

An Institutional Framework to Analyze Human Behavior

ABSTRACT

Aims: This paper shows the analytical framework used by Elinor Ostrom in her book *Understanding Institutional Diversity*, which provides that institutions underlie the decisions that faces the economic individual and develops the proposal by Ostrom of modifying the rules, to make them efficient and insert them into codes or regulations (local, national and international) to make them sustainable over time.

Results: There is a common framework to analyze human behavior. Institutional Analysis Diversity is a method which studies human actions diversity, the purpose established by Ostrom was developed categories and variables to study how individuals facing to take decisions. If decisions are made several times, i.e., they repeat, it means strategy has worked. The economic idea underlies from repetitive game theory. Thereby, enhancing interaction from people and it becomes prescription. Eventually, it can be changed in a customary norm that, reinforced by community, is converted in a moral o legal norm.

Conclusion: The results of the Institutional and Analysis Development (IAD) and its recommendations must be evaluated to apply to analysis of México and its community. An important exercise would be to verify Ostrom's institutional framework and the evolutions of standards in indigenous communities, as well as institutions operating in academic, political and other fields. It is a matter of building fairer norms and motivating the intersubjective cooperation of the participants, not the opposite.

Keywords: Institutions, Analysis, Strategies, Community

1. INTRODUCTION

Elinor Ostrom is without doubt mandatory reference to discuss topics such as: economic governance and shared resources. For her research was awarded in 2009 the Nobel Prize* in economics. In

* To see more about Nobel Prize visit <https://www.nobelprize.org/>

14 addition to be the first woman to receive this award in this field, she has a long academic history in the
15 analysis of the institutions.

16

17 To understand the institutions, you need to inquire about the shape of their basic structures, once you
18 are into a higher level of analysis we can know how and to what extent the behavior of agents (those
19 who evolve over time, learn and have ability to test multiple rules, heuristics or strategies), is affected
20 by the institutions. Institutions are prescriptions in which human beings are organized.

21

22 Prescriptions, initially allowed cooperation, resource allocation and efforts for the survival of the
23 human species. Subsequently the evolution of cognitive ability led to forms of coexistence more
24 elaborate assigning penalties, i., e., requirements were initially strategies that became standards and
25 later rules of conduct (including sanctions).

26

27 Ostrom [1] established that is not necessarily rules should be written or recognized through a legal
28 process, but which are underlying the social structure of humanity. Most of the time, we follow rules
29 without being aware they exist, it's done as a social habit. But to realize its existence, she can explain
30 how they operate, making it possible for the agent modify them deliberately[†].

31

32 The question that arises is why institutional analysis in Ostrom is important? Because the
33 prescriptions (strategies, standards and rules of conduct) define property rights, which allow
34 individuals allocate resources and benefits to each choice made. In the case, established rights of
35 private property in a market economy, the choice of agents aims to ensure greater welfare and
36 efficiency possible.

37

38 The work is divided into three sections. The first corresponds to the notion of agent that Elinor Ostrom
39 has developed, and how it through its conduct gives rise to the institutions, explaining the way they
40 operate. The second section explains the inclusion of the rules in the areas of action elements,
41 characterizing the properties of a universal grammar to the institutions, which are divided into:
42 strategies, rules and regulations. The third section, develops the proposal by Ostrom of modifying the
43 rules, in order to make them efficient and insert them into codes or regulations (local, national and
44 international) to make them sustainable over time. At the end are presented the conclusions of the
45 paper.

[†] According to Smith [3], the deliberate of the reason to analyze and determine within a set of possible actions the best, is called *rationality constructivist*. Thus institutions are deliberately designed by deductive processes aware of the reason for the purpose of serving the human condition. On the other hand, there is a cultural and biological process that has evolved over human existence and it has developed on the basis of principles of action are transformed into rules, traditions and moralities that regulate human behavior, this emerging order acting unconsciously (*off-line*), is called *ecological rationality*. For further reference on this topic see Porras [7].

46

47 2. THE AGENT AND HIS CONDUCT: INSTITUTIONS.

48

49 As individuals we are faced with diverse and complex situations, whether in the family, work, the
50 market, the government, etc., but actions as we hope depends on the decisions that we take and also
51 that they take each other, in other words, we have expectations which are associated with a capacity
52 of prediction, but to be able to predict something before we make a choice and is where it is not clear
53 about what guides us to act in a particular situation. Do we have an internal code which is established
54 what decision taken in every situation to which we are faced, or simply learn to solve such situations
55 based on experience?

56

57 To perform the analysis on the diversity of human interactions in Ostrom, it is necessary to establish
58 the theoretical framework[‡] which is based to achieve the goal. The framework allows you to organize
59 and articulate her notion of agent which can be applied to any relevant theory of human behavior,
60 that's what she calls Institutional and Analysis Development (IAD). Its objective is to identify key
61 variables which can help you to make a systematic and coherent analysis of the structure under which
62 individuals face a situation in which they have to choose, tries to explain "*...how rules, the nature of
63 the events evolved, and the community affected the situations over time.*" [1, p. 9].

64

65 The IAD offered by Ostrom, establishes that the core of the economic, social, political and
66 anthropological studies, is human behavior, and that such conduct should be analyzed with the use of
67 common tools to these disciplines such that can serve to display variables, as well as the large
68 number of combinations between them and your organization at multiple levels of analysis that allows
69 us to understand complex social life. For Ostrom [1] there is not a division between an agent micro or
70 macro, but that category is assigned depending on the scope of study, i.e., individual or collective
71 conduct should be discussed with the same theoretical tool, and should only relate to the number of
72 participants who are assigned positions related to determined action [1, p. 33].

73

74 We know the conduct of the agent is based on elections, there are multiple factors that affect behavior
75 and choice, and yet have a common underlying structure, this structure (which is the central idea of
76 the IAD) are the institutions.

77

78 "Broadley defined, institutions are the prescriptions that humans use to organize all forms of repetitive
79 and structured interactions [...]. Individuals interacting within rule-structured situations face choices

[‡] "The development and use of a framework helps to identify the elements (and the relationships between these elements) need to consider the institutional analysis." Frameworks organize diagnostic and prescriptive research. [...] the frameworks provide a language meta-theoretical that it is necessary to talk about theories and that can be used to compare them. "Frameworks try to identify the universal elements of any relevant theory that is necessary to include" [1, p. 25].

80 regarding the actions and strategies they take, leading to consequences for themselves and for
81 others" [1, p. 3].

82

83 If a prescription is a rule of conduct which tells us what do and what not do[§], then functions as a
84 regulator by defining areas of action of the agent, i.e. Ostrom identifies agent as if it were a be-
85 algorithm. The tool used to formalize situations of action of the agents is game theory^{**}. The existence
86 of multiplicity of fields of action and multiple rules acting simultaneously in layers, allows the theory
87 games to receive the assumptions and structure of a situation of relevant action to explain human
88 behavior in a simpler way.

89

90 The above leads us to ask: what are they? How to operate and emerging institutions in the situations
91 of action? To give an answer to this must be taken into account that the agent decides under
92 elements such as: restrictions (biophysical, cultural), preferences, intentions and expectations.

93

94 "Often we are not aware of all rules, standards and strategies we are pursuing (...) individuals are
95 responsible on develop and modify rules... (if we do not) understand how particular combinations of
96 rules affect actions and outcomes in a particular ecological and cultural environment, rules changes
97 may produce unexpected and, at times, disastrous outcomes" [1, p. 3].

98

99 If we think that human decisions about preference, opportunities, as well as restrictions which have to
100 adjust the agents, which are affected by the rules or absence of these, then we can say that these
101 decisions can be seen as a complex system^{††} and at the same time as a result of an internal process
102 that begins with a biophysical structure layer after layer leaving behind this structure to become a
103 cognitive structure [1, p. 11]. This cognitive layer is composed of individual structures which are
104 composed of multiple individuals (families, companies, etc.), which are structured in many parties
105 (communities, Nations, etc) and belonging to an upper structure. In order to determine the influence of
106 the rules in our behavior, we can review the decisions in levels making use of the IAD and more

[§] The institutions would indicate the physical world, social and epistemic possibility.

^{**} There is a more radical stance of this point of view with Gintis [8, p. 30], who studies neuroscientists show that the mind has a capacity of choice isomorphic to evolutionary game theory. Then the brain functions as a decision-making body centralizing and processing information into dynamic branching strategies under which the agent operates.

^{††} Ostrom [1] does not define a complex system, however, the definition of Holland [2, p. 25] of a complex system seems to coincide implicitly with the vision of Ostrom, in Holland a complex system is "the compound by interacting agents described in terms of rules." These agents are adapted to changing its rules when they accumulate experience. "Most of the environment of any adaptive agent is constituted by Adaptive agents, so that a portion of the efforts of adaptation of any agent is used to adapt to other adaptive agents." Ostrom agent is an agent that learns and can be adapted.

specifically of the Holon. Which is a complete in a single level system consists of many other parts on another level.

The agent faces situations, in which you should choose and the election-solution dependent mental models to do about how reality operates, this can develop it from two perspectives. First, mental models are affected by at least two basic sources: feedback from the world and the shared system of culture or beliefs that individuals are immersed. Individuals need to find a model that is appropriate to the situation they face through repeated interactions or which have a similar structure.

The agent is initially based on mental models (as if...so...), that is formed on particular situation to calculate expected results of certain actions, however, that each agent learns about its outcome and from other actors, can stimulate him to review his mental model and know if you were in an inconsistency or lack of satisfaction. The agent learns to share mental models, that learning is accelerated when situations are repeated. The role played by learning is important, and in Holland [2] can be found learning is the ability of an agent to anticipate^{††}.

It is based on this ability of anticipation that we can see the intent of others, allowing us to create our expectations about the behavior that will have others to us in a given situation. In other words, can think the behavior of the agent is based partially on intrinsic preferences related to how I would rather lead me and what I hope others, as well as to the kind of results I would like to obtain for me and another.

If we say that the institutions are mental models that have prevailed at the time because they are successful, then the agent taken as given, i.e., as if they were external variables affecting decisions. Smith [3, p. 364] takes as a result of certain "ecological rationality" and the agent evokes them in an unconscious way. This way of looking at the institutions has been strengthened under sanction mechanisms (and if not...) and is a complementary form of this concept. An explanation of the institutions seen as standards is developed by Hauser [4, p. 26], who noted that we have an innate capacity^{§§} to decision-makers acting in our psychology of moral as if it were an instinct.

^{††} This capacity of anticipation can also be studied using the concept of intentionality that handles Hauser [4] and which has been a reading of the mind.

^{§§} This innate ability to see moral norms is taken from Chomsky [5, p. 156], who revolutionized the notion of grammar by ensuring that: "...the central nervous system and the cerebral cortex are biologically programmed [as an innate capacity] not only for the physiological aspects of speech but also for the Organization of the same language." "The ability to organize your words is inherent [as part of our genetic material]." Also specified that: "... [It] exists a universal grammar that is part of the genetic heritage of human beings, that we are born with a basic linguistic plan that will fit all... own the species specific languages human".

137 This vision of Hauser [4] do not contrast to Ostrom [1], nor to the Holland [2, pp. 58-106]^{***} on "building
138 blocks" which allow to explain how they become rules (as such) standards through performance,
139 allocation of credit and discovery of rules system, so that agents take institutions as precepts
140 (instructions) in its fields of action. This view is corroborated by Smith [3, pp. 33-34], arguing that the
141 decision-making process in which the agent calls for rules "unseen" is due to an *ecological rationality*
142 which acts in a way *off-line*, whose rules are emerging products that appeal to the collective
143 experience, as if they were a collective unconscious that has co-evolved under a biological and
144 cultural process and, that has been passed from generation to generation through the language. This
145 trend highlights the learning of rules using the reciprocity and which may include rules of punishment
146 or mutual cooperation.

147
148 The second way of analyzing the emergence of the institutions is as heuristic decisions. When there is
149 no rule on the basis of which the agent can make a choice, opt for a mechanism for heuristic decision,
150 which for some operates initially as a constructivist rationality to the solution, but to go through certain
151 mechanisms successful and adaptive (experience) become institutions, although the solution of the
152 problem requires some Cartesian rationality, the mechanism of operation of these heuristic solutions
153 is also due to an evolutionary grant process. This explains the origin of the institutions. Here the
154 experience plays an important role, as there is no internal models that you prescribe to the agent to
155 do, but that "find" a solution on the basis of trial and error. Experience increases and ensures the
156 claim that agents use heuristic solutions, i.e., that it is experience that gives you some degree of
157 validity to the heuristic decision^{†††}.

158
159 Ostrom [1, p. 144] identified eight heuristic solutions, which are quick fixes brain makes automatically
160 and under pressure, establishing himself as immediate decisions. The most commonly used heuristics
161 is the lexicographical (for his initials LEX) strategy, which selects the option with the value higher on
162 that point the highest validation. If two or more alternatives have the same value, there will be some
163 who will have more value and that will be chosen. This heuristic strategy LEX is the general form of
164 "choose the best". Heuristics in general reduce the information comparing an "optimally" strategies in
165 decision making. To learn what the assessment effect of heuristic decisions with regard to the results
166 obtained, should assess whether the heuristic is efficient, which is achieved by establishing how many
167 agents have used it over a period of time. It will increase its use if it has generated "good results" and

^{***} He develops the ability to represent an agent-rule, under certain procedures. And it will be developed in three stages: the first is that he must find a way represent different classes of agent skills without taking into account the adjustment; This is called *performance system*, later used the success or failure of officials to allocate awards or penalties, and this process is called *allocation of credit*, and the last is related to changes in the skills of officials to replace with new options the parties which are assigned under these loans, this procedure is called *discovery of rules*.

^{†††} Ostrom [1, p. 114] cites a study by Gigerenzer and Selten [6], for this type of solutions under which the agent chooses: calling them "*fast and frugal heuristics*".

decreases its use if it leads to "poor performance" (for good or bad results should be understood that there is a correspondence between the allocation of the results and intentions).

3. THE GRAMMAR OF THE INSTITUTIONS

Once explained the determinants under which chooses the agent, it is necessary to analyze the behavior of agents using as fundamental level of study "the Holon" called *field of action*, which in turn includes two holons, in his analysis the participants and the situation of action, these in turn are affected by variables exogenous which generates interactions that generate results. Agents based on evaluative criterion to judge the performance of the system by examining the patterns of interaction and results. These results feedback the scope of action as well as the exogenous variables and can affect them and transform them to the passage of time.

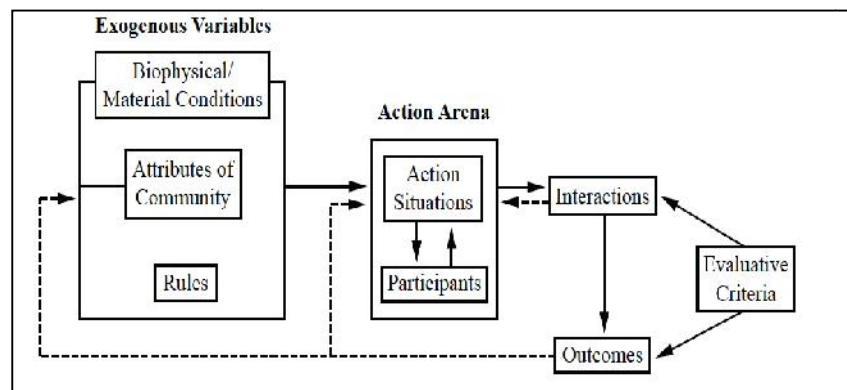


Figure 1 A framework for institutional analysis

Source: Ostrom, 2005, 15.

The image 1 shows elements involved in a field of action, we know that within it are in operation two holons, the situation of action and the participants. Elements that allow to articulate these two holons are: the first are (1) *participants* as a whole, it refers to the entities assigned to positions and that they are able to select an action from an alternative set requires in addition some attributes such as number, their collective status of participation and some individual attributes (age, education, gender, etc.); second element are (2) the *positions* which must be filled by the participants, some examples are: players, voters, buyers sellers, etc., refers to the "tags" under which the participants moving; third element is the (3) *potential results*, generally refer to the costs and benefits assigned to outcomes (for payments), which can be divided into three [1, p. 43] : physical results, the material rewards or costs allocated to the actions and the outcome of the payments and the evaluation placed on the combination of the participants and their positions. Fourth element (4) are the *actions* that participants must choose according to their positions that are established in a specific stage of the decision-making process. The specific action selected by a participant from a set of actions is called choice. Specific movements under which the participant can move is called strategy; fifth element is the (5) *linkage between outcomes and actions*, we say that there is a control variable when there is a link of that variable with its results and it is possible that this variable causes the result, disappear and

change their degree. Sixth (6), it should be taken into account the analysis of *information*, the results differ according to scenarios with certainty, risk and uncertainty; seventh element (7) are the *costs and benefits*, actions and results are driven by the costs and benefits that the participant Act, will depend on the path taken to achieve specific results which are assigned at the end of the movement of trajectory. There are two types of ratings to the rewards: internal and external, the first is you relate with physical elements, while the latter relates to the degree of "utility" or net value can cause, this is associated with their internal models of its objectives and rewards.

We now come to examine how it is affecting the exogenous variables into a sphere of action. Firstly, rules are used by participants to order their relations, if we assume that the institutions evolve in the same way that changing our brains, then these institutions will be affected by the manner in which those rules are understood, implemented modified or ignored. Other exogenous variable are the attributes of community, these affect the scope of action through generally accepted behavior in community, as well as the common understanding that leads to cooperation or not the participants. When we say that the biophysical conditions and materials affect the scope of action, we refer to the same set of rules can produce different results depending on the events in the world on which active participants.

At the time of studying multiple fields of action, it is necessary to distinguish between its layers, Ostrom [1, p. 43] lays down three basic levels of rules affecting the actions taken and results achieved in specific environment or atmosphere. The first affect the decisions of each day of the participants in any environment, they can change very quickly, and are called *operational rules*; the latter are the rules of *collective choice*, that affect operational activities and their results by specific rules that change the operational rules (for example, the rules that establish who will be assigned to the positions of monitors); and finally the *rules of constitutional choice*, affecting election activities are of collective choice, determines who is eligible within the participants and that rules can be used to develop / modify the rules of collective choice.

The rules are, the result of the explicit or implicit to achieve order and forecasting among the participants, who received positions and on the basis of which have permitted, required or forbidden to perform certain action, facing the possibility of being monitored or punished. These rules do not need to be written to act as such, i.e., there is no need to have emerged from a legal procedure, institutional rules are created on many occasions in a way self-conscious by individuals to change the structure of repetitive situations they face in an attempt to improve the results achieved, in other words, that individuals can consciously decide to take a different rule, thus making a change in the way they choose [1, pp. 16-18]. She refers to the sense that it denotes a rule is very important, all the rules are formulated in human language, language accelerates cultural transmission, it carries the information specific-situation as well as general conceptual and policy information, why Ostrom develops a universal grammar (Syntax) that allows us to illustrate the differences and similarities between strategies-standards and rules followed by agents. The IAD provides a syntax called

240 AIDICO, which acquired its name for integral parts. These components are: [attribute], [DEONTIC],
241 [A/M], [conditions], [OR ELSE].

242

243 By *attribute* identifies the person who heads the statement, answers the question who? by specifying
244 the essential attributes that bind the positions, both participants and actions, if you do not specify
245 specific attributes by default are understood all participants as a whole that we are talking about.

246

247 By *Deontic* refers to the modal operators that appear in a prescription and establishes its sense,
248 which are: *allowed*, *prohibited* and *forced*. By default, that is not prohibited is permitted for the agent.
249 Now must make an observation with regard to forced and banned, because there are internal
250 elements in bound (subjective, such as shame, penalty, etc.) requiring doing something, while
251 forbidden appears more to an external element that links action, could be a sanction (internal).

252

253 Component *AIM*, which describes particular actions or results in the situation of action to which is
254 assigned the deontic, i.e. refers to the intention or not (accidentally) that the agent had to choose the
255 action. If it is not specified it is accidental, is understood by default that is intentional.

256

257 By *conditions* indicates the set of variables that define when and where an institution (strategy,
258 standard and rule) applies. If not specified the time and place, is understood by default which is true
259 for all time and space.

260

261 *Or-Else* means the consequence that an institutional declaration being ignored, i.e., the punishment
262 must be an agent if a rule is not followed. Three conditions of existence are attributed to this
263 component: (1) must be the result of collective action; (2) it must have an element of support, i.e., a
264 threat that deterred the behavior of the agent; and (3) there must be an efficient monitoring capable of
265 dealing with opportunistic behavior of offending agents. This last component is what gives to rule their
266 character as such.

267

268 The rules operate at all levels, reason by which a classification of them should help us form a "...set of
269 concepts to facilitate the construction of a theoretical and empirical body that allows us to study
270 human behavior and their results in different situations" [1, p. 187]. In the second imagen we can see
271 how rules, treated as exogenous variables directly, affect the components of a state of action. If we
272 understand the elements that interact in a field of action and its rules, then it will be possible to
273 improve them with reforms or changes in such a way that we get better results.

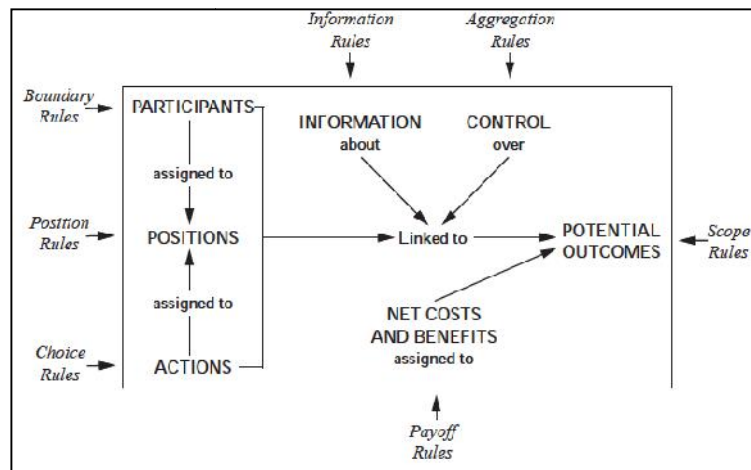


Figure 2 Rules as exogenous variables directly affecting the elements of an action situation

Source: Ostrom, 2005, 187.

4. THE AMENDMENT OF THE RULES

According to previous section, Ostrom [1] is optimistic to establish the rules may be modified, regardless of the level in question. Namely, that if we are aware of the elements of the situations of action and its relations with the rules, we can then modify them to improve the performance of the results. She considers that it is not creating "recipes "generals who do not take into account the variety of problems that faces the agent in its multiple layers or levels of performance, in the design of principles should be considered ecological thresholds under which operates the problem that it of address.

Ostrom demonstrates that institutions are relevant in that they help us to explain the diversity of results in social dilemmas, this is an important issue to follow if we assume that humans are able to develop, communicate and learn standards of trust, integrity, reciprocity and equality. When he mentions that the generic rules are common to the markets, hierarchies, etc., it also makes mention of systems of governance of common resources, notes that these evolutionary capabilities of the rules have existed in the management of resources in common use and that can capture your performance.

It emphasizes identifying some principles that characterize the robustness of common property institutions. If we apply these principles when designing the rules and taking into account the particularities of the communities and areas of action, then we could move that success to other forms of property, such as private for example. These principles are:

2991. The limits should be defined clearly, specifying the class of agent who must have access to resources (quantity, quality, etc.);
3012. There must be a proportional equivalence between benefits and costs, by specifying the amount of resources allocated to its work;

3033. Arrangements must be collective choice, any arrangement that is carried out in the community should
304 have included those workers affected in their assignments and they are also entitled to participate at
305 the time of making or modifying its rules;
3064. There must be an auditor who meets biophysical and moral attributes such that allows the efficient
307 monitoring of agents, imitating their behavior with specific rules of action;
3085. There must be a mechanism of sanctions, and these must necessarily be gradual or proportional to
309 behaviors. The agent learns and as a result the sanctions are gradual;
3106. A mechanism for conflict resolution that is fast and operate at low cost, if failure in any of these
311 elements lead to the emergence of *free-riders* who undermine the agreements must be;
3127. There must be a minimum recognition of rights to organize, ensuring the design of rules in a lower
313 layer as the operational situation. The authorities must not invade this field of action because they
314 would limit heuristic solutions;
3158. Grouping of niches, in which similar behaviors of appropriation information allow better organization
316 within each niche, which lead to take advantage of this approach. Ostrom referred to as "nested
317 enterprises".

318

319 Within the Organization of the rules according to these principles, should take into account that the
320 rules (as mentioned) also work as threats, they help to strengthen the mechanism under which
321 reinforcing and are of a nature more binding with agents. Some theoretical speculation about threats
322 should be taken into account, Ostrom reveals that (1) must adapt to exogenous rapid changes (such
323 as technology, the growth of the population, the use of resources, etc.); (2) there should be no faults
324 of transmission from one generation to another, from the principles and punishment on the basis of
325 which operates the community; (3) that in support on projects and easy access to funds, programmers
326 take account of the specific Community characteristics, if they fail it is due to the lack of consideration
327 on those features that can impact or not actors; (4) the threats should avoid opportunistic agents and
328 corruption form, if the monitor or the sanctioning does not follow the established rules and allowed to
329 collude with opportunistic agents, the strategies of others may vary and even disintegrate the
330 community; and (5) lack of institutional arrangements for large scale related to the collection of
331 information, aggregation and dissemination could lead to solutions if they do not operate with
332 efficiency, i.e. the lack of academic assistance or social organizations could lead to the depletion of
333 some resource, is why workers should be informed and the costs of such organizations (including
334 government levels) should be very low so that they can operate.

335

336 Ostrom [1] also establishes that the rules can be improved considering that the Government of a layer
337 above can help strengthen the ecological community institutions provided that they take into account
338 the particularities of each community, also help resolve problems that arise in the use of common
339 resources promoting the equivalence in the allocation of resources (in the case of tyranny) spreading
340 information (technique in the case of non-renewable resources), etc. This way of organizing it is called
341 polycentric system. Systems of governance of common resources involve social dilemmas, his
342 problems involve both biophysical variables as the material world, the communities involved, and the

rules that combine to affect the structure of ownership situations, patterns of interactions between the owners of the funds of common resources, and the results obtained. Ostrom demonstrates with her empirical studies that opposed to what we believe, these owners of common pool resources are able to establish viable institutional mechanisms to keep their resources over time.

5. CONCLUSIONS

There is a common framework to analyze human behavior. Institutional Analysis Diversity is a method which studies human actions diversity, the purpose established by Ostrom [1] was developed categories and variables to study how individuals facing to take decisions. If decisions are made several times, i.e., they repeat, it means strategy has worked. The economic idea underlies from repetitive game theory. Thereby, enhancing interaction from people and it becomes prescription. Eventually, it can be changed in a customary norm that, reinforced by community, is converted in a moral o legal norm.

Clearly, Ostrom focuses on study norms selectivity, it means how exogenous variables as bio-physics conditions, cultural identities (community attributes), and other rules, interact on action arenas and produce outcomes, due to well-being and properties criterions, norms standings, they transform o disappear. The norm trajectory is saw like moral inheritance or legal that must be modifies according with exogenous variable and evaluation criteria changing. To know these interrelations, the evaluation criteria and award assignment perform stability norms and its obeying.

Ostrom develops a general grammar (syntax) to compare similarities and differences on strategies become norms, we have to remember purpose on study norms that remained on time and we expect to be fair. It is created ADICO, which identifies some attributes must have persons who occupy positions, introducing deontic operators serve as actions delimiters, AIM element attributes accident or intentionality to behaviors, conditions are attributed to well defined properties which norms are compared, finally behavior consequences are introduced by if prescriptions are ignored.

There is so many application literature on studying behavior from economic analysis [1, pp. 69-98], but this framework is different. The results of this framework (IAD) and its recommendations must be evaluated to apply to analysis of México and its community. An important exercise would be to verify Ostrom's institutional framework and the evolutions of standards in indigenous communities, as well as institutions operating in academic, political and other fields. It is a matter of building fairer norms and motivating the intersubjective cooperation of the participants, not the opposite.

REFERENCES

- [1] E. Ostrom, Understanding Institutional Diversity, Princeton: Princeton University Press, 2005.
- [2] J. H. Holland, El orden oculto. De cómo la adaptación crea la complejidad, México: Fondo de

Cultura Económica, 2004.

- [3] L. V. Smith, *Rationality in Economics: constructivism and ecological forms*, New York: Cambridge University Press, 2008.
- [4] M. D. Hauser, *La mente moral. Cómo la naturaleza ha desarrollado nuestro sentido del bien y del mal*, Barcelona: Paidós Ibérica, 2008.
- [5] D. Cogswell, *Chomsky for beginners*, Buenos Aires: Era Naciente, 1997.
- [6] G. Gigerenzer and R. Selten, *Bounded Rationality. The Adaptive Toolbox*, Cambridge, MA: The MIT Press, 2001.
- [7] C. I. Porras, "La perspectiva de Vernon Smith acerca del agente económico," *Tiempo Económico*, no. 15, pp. 33-49, 2010.
- [8] H. Gintis, "A Framework for the Unification of the Behavioral Sciences," *Behavioral and Brain Sciences*, vol. 30, no. 1, pp. 1-61, 2007.

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