like the term is used, when speaking about rule following behaviour (Vanberg 1993). This is similar to the expression used by Ostrom, when she claims that actors often follow “rules of thumb” instead of rational calculation (e.g. Ostrom 2005, p. 21), if they have to take a decision. When the term rule is used as “regularised behaviour” it entails all three institutional statements of the grammar: strategies, norms and rules. Within the grammar the word rule is used in a much narrower sense: an institutional statement, with an or else. This comes closer to the meaning of the word *rule* in colloquial language, where it is used as a synonym for law (Encyclopedia Britannica 2005). In the literature it is not always clear, which meaning of the word rule we are currently talking about. Maybe an additional attribute stuck to the word might help. Instead we could use their synonyms, which would lead us with: 1) regularities, 2) institutions, 3) laws and 4) rules narrowly defined by an or else. However, as argued below the clear observation of a rule in the narrow sense is also no clear cut.

Can we distinguish a rule and a norm with the help of the or else?

According to Crawford and Ostrom the important difference between a norm and a rule is that the first has no or else and the second has an or else. Is this a clear cut distinction and do norms really not have an or else or is it more a different degree in seriousness?

We find it difficult to use the or else as a distinction criteria between rules and norms, because the latter institutional statements could always be reformulated having an or else associated with it. Apart from rule following behaviour, how would we otherwise choose than evaluating the pros and cons? Let us have a look at the norm about the dishwasher and reformulate it with an or else:

“I must put the cup into the dishwasher or else I will feel guilty”. This would be an or else with an internal delta alone. “I must put the cup into the dishwasher or else the secretary will look grumpy at me”, would be an or else with an external delta.

A similar argument could be even made for a strategy: “I put myself immediately to work, or else I will not be able to yield the output of my work”. Or in game theoretic statement one would say: “I will not cooperate otherwise I will lose the difference between D and C”.

Posner and Rasmusen (1999) do not differentiate between norms and rules, but between norms and laws. What is important in our understanding is that both, norms and laws are characterised by sanctions. Norms, are apart from the automated sanction (which would be the “normal” pay off (the C or D)), sanctioned by emotional or psychic factors. Laws are sanctioned by more tangible factors like fines. As we know that there are also informal institutions, which have more tangible sanctions associated to them, we would not like to distinguish into norms and rules, as Posner and Rasmusen do, but nevertheless use their criteria as a demarcation line between norms and rules in a narrow sense.

The distinction between a strategy, a norm and a rule would then be that the first is characterised only by an automated sanction, the second is characterised by an emotional or psychic pay off and the rule has a more tangible or material sanction, the or else parameter, associated to it. The emotional sanction can be subdivided into internal (which would be guilt) and external deltas³.

The word "sanction" is very much an economic terms and sounds like punishment: the opportunistic bounded rational actor only follows a rule or a norm, if a punishment is around.

Probably one should call them simply pay offs, as we know, particularly in the field of emotions, the positive pay off seems to be a lot more powerful than the negative one. However, the word pay off might provide us with the illusion that those factors are monetarisable or that there exists any other single currency to sum them up. This is obviously not the case (Schmid 2004, p. 34).

From the first view, one would argue that the deltas are subjective, individual specific psychic factors, which have a very weak predictive power on the behaviour of the person. However, it is important to consider, that emotions, which rely on beliefs might be changeable in the long run (possibly with the help of your councillor) but many of our delta parameters are deeply ingrained into our personality (Elster 1998, p. 53) and culture (Knight and North 1997)⁴.

Additionally, the personal value associated to a fine, which has an objective height (Ostrom 2000), is also individual specific. A fine of a million dollars prevent many people from offending, there are others, who are not threatened by this. A winter in prison might be associated with a perceived positive pay off for a beggar and might ruin an entire life of another person.

Is a deontic discrete or continuous?

What is the difference between a strategy, a norm and a rule from the perspective of the payoff matrix? The strategy consists only of the normal pay off, a norm has an additional delta parameter and the rule has in most cases all three pay offs. The normal pay off can be interpreted using Posner's and Rasmusen's (1999) classification as the 'automated sanction' of a behaviour. We would argue that from this starting point (where the payoff of the individual would be $(x, 0, 0)$), we can imagine a continuum of deontics, which are more and more enforced by delta or fine sanctions.

It would be even difficult to negate a delta parameter involved in most strategies. "We drive on the left side of the road, when we come to the UK", might be one of those nearly "delta free" strategies, because the automated sanction would be particularly high and no matter what beliefs and values one has and therefore delta parameters one would follow this strategy⁵. The word strategy, as it is used in the

³ See the different list of emotions in Elster (1998) and see below the different propositions in the tram example.

⁴ It is not clear if a delta parameter is stabilising behaviour or not. Some fundamental values seem to be so important that one can easily predict the behaviour from it: I do not think to ever beat my children. On the other hand the cognition of certain emotions seems to rely very much on the particular situation they occur in.

⁵ This is the basic idea of a convention. Only e.g. a religious fanatic, who has extremely high internal deltas would possibly prefer to drive on the other side of the road.

grammar, comes from a game theoretical context. One can not imagine that a strategy in a game does not rely by any means on a normative statement. If I choose as a strategy to always maximise my own pay off certainly relies on my internal deltas and normative beliefs. We know that people choose many other strategies playing games (Ostrom, Gardner et al. 1994). Where should the decision for one or the other strategy come from if not from a norm or belief? Whenever there is any uncertainty involved, we need to use norms or beliefs⁶.

Take the strategy example provided above. One reason for starting to work immediately after having brought the child to the nursery comes from the experience that this provides us with the highest pay off in terms of work done. However, it would be also strange to negate that there are internal deltas at work. Our parents, our schools, our employer or who else all have told us what serious work means (the early bird catches the worm). Not starting immediately makes feeling guilty.

Starting from those little deltas as described above one could argue that sanctions do increase in a continuous manner, leading from strategies, to norms and finally rules. We would therefore argue that a deontic could not only be described by the words may, should or must (or the negation), but a whole continuum can be used for describing it. If it would be commensurable (see below) it could be described as a continuously increasing delta or fine. It starts from being hardly anything (as in our example with driving in the UK) to a very high fine.

Different deontics could be the following becoming stronger and stronger:

May, suitable, appropriate, advisable, ..., good, should must

The must can then be differentiated endlessly depending on the or else/fine, being measured at least theoretically on a cardinal scale.

This continuum of deontics could be understood as a system of graduated sanctions, where a norm transforms continuously in an evolutionary process into a rule in case this is seen as necessary. The more it becomes clear over time, which is the appropriate behaviour in a particular situation, the more the sanction will rise to force us in behaving this particular way.

However, even what signifies a "must" varies substantially not only between individuals but also different cultures.

Reflecting about the clear definition of the deontic led us to the question if there exists a deontic and therewith a norm without any delta parameter involved?⁷ Or cannot always a certain delta parameter be assumed leading the decision. We do not want to argue that in any single decision about following a norm or not, delta parameters would play a role. Being able to take decisions in a complex world requires us to rely most of the time on routine based behaviour (Simon 1993) . Nevertheless, on a long term basis, delta parameters and fines must - conscious or unconsciously - play a role (Vanberg 1993, p. 181Vanberg 1994, p. 16). If we do not interpret deltas in terms of concrete figures, then they are nothing else than the reasons for or against following a norm (Bromley 2006). How often we consider the

⁶ This relates to the old discussion between old and new institutional economics, where the former would argue that there never existed an institution free, cultural free, rational decision, which was not shaped by our norms and beliefs (Bromley 1989, Hodgson 1993, p. 16Vatn 2005).

⁷ The same applies to the argumentation about strategies and rules, if we follow the argument above.

delta's and fines involved in our decision instead of just following the deontic blindly depends on the pay off at stake (Denzau and North 1994).

In conclusion this means that there is always some level of sanctioning on a continuous increasing degree from automated, over internal sanctioning to external sanctioning. Imagine an informal unwritten institution where sanctions for obeying a rule are not formalized. The challenge would be in those cases to draw the fine line between an external delta, i.e. a sanctioning in relation to people surrounding me and an or else parameter something more tangible but not written down and formalized.

Do the additional conditions clarify, what a norm and a rule is?

What are the additional conditions from Crawford and Ostrom for an or else to exist and do they lead to a clear distinction between rules and norms. The three additional conditions are (Crawford and Ostrom 1995, p. 586 Ostrom 2005, p. 150):

- a monitor must exist
- a norm or a rule about the monitors' rights and duties exists
- a collective action process, which determined the or else, must have taken place.

Let us have a look at the three conditions in turn.

In relation to the monitor, we would argue that apart from simple rule following behaviour, we always need a form of monitoring, if we want to guide the behaviour with the help of norms and rules. When a norm is supported by an automated sanction or an internal delta, we have the cheapest form of monitoring, self-monitoring. It is like God who sees everything, not many principle agent problems are involved (we also might cheat ourselves). Whenever a norm is not followed simply by considering internal deltas, we need a monitor, which can be the general public, our peer group or a particular individual assigned for monitoring. That we need monitors for rules is without any question.

The problem is where to draw the demarcation line, between a proper monitor (rule) and an improper monitor (a norm).

In our dishwasher example from above, for example, we have an informally assigned (by our boss) and also collectively recognised individual monitor, which is our secretary. If this is a clearly assigned monitor in the sense of the grammar of institutions remains unclear. Additionally, if we agree that a difference between a norm and a rule is its seriousness by which it is followed then there does not need to be any relation between the kind of monitoring and the seriousness the institution is followed. But it depends on the particular circumstances, to which an institution applies. Some institutions are most effectively monitored by the internal monitor, others by social monitoring in a group, other by an informally assigned monitor (who e.g. has a huge intrinsic monitoring motivation, like our secretary), or by an official assigned monitor (e.g. the ticket controller). However, what is certain is that the

institutional statement is largely influenced by who is the (assigned⁸) monitor. We could broadly divide into the following categories, which can be further distinguished:

- Internal monitoring (which is the default if we deal with internal deltas)
- Social monitoring everybody
- Informally assigned individual or group of monitors
- Formally assigned monitors (private)
- Formally assigned monitors (community; state)

As an additional part of speech of our institutional grammar, we would therefore propose to use an additional specification to the or else which describes the monitoring devices in place for this particular institutional statement.

Having a monitoring norm or rule, which tells the rights and duties of the monitor does not seem to be a clear cut criterion either, because it is not clear how explicit this monitoring norm needs to be. In our dishwasher example we have the assigned monitor, who has an implicit fuzzy monitoring norm, which she has to follow. She is not allowed to apply any sanction to anybody, who has not violated the dishwasher norm, or else we will complain. She also has a set of graduated sanctions. She first starts to speak with the respective person, then continues to tell the others about it and probably the most severe sanction is to tell it to the boss, who then will mention it at the next staff meeting (usually avoiding names). She would certainly get in trouble in case she would start a massive bullying campaign because of somebody, not having put a cup into the dishwasher once. So you see that implicitly, but also partly explicitly – we spoke continuously about the cups in the staff meeting – there is a monitoring norm existing. However, above, we graded the dishwasher example as a norm.

If we interpret the delta parameters and fines as the sanctions associated to a norm, does mentioning the list of sanctions applied to an institutional statement not describe sufficiently well the rights and duties of the monitor?

The third requirement, the collective action, is a good criterion, because it tells a lot particularly about the legitimacy of an institution, which has a huge impact on the seriousness. However, one would have to further differentiate types of collective action processes, to get a more nuanced grammar and to be better able to differentiate various institutional statements. Is our dishwasher institution a rule, because we have spoken various times in staff meetings about it? Is it a rule, because our boss has installed it and is supporting the sanctioning scheme of the secretary? Or is this kind of process not enough of a collective action process? What is a proper collective action process? All those questions are not followed here, but would provide a useful extension of the grammar.

Do we follow rules mainly because of fines or because of delta parameters?

Assuming that all rules are backed up by certain deltas, internal or external, the question arises if not delta parameters are then the relevant basis to make

⁸ The distinction of what it means to be assigned comes out in the last point discussed about the collective action process.

decisions? It is strange that within institutional economics the main emphasis has for a long time been more on rules than on norms. This might be due to the behavioural assumption of bounded rationality and opportunism, which assumes that the individual will maximise her own pay off, in case she can. Having a narrow understanding of what means maximising the own pay off (not including emotions, the warm glow), one is quickly demanding more formalised or explicit forms of sanctioning, instead of relying more on a sanctioning system using delta parameters. We do not want to argue that for many institutions to be followed there is the need of a tangible fine. However, many scholars have pointed out and the evidence is rising, how particularly important those delta parameters are for running an institutional system (Lin, Cook et al. 2001, Karayiannis and Hatzis 2007, Casebeer 2008, p. 12). It is a great achievement of the grammar of institutions to allow us to introduce those emotional factors into analysis (Ostrom 2005, p. 168).

There are hardly any institutions, which only rely on fines, and do not use the role of delta parameters. One is for instance parking in non-parking zones in Germany, where one gets the impression that many people make a kind of trade off between the fine and the price of the car park, but no psychic sanctions are involved⁹. This switches immediately if we deal with parking zones reserved to disabled people, where we believe that many compatriots have internal deltas.

We would argue that it is an exception that a rule relies only on fines and additionally for many rules hardly anybody could tell us something about the fine associated to the breach of the rule. We know that it would not be wise to breach it, having only a notion about the possible fines. Taking even the tram example, where it is well announced in any public transport and we know that the fine for first offenders is usually 40 €, we have no idea about the cost of breach, if we free ride, for example, repeatedly. Nobody knows what will be exactly the consequences, of stealing in a department store, of picking the fruits from the neighbour, of using the office telephone for private purposes or doing even a lot more harmful things. We also have no knowledge about the probability to get caught. The only thing we know is that we have a gut feeling in doing those things, that it would not be advisable to do those things and that we would not like others to do those things to us.

We also do not know, what the “emotional price” would be of those offences, but the examples certainly show the key importance of delta parameters, psychic factors or emotions for decision making. The role of emotions for allowing us to take sensible decision has been shown in neurobiology (Damasio 2004). This knowledge found to a little extent entry into the analysis of (economic) decision making (delta parameters, Elster 1998, Vanberg 2006). Emotional or a rational decision is not a question of either or, as it was long since thought, but emotional factors and therefore, deltas are nearly always involved in decision making (Schmid 2004, p. pp34).

Elster (1998) points out another interesting aspect in relation to emotions and decision making. In many decision making processes, we have to face the problem

⁹ Having a rule, which relies only on fines, makes it possible to advice an efficient monitoring system (the decision heuristic for the actor in the tram example would then be: $p_{(to\ be\ detected)} * 40\ € = ticket\ price$. The tram company would have to employ monitors until $p_{(to\ detect\ somebody)} * 40\ € = wage\ of\ the\ monitor$), but nevertheless, it is clear that such a system, would cause an extremely high monitoring cost and therefore, would not be useful for an economy from a transaction point of view (Wallis and North 1986, North 1990, Etzioni 1994).

that there are multidimensional choices, where we have to make trade offs between competing goals. One norm contradicts the other and we do not know, which norm to favour. If we would take the decision with a calculative rationality on its own, we might get troubled. As we do not know the exact figures, we might not end up finding a solution. However, if we detect such a cognitive dissonance in our decision making (trade off between various goals), emotions have the ability to get redirected towards a particular focal point: The perceived delta parameters change in due course. We end up by taking a decision as if the pay off matrix would provide us with a clear decision rule. In case we are on the edge between cooperating and non-cooperating, we invent or alter our delta parameters, so that the decision becomes clearer to us: e.g. we develop a norm of fairness, which does not allow us to give money to this big capital investor, who runs the public transport in the city. We build or adapt a mental model, which allows us for managing our emotions.

If we agree that the importance of an institution relies much more on the delta parameters than we have thought for a long time – we know what we feel about an institution, but we do not know, what we have to pay in case we do not follow an institution, then it would be a useful step to differentiate the grammar more in relation to various delta parameters. This differentiation could come from emotional psychology or from empirical studies, which try to find the various delta parameters of importance for decision making. Particular sub-delta parameters are a lot more powerful than others or then fines. Learning more about the various sanctioning powers of e.g. guilt, shame, pride, joy, jealousy, fear or love is certainly important for understanding institutional systems.

It was argued that internal and external delta parameters are psychic, emotional sanctions that change the pay off structure of an individual. A list of basic emotions (like fear or shame) can be observed in any cultural context, no matter where we are – we all cry. However, even if the expression of shame and fear are the same or similar in every culture, the reasons for feeling shame are largely culturally determined and therefore context dependant (Elster 1998, p. 49, Knight 2000). A grammar of institutions therefore, will only become to a certain degree a universal grammar (similar as every language has something comparable to a verb). An institutional grammar without attributes, deontics, aims conditions and or elses can not be imagined. Therefore, the higher level categories will be culturally independent, but the lower categories, will certainly be culture dependant.

When we think about the question how rules evolve over time, than we have to admit that in most cases they evolve out of an existing norm, which has proven to be effective in regulating some interaction and provides stability. We will hardly find a rule which is acting against existing norms and values. At least this can only be implemented with very high monitoring costs and might still not be effective. Thus when a rule is the result of the institutionalising of a norm, and as argued above, hardly anybody could tell us something about the fine associated to the breach of the rule, this mean that people most likely act in line with the norm and according to their delta parameters although according to the grammar it is a rule. Moreover, it is obvious that in many concrete situations of decision making we do not consider the or else, but we just have a look at the deontic and do what Vanberg (1994) describes as rule following.

What would it mean for the grammar?

Attributes, aims and conditions have been clear to us as parts of the grammar. In relation to the deontic we could imagine that the range between may, should and must could be much more specified, leading more to a continuous deontic. However, we argued that every institutional statement can in principle be reformulated with an or else. If this is so, the seriousness of the deontic, even in most cases of rule following behaviour, is always determined by automated sanctions, deltas and fines associated. Therefore, the role of explicit internal, external deltas and more material fines becomes more crucial for determining an institutional statement.

The important difference between a strategy, a norm and a rule, we suggest, would not be the deontic or the or else. A strategy consists only of automated sanctions. This kind of choices, which rely on automated sanction alone, might not be given that often, as for most decisions at least internal deltas will enter into the decision making. This is due to the nearly omnipresent uncertainty involved in decisions. In the area of norms, we could then differentiate into personal or social norms. The first would be only sanctioned individually with the help of internal deltas (only self-monitoring takes place). The latter would be sanctioned by people surrounding us with the help of external deltas. A rule would then be something defined which is sanctioned with the help of a more tangible sanctions or material fines. This distinction has the advantage that it is more precise than the or else distinction. Additionally the way of sanctioning has important implications on how those institutions are changing and how they can be monitored.

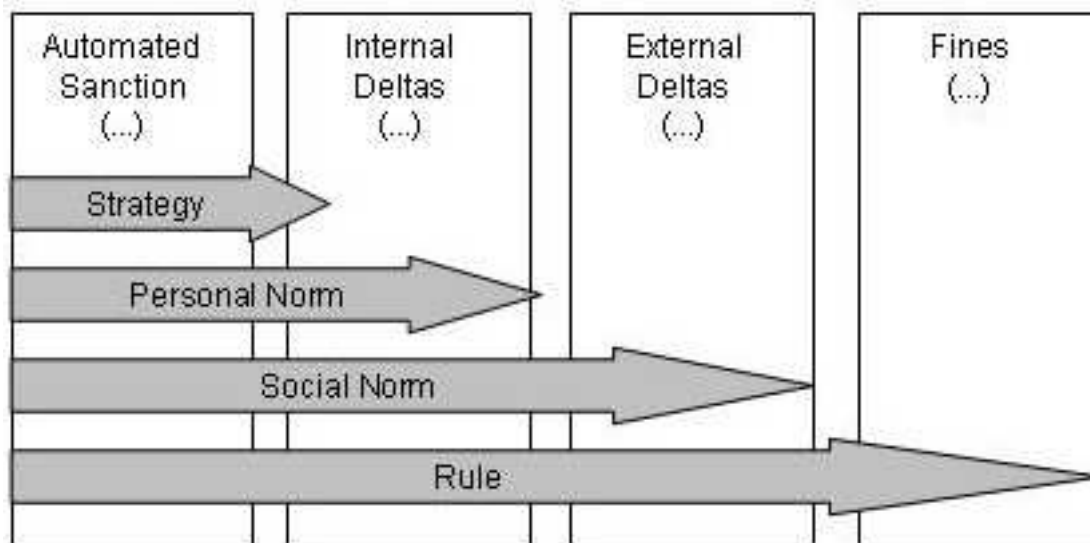


Figure 1: Institutional statements according to their sanction

A particular emphasis in extending the grammar should be put on the differentiation of delta parameters. They seem to be the important factors determining choices in most cases. We do not consider the formal fine, but we behave according to emotional factors. We do not behave rational in a narrow sense, but emotionally rational. Those emotional decision parameters are so far little understood.

Deltas could be differentiated according to the emotions associated to those deltas. Depending on the emotion the seriousness and effectiveness of the institutional statement will vary. This would need to be further pursued studying psychology of emotions. One can see that delta parameters can, as explained in the grammar, be

positive or negative and they can arise while breaking or obeying a rule. Some emotions arise, before breaking a norm and others only arise, in case the sanctioning takes place. Possible emotions would be:

- Guilt, shame, hatred, disappointment, fear, regret, grief, jealousy, envy, disgust, frustration, contempt, sadness (negative pay offs)
- admiration, pride, liking, rejoicing, hope, joy, happiness (positive pay offs)¹⁰

Those emotional categories are so far culturally independent, thus they would fit for a universal grammar of institution. However, what leads to the particular emotion is certainly a question of the particular belief of the person and therefore culture dependent.

Using our tram example, which is certainly heavily determined by deltas, we show what those different automated sanctions, deltas and fines could be from the view of a teenager:

I must buy a ticket for the tram or else I will:

Pay offs (Deltas) dissuading from the ticket purchase:

- save two Euros for the ticket fare (automated sanction, which in this case prevents us to follow the rule)
- regret having bought a ticket, if I do not get caught (internal delta)
- feeling joy of shirking the establishment represented by the company (internal delta)
- feel pride when telling this to my pals (external delta)
- not feel the admiration of my friends observing me getting caught (external delta)

Deltas supporting the ticket purchase:

- feel guilty, because it is dishonest (neg. internal delta, coming from family education)
- feel guilty, because it is not fair to get something without quid pro quo (neg. internal delta)
- feel fear, while sitting in the tram and waiting the controller to come (neg. internal or external delta)
- feel ashamed, when others look at me, when I get detected (neg. external delta)
- feel happy, because I do not have to worry about the ticket controller (pos. internal or external delta)
- feel worried about having to tell it to my parents (neg. internal delta)
- feel ashamed while telling it to my parents (neg. external delta)
- have to pay 40 € in case I get caught ($p_{(\text{to get caught})} * 40$) (fine monitored by the company)

¹⁰ The list of those emotions are extracts from Elster (1998) and various internet sources.

- get a complaint of an offence, when free riding repeatedly (fine monitored by the state)

For any institutional statement, we might provide such a list, which provides us with the pros and cons of following an institution or not. What those examples make clear is that the decision can not be based on any rational (in the narrower sense) calculus. It also shows that the particular delta parameters are context dependant.

Conclusions: how to use the grammar empirically/possible further steps

When trying to learn more about the role of delta parameters and fines, it might be useful to detect rules or norms, which only rely on one or the other form of sanction/pay off. This would separate the various sanctions into its building blocks. In a laboratory situation it is rather easy to design games, which only rely on either internal, external deltas or fines (See the declination of example in chapter five of Ostrom 2005; (Ostrom 1998)). A game which consists only of a simple pay off matrix, does not allow for communication then all deviations from maximising behaviour must be due to an internal delta. The next step would be to allow communication, which then allows for external deltas to play a role. The last step would be that either through this communication the actors agree on a rule in the Ostrom sense or the monitoring rule is given externally¹¹.

In an empirical situation this is more difficult. Above we have argued that e.g. the rule about non-parking zones in Germany might be an example for only fine based sanctioning. If nobody feels guilty (internal delta) about parking in a non-parking zone, then it is hardly imaginable that any form of social sanctioning (external delta) will occur. Therefore, just letting the decision about parking or non-parking rely on the fine associated to this breach, the probability to get caught and the opportunity cost of a car park. The result of this investigation should be that we behave as “as if” maximizers, as predicted by rational choice theory.

An empirical situation, where behaviour just depends on the internal delta, would be a situation where at least de facto no external monitoring is feasible. This would be the snatch game described by Schwab and Ostrom (2008/06). The best known empirical example would be the “bagel man” described by Levitt (2005, 2006), where the payment of the bagel just relies on the benevolence of the person taking the bagel, as in many occasion, nobody would be around¹². A similar example are in

¹¹ When you make the game situation very explicit, then many of us are able to switch off our internal deltas (however, do not play e.g. the game with children). See also Vollaard (2007) who shows that at least in the area of field experiments players are not able to switch off internalised norms. Additionally, it could be argued that following any decision heuristic in a game is also already a kind of normative statement, which is not possible without any deltas.

¹² The “bagel man” is an US American economist, who stopped his professional carrier and started to make a living on delivering bagels to offices, where the people could take a bagel and put the money for it into a tin next to the bagels. There was or is no seller or vendor, but the people put the money into the box “voluntarily”. His economist colleagues predicted that this business is doomed to failure, but he made a good a living out of it, having contribution rates of around 80%. Having a lot of data about the different payment rates in different locations, he analysed the data, trying to optimize his business. The data was particularly used to analyse white collar crime.

Germany rather wide spread fields with flours for self-picking¹³. However, observing those examples, one realises that the suppliers of this exchange try as hard as they can to sustain their exchange by augmenting the delta parameters of the actors (internal delta parameters: e.g. putting a sign that a family has to live on this; external delta: putting the field close to a house, where a retired person is living). Another situation which relies a hundred percent on internal deltas is the sale of the last album of the group “radio head” for a freely to chose donation. It was made explicit that there are not going to be any sanctions, in case you download the album for free. In the internet nobody else can observe you, so the price you pay is entirely determined by internal deltas, e.g. internal norms about fairness.

An empirical example which relies only on external deltas is possibly the most hard to find. Probably the norm described above about the dishwasher in a department of strong believers in neoclassical economics (self-interested myopic actors) could be an example. However, on the one hand it could be argued that not leaving the cup outside the dishwasher, in case nobody socially monitors, would lead to a negative internal delta, as it does not maximise own utility according to definition. On the other hand, it is difficult to imagine how in such a world a norm could be established which only relies on external deltas and does not use any sort of fine.

When there is a payment involved like in the examples above, observing the payments which occur and to see in how far they deviate from a narrow rational choice prediction, might allow us to calculate ex post, what has been the monetary value of delta parameters. This might be interesting in terms of estimating the economic value of the morality for the economy. However, for understanding the importance of those delta parameters, one would need to learn more about the various subdivisions of the various deltas parameters and fines, which drive the actors towards their actual behaviour.

Ostrom (2007) started this process of classification for an empirical case. This avenue would need to be elaborated further. So that the deontic becomes more nuanced and that the entire array of or else parameters (including internal, external deltas and fines) would be covered. Currently determining clearly if in an empirical situation the deontic is a may, a should, a must or a must not is very difficult. And it would need to be seen, in how far the classifications could be extended, particularly in the area of the various perceived delta parameters. Further investigations would be a rather explorative undertaking (see the tentative listing in the section above). We will never end up with a continuous scale comparing the various deltas. Nevertheless, having a more detailed list of deltas available and having a notion of their relative importance helps us to differentiate institutional statements further.

Studying institutions governing common pool resources, we often deal with informal institutions and the relevant institutions are anyhow the institutions-in-use and not the institutions-in-form. Our experience in the field would suggest that the further subdivision of the deontics and or else parameters is a very difficult undertaking, as in many field work situations the or else parameters are either not consciously known by the actors or are rather vaguely expressed by them like “ we follow the rule of the strongest, otherwise we will get in trouble” (Theesfeld 2004, p. 260). Additionally, many actors will not be willing to tell us something about their true delta parameters,

¹³ I am currently preparing a study with a farmer, who owns a lot of those fields and additionally sells his ideas on optimisation of this type of “moral” market to other people.

but will whitewash them. Therefore, it will certainly not be an easy road towards a clear cut and easy applicable universal grammar of institutions.

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