

RELATIONSHIP AMONG COMPLEXITY, SUSTAINABILITY AND DIVERSITY IN SOCIAL JUSTICE

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Abstract: *Economic product distribution inside society implies not only rationality calculus but also the analysis of some specific features of the social justice. The paper identifies the relationships among the concepts of complexity, sustainability, and diversity in social justice. In the same context a certain ambiguity maintained in the specialty terminology is clarified between the issue complicated and the issue complex regarding the systems and processes, by proposing a new signification for the complexity issue. Effects of synergy between sustainability and social justice are identified, and analysed both from the view point of fundamental causes leading to social imbalances and in terms of achieving environmental objectives which can lead to significant economic and social outcomes in terms of welfare and environmental quality. Regarding the diversity concept, the paper proposes as criterion the distinction between the commutative justice and the distributive justice thus separating what it is merited from what is fair in the distribution of economic product. Finally, an institutional and behavioral mechanism of the triad complexity, sustainability, diversity is proposed and examined.*

Key words: *complexity, sustainability, social justice, distributive justice, economic product.*

JEL Classification: *A13, E00, O11.*

1. Complexity in Social Justice

1.1. The Concept of Complexity

In order to understand and define the concept of complexity, it is necessary to clarify some related concepts and to justify the motivation for which these clarifications are needed.

Thus, in the literature, some economists believe that there are three categories of existential entities in the Universe: objects, properties and relationships that can be known as phenomena under three fundamental forms of existence: as aggregates, as systems, and as networks (Dinga, 2015). We will further define these three categories, pointing out that we can talk about the concept of complexity with regard to aggregates, the concept of complexity about systems and the concept of network complexity.

An *aggregate* is a set of components characterized by a single predicate of sufficiency, that is, it must be a decomposable entity (the decomposability of an aggregate goes to its indivisible components, depending on the stage of knowledge and on the interest of the subject, a particular component studied can be indivisible or not). Regarding *the system* concept we say that is the form of existence that simultaneously checks two predicates of sufficiency, namely: the existence of an aggregate and the existence of synergy (synergy refers to the property of an aggregate, which once formed, must possess properties that before aggregation there were not found to its components, taken separately). In other words, a system is a synergic aggregate (Dinga, 2015). As for the notion of *network*, this concept involves checking two predicates of sufficiency: existence of a system and existence of novelty; so, a network is a system that contains the novelty element. Figure no. 1 shows the general scheme of the relationship among the three concepts defined above.

Based on the definition of the concepts so far we can discuss the concept of complexity considering two aspects namely: defining the notion of and the fact that complexity can be said only in the case of networks, so only in the case of systems characterized by the production of novelty (complex is only that system that is not completely predictable). The notion of complicatedness refers to the degree of difficulty in structurally, functionally, functionally describing the functioning of an entity (Dinga,

2018). We call complicated a system with a rich structure, the point from which a system can be called complicated is given by the state of scientific knowledge at that time.

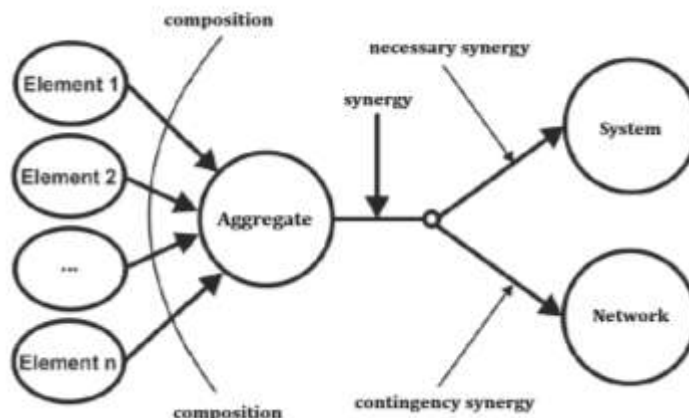


Figure no.1. The general scheme of the aggregate-system-network path

Source: Dinga E., *Predicție și predictorii în economie*

In conclusion, the concept of complexity can be defined as: a state of a system „endowed” with cultural subjects (capable of free will). It can be said that a complex system is not necessarily a complicated one (it can be a simple system), but the presence of free will gives the complex system a necessary-unpredictability.

We will retain for the field of interest of the present work that we meet the concept of complexity only in existential forms characterized by unpredictability (which appears only where the novelty appears - the source of the novelty is the presence of the subject) involving the presence of free will (we understand by free will an opposition / denial / avoidance of positive necessity, more exactly, of the social necessity).

According to some authors, the antonym of the concept of complex is considered the concept of simplex (which signifies the absence of the subject from the analyzed existential form) (Dinga, 2018). It is thus stated that an existential form can be simple and complex if it contains subjects, or complicated and simplex, if it does not contain subjects. Figure no. 2 summarizes what has been said and shows the connections that are established between the two concepts:

	NATURAL <i>SIMPLEX (S_x)</i>	SOCIAL <i>COMPLEX (C_x)</i>
SIMPLE (S)	$S - S_x$	$S - C_x$
COMPLICATED (C)	$C - S_x$	$C - C_x$

Figure no. 2. Connections of complex and simplex concepts in the natural field and in the social field

Source: autor’s work

The simple-complex association ($S - C_x$) shows that an existential form belonging to the social domain can be simple and complex, so it includes cultural subjects, capable of free will, which are embedded in a system, induce properties of unpredictability. Complex-complicated association ($C - C_x$) indicates that such an existential form in the social domain is characterized by systems with a rich structure that are not fully predictable.

1.2. Generation and Impact in the Issue of Social Justice

Generating social justice is a combined result (a mix) of the project based on social rationality and of emergence induced by free will. Social disciplines are characterized, from an epistemological point of view, by the fact that the economic object contains, functionally and structurally, the economic subject. Thus, we say that social justice is an artefact that focuses on the subject, it contains the concept of free will and it is generated by norm, the norm itself being the result of a subjective action.

The complex nature of generating social justice makes predictability of its evolution not guaranteed, although it is partly the result of a calculation (the calculation being completely predictable). While the projected component has the nature of the calculation (of the logical inference from a rationality model), the emerging component is of the nature of heuristics (of ad hoc purposes). Consequently, it can be said that the generation of social justice is a phenomenon characterized by complexity.

Regarding the impact of social justice, it applies to all subjects, its application is based on norms, but the decision to apply social justice also contains contingency or free will. Hermeneutics associated with the application of social justice, normative adjustment, is not predictable either from the legislator's perspective or from the perspective of the person to whom the law is applicable. Since social justice is not entirely in the nature of the rational project, it can not avoid unacceptable effects from a rational perspective (leading to social injustice). At the same time, as social justice is not fully emerging, it can not avoid unacceptable effects from a moral perspective (leading to social wrongness).

2. Sustainability in Social Justice

2.1. The Concept of Sustainability in Social Justice

Sustainability is a state of a system that has principles (internal and / or external) through which the system is replicable under conditions of preservation of its identity. The identity of a system is given by the preservation of its structure (from a point of view that interests the analysis) and the preservation of the structure must not necessarily be made punctual (a margin of variation of the structure is acceptable where the system remains identical to itself).

Sufficiency predicates identified for defining the concept of sustainability of social justice are as follows:

- **Predictability (P)** - social justice aims to ensure identical effects for identical causes;
- **Regularity (R)** - refers to preserving the identity of social justice, in fulfilling its purpose;
- **Self-similarity (S)** - the property of social justice to be identical to itself, refers to respecting the values (of the axiological matrix of the nation) and tradition in the implementation of the rule of law.

In view of the above, a definition of the concept of sustainability of social justice can be formulated as follows: it is a predictable construct that preserves the identity of social justice, by preserving the values and traditions in the implementation of the rule of law, having a continuous character and an institutional origin .

In the qualitative analysis of the predicates of sufficiency we will examine: a) consistency; b) independence; c) completeness.

a) Consistency Analysis

- **P/R:** by ensuring identical effects to identical causes does not compromise the identity of social justice (accomplishment of its purpose); reciprocally, preserving the identity of social justice does not invalidate the guarantee of

ensuring identical effects to identical causes in the functioning of social justice;

- **P/S:** by ensuring identical effects to identical causes, the values (of the axiological matrix of the nation) and the tradition in the implementation of the rule of law are respected; reciprocal by respecting values and tradition in the implementation of the rule of law, ensure identical effects to identical causes;
- **R/S:** preserving the identity of social justice implies respecting the values (of the axiological matrix of the nation) and tradition in the implementation of the norms of law; reciprocal, by respecting the values and the tradition in the implementation of the rule of law leads to preserving the identity of the social justice.

b) Independence Analysis (non-redundancy)

- **P/R:** from ensuring the same effects in identical causes (social situations), cannot be inferred that social justice fulfills its purpose. For example, a small variation in the effects associated with the same causes can still maintain the goal of social justice (for example, by sending an explicit, normative message that changes economic behaviors towards the goal of social justice); from the fulfillment of the purpose of social justice, the identity of the effects to identical causes cannot necessarily be inferred (there may be situations in which the differentiation of the effects to the same causes fulfills the purpose of social justice - for example the progressive taxation of personal income);
- **P/S:** from the observance of the condition of identical causes generating identical effects, the invariance of social justice cannot be extracted (institutionally or operationally). For example, changes in the values that govern economic behaviors can occur in society without being due to compliance with the condition of identical effects to identical causes; from the preservation of the axiological matrix of society does not necessarily follow that in its implementation the social justice will respect the identity of the effects to the same causes;
- **R/S:** from the invariant maintenance of the social justice macroinstitution cannot logically, validly, infer that the axiological matrix of society is preserved, it is possible that this very invariance of social justice generates an axiological revolutionary process in society, in order to accelerate the social progress, and reciprocally, the preservation (invariance) of the system of values in society does not necessarily imply the invariance of the social justice system, since the same values can be served by different systems of social justice (e.g. the value called equality can be implemented either by a single income tax rate of personal income, or by a variable tax rate, as progressive taxation).

c) Completeness Analysis

The third predicate of sufficiency (**S**) provides (filters) the set of values both formal and informal (tradition) that underpin the distribution of the economic product in society. The second predicate of sufficiency (**R**) ensures the homogeneity of the treatment applied by social norms both vertically (between „occupants" of the same socio-professional sector) and horizontally (among the different socio-professional categories). The first predicate of sufficiency (**P**) ensures that the invariance of an input in the social justice system corresponds to an invariance in its output (or, what is the same, a change in the input of the social justice system be associated to the corresponding modification in its output). Based on these considerations, we consider that the system of the three predicates

of sufficiency of the concept of sustainability of social justice is complete, i.e. it allows the functioning of social justice in a sustainable manner.

In the paper we have examined so far whether a certain abstract construct that verifies the three identified predicates (**P**, **R**, **S**) can be conceptually qualified as **SSJ** (the concept of sustainability of social justice). We will continue to examine, logically, whether the **SSJ** can generate (by analyzing each predicate of sufficiency or by combining them) other predicates that characterize it as called new necessary predicates.

From the three predicates of sufficiency identified, the predicate predictability (**P**) generates a new necessary predicate that we will call *the structurality* (N_{St}) and refers to

the permanent character and continuous action of the rules imposed by the functioning of social justice in a sustainable manner. The second new necessary identified predicate refers to *the institutional origin* (N_I) and derives from the regularity predicate (**R**), being of a

normative nature, this normativity gives it a conservative capacity of maintaining, of permanence. The predicate of self-similarity (**S**) will generate the third new necessary predicate, *the historicity* (N_H) that refers to the influences of the social-historical context

on the sustainable functioning of the social justice system.

Sufficiency predicates of predictability and regularity will together generate a new necessary predicate, namely *the separability* (N_S) that refers to the ability to individualize,

according to a certain criterion, the application of the rules of sustainable operation of distributive justice or commutative justice.

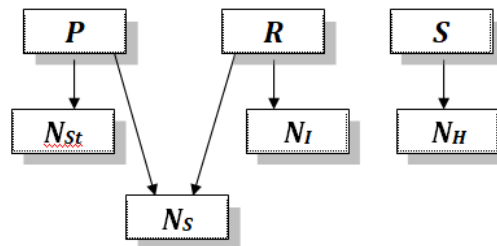


Figure no. 3. The logical scheme of generating the new necessary predicates of the concept of sustainability in social justice

Source: autor's work

Successively, according to the adopted notations, we can write:

$$P_N = \{P, R, A, N_{St}, N_I, N_H, N_S\}; \quad P_N^n = \{N_{St}, N_I, N_H, N_S\};$$

2.2. Genesis and Impact of Sustainability in Social Justice

The genesis of the state of sustainability in social justice implies the replication, through meme, of the values and behaviors generally accepted in the given system, between its evolutionary cycles. As a result of the replication of values and behaviors, it is possible to replicate institutions that implement social justice. There is thus a sui generis test of the model of social justice just by replicating it in conditions, as a rule, changed.

The viability of the model of social justice following this test is a criterion for assessing the sustainability of social justice.

The impact of sustainability in social justice is to conserve the overall social model, including social traditionalism and social stability.

There is a certain equality of treatment, from the perspective of social justice, of both the contemporary and the non-contemporaneous generations that allow the spatial and temporal replication of the fundamental principle of any society, namely individual freedom.

3. Diversity in Social Justice

3.1. The Concept of Diversity in Social Justice

The concept of diversity refers to a state of a system in which heterogeneous components coexist which do not compromise the functioning of the system based on its structure. The acceptable (maximum) degree of coexisting heterogeneity is that in which the set of functions of the system is not altered, however, it must be accepted a certain variance of heterogeneity within which the structure is considered to maintain its identity (NB: of course the variance of heterogeneity is other thing than the margin of variation of the structure). The following figure graphically illustrates what has been said above.

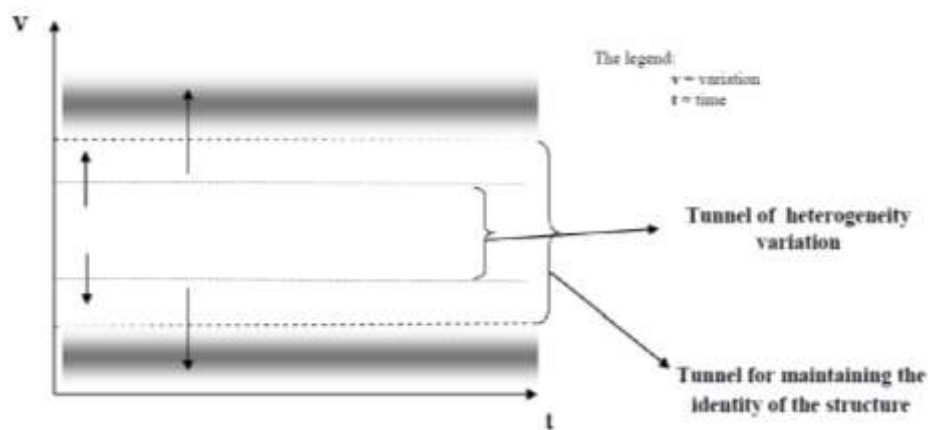


Figure no. 4. Graphical illustration of the margin of variation of the structure of a system

Source: autor's work

Particularly in the social sphere, the concept of heterogeneity must be seen under the following main aspects: a) the heterogeneity of the economic structure of society (by sectors, by branches, by social location, etc.); b) the heterogeneity of individual value systems that, although sharing a core of common values at society level (usually generated by history and traditions) may differ among individuals or even among social groups, structured according to different criteria; c) the heterogeneity of idiosyncratic behaviors of individuals who share the same system of values; d) heterogeneities occurring in the distribution of the economic product by not respecting the first predicate of the sufficiency of the sustainable social justice (equal effects must be ensured for equal causes).

3.2. Genesis and the Impact of the State of Diversity in Social Justice

Generating diversity in social justice is the combined effect of two types of social diversity: the diversity of the positioning of individuals in the social hierarchy (by gender, age, wealth, training degree, geographic or national location, etc.) and the diversity of the

positioning of individuals from the point of view of the Weltanschauung, which simply leads to various intellectual models (theories) of social justice. The two categories of individuals, involved and non-involved, and the two categories of social justice: commutative justice, which is based on the principle of commutateness and distributive justice, which is based on the principle of solidarity, governed either by principles of natural law or principles of the positive law are logically systematized in Figure no. 5.

It should be noted that diversity can only be identified based on criteria (how many individuals so many criteria), individuals being indiscernible among themselves.

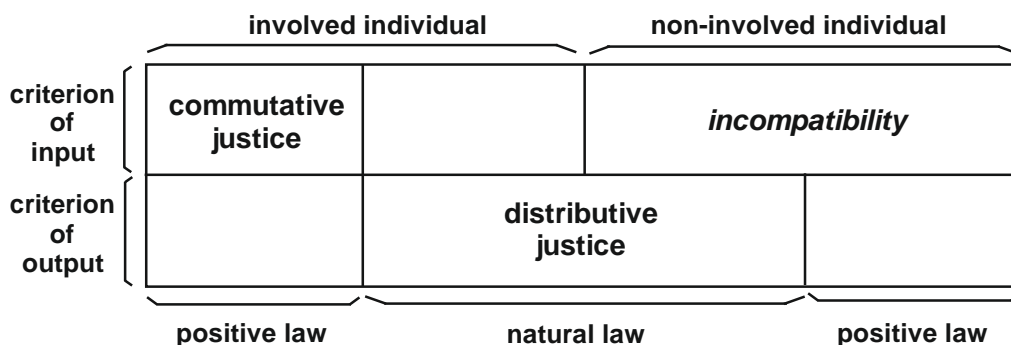


Figure no. 5. Diagram of the diversity of social justice

Source: autor's work

In Figure no. 5, by the involved individual it is understood the individual on whom the purpose of social justice is directly exercised (from the perspective of adjusting the distribution of the economic product), while by an non-involved individual it is understood the individual on whom the purpose of social justice is indirectly exercised (meaning that this individual bears the cost of redistributing the economic product in favor of the involved individual). By the criterion of input it is understood the criterion that justifies the distribution of the economic product by the individual's contribution concerned in obtaining that product, and by the criterion of output it is understood the criterion which justifies to the consequences of distributing the economic product independently of the individual's contribution to cause of that product. It is now obvious that commutative justice can only work for the involved individual who checks the entry criterion while the non-involved individual is incompatible with this criterion. On the other hand, the exit criterion is compatible with both the involved and the non-involved individuals, so the distributive justice involves both categories of individuals (e.g. additional taxation of the non-involved individual in order to achieve redistribution of the economic product to the involved individual). It should be noted that commutative justice assumes the positive right, while the distributive justice assumes the natural right.

The impact of the state of diversity on social justice refers to the unacceptability of the design of social justice on the profile of the average representative agent and the acceptability of the adaptability of the model of social justice depending on the structural changes of diversity regarding the social justice.

3. A Ternary Model of the Functioning of Social Justice (complexity, sustainability and diversity)

The ternary model of social justice includes three classes of property:

- **Class I** - class of constitutive properties, derived from the complexity property (C), occurs through the simple existence of the social system endowed with subjects and encompasses the social interactions of the subjects;

- **Class II** - the class of functional properties, derived from the diversity property (D), comprises the behaviors of subjects belonging to the social system;
- **Class III** - the class of structural properties, derived from the sustainability property (S), comprises the social structure (social institutions) of a social system.

The logical model linking the three properties as defined above is shown in Figure no. 6.

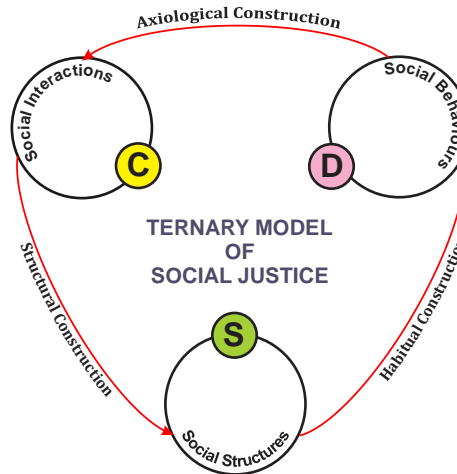


Figure no. 6. The ternary model of social justice

Source: autor's work

The mechanisms that aggregate the three classes of property of the social justice system are, as has been shown so far, the axiological construction, structural construction and habitual construction. The axiological construction includes the values of freedom, dignity, equality, equity, democracy, but also other values that impose, resist or change the importance of forming a common system of values, specific to behaviors and social interactions between individuals. Structural construction (Hodgson, 2004) is both of emergence type (significant relationships between individuals lead to causal interactions: rules, norms, meanings) and of deliberative nature (institutions may arise as an intellectual project). Habitual construction refers to the coherence of behavior within the social justice system (behavioral patterns).

Given that social justice needs to develop a certain ethic, the present work has identified the relationship between the concepts of complexity, sustainability and diversity, proposing an institutional and behavioral mechanism of the triad complexity, sustainability, diversity, and the author will develop in his future research other characteristic concepts of the social justice system.

References:

1. Dinga, E., 2015. *Predicție și predictorii în economie*. Workshop - Cercetarea-Protocoale și creativitate în cunoaștere, READ.
2. Hayek, F.A., 1998. *Constituția libertății*. București: Editura Institutul European.
3. Hodgson, G.M., 2004. *The evolution of institutional economics. Agency, structure and Darwinism in American Institutionalism*. London: Publishing House Routledge.
4. Rawls, J., 2011. *O teorie a dreptății*. Iași: Editura Universității „Alexandru Ioan Cuza”.