



The economical Reasoning: Mental Footnotes and the Social and Solidarity Economy

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Cita sugerida (APA, séptima edición)

Vilchez-Tornero, J. L. (2023), The economical Reasoning: Mental Footnotes and the Social and Solidarity Economy. *Revista Portal de la Ciencia*, Vol. 4(2), 218-228. DOI: <https://doi.org/10.51247/pdlc.v4i2.362>.

ABSTRACT

For folk economy is understood as a series of beliefs and mental representations of economic topics. These beliefs constitute the framework for the Reasoning of certain economic topics. The aim of this work is to analyze the relevance of the so-called Social and Solidarity Economy. For this goal, this topic is studied carrying out a bibliographical revision based on scientific research, documentary analysis, and hermeneutics. The complete understanding of economic attitudes and, in turn, the economic behaviors go through the understanding of how individuals think in term of the cognitive science. The results point at the fact that the more we know how people reason economics, the more applications for the development of economic Psychology could be done. This fact has a direct application on active social participation and how to manage businesses. Social and Solidary Economy is the democratization of companies and enterprises in which workers are at the same time employees and stakeholders of the company. In this area, the concreteness of all economic Reasoning--that the employees of this kind of initiative must carry out on a daily basis--promotes the cognitive development of these subjects in economic aspects. Social and Solidarity Economy in Hispanic America shows that this financial system is not only sustainable but it develops cognitive development.

Palabras clave: Social and Solidary Economy, Economical Psychology, Psychology of Thinking, Reasoning, Mental models, Mental footnotes

Raciocínio Econômico: Notas Mentais e a Economia Popular e Solidária

RESUMO

Para a economia popular, é entendida como uma série de crenças e representações mentais de questões econômicas. Essas crenças constituem a estrutura para o raciocínio de certas questões econômicas. O objetivo deste trabalho é analisar a relevância da chamada Economia

Social e Solidária. Para tanto, este tema é estudado por meio da realização de uma revisão bibliográfica com base em pesquisa científica, análise documental e hermenêutica. A plena compreensão das atitudes econômicas e, por sua vez, dos comportamentos econômicos requer uma compreensão de como os indivíduos pensam em termos de ciência cognitiva. Os resultados apontam para o fato de que quanto mais soubermos como as pessoas raciocinam sobre a economia, mais aplicações poderão ser feitas para o desenvolvimento da Psicologia Econômica. Este fato tem aplicação direta na participação social ativa e na forma de gerir as empresas. A Economia Social e Solidária é a democratização das empresas e empreendimentos em que os trabalhadores são ao mesmo tempo empregados e partes interessadas da empresa. Nesta área, a concretização de todos os raciocínios econômicos - que os funcionários deste tipo de iniciativas devem realizar diariamente- promove o desenvolvimento cognitivo desses sujeitos em aspectos econômicos. A Economia Social e Solidária na América Latina mostra que esse sistema financeiro não é apenas sustentável, mas também desenvolve o desenvolvimento cognitivo.

Palavras-chave: Economia Popular e Solidária, Psicologia Econômica, Psicologia do Pensamento, Raciocínio, Modelos mentais, Anotações mentais.

El razonamiento económico: Notas mentales y la Economía Popular y Solidaria

RESUMEN

Para la economía popular se entiende como una serie de creencias y representaciones mentales de temas económicos. Estas creencias constituyen el marco para el Razonamiento de ciertos temas económicos. El objetivo de este trabajo es analizar la relevancia de la denominada Economía Social y Solidaria. Para tal fin, se estudia este tema realizando una revisión bibliográfica basada en la investigación científica, el análisis documental y la hermenéutica. La comprensión completa de las actitudes económicas y, a su vez, de los comportamientos económicos pasa por la comprensión de cómo piensan los individuos en términos de la ciencia cognitiva. Los resultados apuntan al hecho de que cuanto más sepamos cómo razonan las personas la economía, más aplicaciones se podrían hacer para el desarrollo de la Psicología económica. Este hecho tiene una aplicación directa sobre la participación social activa y la forma de gestionar las empresas. La Economía Social y Solidaria es la democratización de las empresas y emprendimientos en los que los trabajadores son al mismo tiempo empleados y partes interesadas de la empresa. En este ámbito, la concreción de todo Razonamiento económico -que los empleados de este tipo de iniciativas deben realizar diariamente- promueve el desarrollo cognitivo de estos sujetos en aspectos económicos. La Economía Social y Solidaria en Hispanoamérica demuestra que este sistema financiero no solo es sostenible, sino que desarrolla el desarrollo cognitivo.

Palabras clave: Economía Popular y Solidaria, Psicología Económica, Psicología del Pensamiento, Razonamiento, Modelos mentales, Notas mentales.

INTRODUCTION

Economics is understood as a series of beliefs and mental representations on economic issues; these beliefs provide the framework for Reasoning about this matter. The full understanding of economic attitudes and, in turn, of economic behaviors requires the interpretation of how individuals think in terms of cognitive science. On the other hand, Psychology of Thinking is a central issue in cognitive Psychology. For this reason, the more we know how people reason

economically, the more applications could be made for the development of economic Psychology.

The term “folk economic beliefs” is defined as the beliefs to do with economic matters from individuals without a specific training in Economics (Boyer & Petersen, 2017). These beliefs include mental representations of diverse economic topics such as rents, prices, unemployment, or immigration policies. As Boyer and Petersen explain, folk economics should not be described only in terms of deviations from academic economic theory (by studying solely the “fallacies” that non-trained subjects commit when dealing with economic topics). The term should be also distinguished from Microeconomics, which addresses choices of individuals and firms in making decisions regarding the distribution of resources and the interactions among these individuals and firms. On the other hand, behavioral economics uses experimental designs to test the cognitive processes that motivate economic choices of consumers, in which incentives and information flow are manipulated and participants’ behavior is measured (Smith, 1976).

METHODOLOGY

In order to comply with the outlined objective, a descriptive study by using a bibliographic review was developed (supported by the methods of documentary and hermeneutic analysis); texts (such as books, articles, scientific essays, or degree theses) were analyzed, interpreted, collated and processed. Those documents were recovered from different databases and repositories with the help of the Google Scholar search engine.

The search was aimed at obtaining information on aspects related to the Social and Solidarity Economy (SSE), evolutionary cognitive models, domain-specific inference systems, intuitive systems in the form of beliefs and mental footnotes, and experiences of SSE in Hispanic America (among others).

With the obtained information, a database with 75 bibliographical references was made by using EndNote application. These references were used to build the theoretical framework and to draw conclusions.

THE STUDY PRINCIPLES

Before getting into the analysis of the importance of the SSE for companies, society and common citizen, it is necessary to address aspects such as evolutionary cognitive models, domain-specific inference systems, and intuitive systems in the form of beliefs and mental footnotes that will allow a better understanding of the objective of the study.

1. Evolutionary cognitive model

Boyer and Petersen (2017) propose a cognitive model to account for how folk economic beliefs are present in the subjects’ cognitive system based on three dimensions of acquisition: inference systems, beliefs and cultural transmission. From an evolutionary point of view, small groups with intensive exchange developed an intuitive Psychology of exchange (Cosmides & Tooby, 2015). This psychological skill consists of a collection of highly specialized inference-systems, designed to solve exchange problems recurrent in our ancestral environments (Boyer & Petersen, 2017).

2. Domain-specific inference systems

The mind consists of different specialized systems that are designed to adapt subjects to the challenging environment based on the development of (Hirschfeld & Gelman, 1994):

- (a) specific attention to some of the available information;

- (b) organized inferential principles;
- (c) specialized “functional systems” (in term of Luria, 1973); and
- (d) specific outcomes.

Those developments make it possible the consolidation of the folk economic beliefs in the cognitive system as an adaptive and heuristic manner of solving social problems (Boyer & Petersen, 2017). As an example, in the auditory stream, the sound events identified as lexical items are processed by assigning different syntactic roles (Traxler & Gernsbacher, 2006). This processing conforms the so-called “generative grammar” (in terms of Chomsky, 1956) that arises from “the universal grammar” (i.e., the innate skill of the human brain of learning from and ordering our environment).

3. Intuitive systems in form of beliefs

Most of the “folk-theories” are reflective beliefs based on our intuitions (Boyer & Petersen, 2017). Our intuitions are based on the aforementioned specialized inference systems but they can be improved by the conscious rethink about them. This is the case of when a social interaction questions our preliminary outcomes. That would explain why the diffusion of beliefs is more effective in social groups.

As an example, human minds include an intuitive set of assumptions about physics that predict the trajectory of objects. This specialized inference system appears early in infancy (Baillargeon, Kotovsky, & Needham, 1995). Nevertheless, humans can also entertain explicit thoughts that explicate and comment on these intuitions, e.g., “a belief that heavy objects have more momentum than lighter ones” (Boyer & Petersen, 2017, p. 15).

4. Cultural transitions

An essential component of cognitive cultural transmission is that psychological assumptions make certain mental representations easier to be acquired, stored and communicated than others (Boyd & Richerson, 1985; Sperber, 1991). Cognitive dispositions make people shape inputs in order to match their cognitive mental schemata (Claidière, Scott-Phillips, & Sperber, 2014).

5. Mental footnotes

In this theoretical, evolutionary proposal, there is a need to incorporate how human mental Reasoning works for the complete understanding of how the folk economy creates its beliefs and its mental representations of economic topics. This explanation goes beyond “the rudimentary exchange psychology, evolved by natural selection” (Boyer & Petersen, 2017, p. 18). The way we reason conditions our representations of the environment (e.g., Beck, 1976), our attitudes (e.g., Erber, Hodges, & Wilson, 1995)--which allows the cognitive system to not unnecessarily consume energy (e.g., Bertrams & Pahl, 2014)--, our emotions (e.g., Ellis, 1962), our emotional states (e.g., Aspinall, Mavros, Coyne, & Roe, 2013), and, therefore, our behavior (e.g., Biersner & Melzack, 1966; Vilchez, 2013). The implication of Reasoning itself in the majority of other cognitive processes justifies its inclusion in the explanation of the gestation of a folk economy as a particular construction of knowledge.

When constructing knowledge, in general, and shaping folk-views on the economy, in particular, we reason by basing on expressions in which their conclusion will be true if they hold in every possible mental model generated from that expression (Johnson-Laird & Byrne, 1991). In this regards, the greater the number of incompatible situations generated by an expression, the more semantic information that expression provides (e.g., Castro, Moreno-Ríos, Tornay, & Vargas, 2008); without being important the authenticity of the information, just its simplicity. This is what constitutes our “conceptual truth” (e.g., Johnson-Laird & Savary, 1999).

The whole process of Reasoning is not always completed or exhaustively carried out. In this sense, when individuals deal with the world in daily life, we use heuristics. In this heuristic process, "mental footnotes" (in term of Vilchez, 2016, 2018) play an important role in shaping our beliefs, adding implicit information to our representation of the world that goes beyond the mere negation (see Vilchez, 2015), or saving energy and resources for the cognitive system. This implicit information influences meanings in specific contexts and determines, in turn, the inferences that humans can make from the comprehension of a particular situation (Thompson, 2000). Mental footnotes means "shortcuts of Reasoning" (in term of Vilchez, 2016, 2018) that determine the whole process of Reasoning, such as the kind of "markets are bad for society" or "trade will make us poorer and others richer" (Boyer & Petersen, 2017, p. 8). These heuristics, among other sources of information, come precisely from "the platforms and common phraseology of political operators, and from common journalistic discourse (Wood, 2002; Worstall, 2014)" --as Boyer and Petersen (2017, p. 8) point out--and they constitute "the color of the glass we look through" (in terms of Shrauger & Schoeneman, 1979).

6. The "concrete" Economics

When cognitively developing, the human being evolves from a concrete way of thinking (in which the objects we reason are present) to an abstract thinking (Piaget, 1928). In this sense, mainly in Hispanic America, the so-called *Economía Popular y Solidaria* ([Social and Solidarity Economy]; e.g., Montes Vega, 2011) is characterized by the fact that all members of a company are equally stockholders and investors (De Sousa Santos, 2002). In this sense, these experiences are described as a democratization process from the political dimension to the economic area (Duran, 2002), in which every member can vote and participate (and, therefore, workers need to be informed) in the decisions that concern to the company. This democratization and social participation make people to be able to deal with economic concepts as experts since they require to deeply comprehend how their company is immersed in complex market and trade relationships. The economic concepts evolve from abstract elements to "something I can find in my daily life". In the concept formation (e.g., Neisser & Weene, 1962), concretion allows individuals to represent the essential properties that generalize and discriminate new concepts from old ones (e.g., Gilbert, 1962), that is to say, expert concepts from novel concepts. Concretion and dealing with the concepts that are significant in our daily life is the base for specializing the representations we construct about the world. This is the reason why the folk economy is not only a matter of cultural transmission but a lack of economic training as well (motivated by a lack of self-interests). This mental training is the one which makes us restructure our way of Reasoning and, therefore, our knowledge.

7. Experiences of Social and Solidarity Economy in Hispanic America

The SSE represents a different but viable proposal to build an economy that promotes life and the development of cognitive skills. Macro analyses of credit risk show that the SSE financial system is sustainable (Pinaya, Trávez Villalba, & Torresano Merlo, 2015); despite the fact that it requires constant monitoring to ensure its sustainability. Taking into account that credit failure to pay constitutes one of the most significant indexes of financial crisis, the lower probability of wrongdoing of SSE experiences gives a clear idea of the stable behavior of this type of markets.

7.1. Supervision of savings and credit cooperatives in times of crisis: The case of Costa Rica

The Costa Rican financial cooperative system begins with the founding of the *Coopeamistad* Savings and Credit Cooperative (Torresano et al., 2015). This financial system currently has 126 savings and credit cooperatives in the country, promoted and controlled by *Coopeamistad*. During the last 20 years, only two cooperatives have gone bankrupt within this network,

although the impact of this fail has even been amortized by the reabsorption of the associates through the other associated cooperatives.

From a cognitive skills point of view, better financial strategies and psychological techniques were developed regarding capital management. Among the measures that were taken, it highlights:

- (a) the diversification of investments;
- (b) the reduction of the rate of credit approval to its associates;
- (c) the reduction of the average term of the loans;
- (d) the restriction on census administrative expenses;
- (e) control of salary expenses, without dismissal; and
- (f) the increase in customer acquisition by improving the competitive price.

All these initiatives were proposed and carried out by people without explicit scholarly, economic training. The success of these companies has been pointed to the order in the procedures of the organization and to their highly democratic administrations (Torresano et al., 2015). The benefits of democracy in self-regulating organizations were already proved by Lewin, Lippitt, and White (1939) who showed that the best leadership is democratic, against authoritarian and "laissez-faire" (complete freedom). In their study, the group with democratic organization was the one that showed the least aggressive behavior and the most effective results in tasks.

In this sense, the role of the General Assembly of EPS companies is key in the regulation of important management areas such as the working conditions of the directors, how long their term in the position should be, how many times the Assembly should meet per year or how the Assembly is going to prevent conflicts of interest.

6.2. Consumer credit in Uruguay: The role of credit administrators

The Credit Management Companies (CMCs) are initiatives that intervene in the financing of the sale of goods and services by third parties. In these experiences, the return on assets shows much higher benefits than those obtained by banks, which spins around 3% (Torresano et al., 2015). The great benefit of the CMCs lies in the collection of commissions that are calculated on the sales that the other initiatives carry out.

6.3. Production, distribution and consumption in the Social and Solidarity Economy: Challenges in Argentina

Once the experiences of SSE have been implemented, the benefit is evident. The problem comes precisely in this implementation. After the crisis of 2001 and the collapse of the Gross Domestic Product (GDP; around 10%; Torresano et al., 2015), the Argentine economic system was plunged into poverty, unemployment and exclusion.

The basis of SSE initiatives is self-management, entrepreneurship and partnership, but these guidelines must be implemented effectively so they do not become a "patch economy". The SSE requires a set of strategies based on the cognitive exchange of knowledge and experiences articulated in a synergistic way. One of the most significant examples of synergistic cooperation and knowledge exchange is the Companies Recovered by their Workers (CRW). In Argentina, the CRWs took the form of work cooperatives, family enterprises in different degrees of development and family farming (Torresano et al., 2015).

The SSE must not only represent a different form of production but must create a different form of commercialization, in case SSE companies do not want to fall into the same traps as the classical economic system (Torresano et al., 2015). A completely self-supplied individual is unthinkable. The commercial exchange is at the very base of the concept of society

(Archetti, 2004). When trading with objects, the market gives value to those objects and shapes "the law of supply and demand" (Stewart, 1767/2013). Currently, the abstract nature of commercial exchanges, along with the spatial distance between producers and consumers, implies a supposed objectiveness that regulates the link between offers and demands (García Canclini, 1995). Supporting mechanisms are required, not only for production but also for trade, in order to solve the current obstacles (Torresano et al., 2015):

- (a) difficulty of producers to combine production with commercialization;
- (b) need to systematize proposals the change in consumption habits;
- (c) need for quality services for consumers; and
- (d) the need to build independent trade networks.

There are different phases in the value chain. In this sense, growth is not only focused on the distribution or commercialization of the products but on both the sustainability of producers and access to a fair price for consumers. To this aim, *Colectivo Solidario* (Solidary Collective) was born in 2010 in Buenos Aires, Argentina, with the objective of setting up a supportive intermediation between SSE producers and consumers (Torresano et al., 2015). The first question was "how do we set the final price that consumers should pay for products?". In order to solve this issue, a progressive sequence of price increases by production stages until reaching the consumer was made. Each of these phases is determined by the type of product/producer and by its distribution and intervening components (such as distances, fragile containers, risk of possible losses or product of first necessity, among others).

6.4. Savings and credit cooperative "Jesus Nazareno" in Bolivia

The administration of cooperative's resources is implemented with a series of formal and informal practices (Torresano et al., 2015). In this specific case, there is a clear transparency in the management of the economic resources invested by shareholders and creditors. The organized and strategic planning has been another essential point for SSE. As pointed out above, the general structure of administration in SSE companies is the General Assembly of members. The Board of Directors is the operational management body of the Assembly. This committee uses various subdivisions that operationalize work nuclei such as: the Supervisory Board, the Electoral Committee, the Credit Risk Committee, the Investment Risk Committee, the Information Committee and the Audit Committee (all of them being concrete technical matters carried out by "normal" [non-trained economic people] employees/stakeholders). Using this organization chart, the cooperative has tripled its assets in the last 10 years (Torresano et al., 2015).

6.7 Cooperative practices in Brazil: The network of technological incubators of popular cooperatives and the solidarity economy in a crisis context

In the crisis of employment and of strong social exclusion of the 90s, the Solidarity Economy (SE) emerged as a space for the construction of other ways of work and production in Brazil (Torresano et al., 2015). Diverse social actors stood out in this revolution as unions, churches, NGOs and diverse social movements. The Universities contributed to the process through the constitution of a new collective actor: a network of SSE enterprise incubators implemented at a national level (precisely for training non-trained stakeholders). The enterprise incubators use knowledge to support popular groups and advise them in their productive, technological, educational, organizational and management processes. The idea was to restructure old systems of technology transfer and changing their target public to cooperatives from popular sectors in low-income communities. The enterprise incubators were created by groups of professors, and other professionals, sensitive to the struggles of popular movements, seeking to implement in real experiences the public knowledge generated in Universities. Currently,

there is a Network of Technological Incubators of Popular Cooperatives (Network of TIPCs) that strengthens the articulation between the collaborating Universities.

CONCLUSIONS

Concrete Reasoning is the base for abstract Reasoning. Economy has been considered as something "typical from rich people" or people who work on that area, not something close to the great majority of citizens. Economy is something that belongs (along with Politics) and affects to every single citizen. SSE is the path to participate on a more active manner of the social-extended, economic matters (even from an entrepreneur point of view). Nowadays, formal and informal Education promotes conformism. A number of citizens declare that their aim in life is to become public servant. There is a lack of undertaking how Society works in current societies, which provokes, in turn, a lack of cognitive development about aspects that relate to our daily life (such as Economics, Politics, or social movement). The more developed Reasoning skills about these topics we have, the more conscious and critical citizens we can be and the more improvements over Society we could reach.

SSE is the clearest example of the diversification of democracy processes all over Society. SSE means a manner of self-regulating companies, which could be applied as well to any kind of organization. From a psychological point of view, SSE not only develops the Reasoning capability of subjects in "non-common" social issues but it is based on the intrinsic human nature of necessity of incentives (Skinner, 1978) and, therefore, it promotes the self-improvement.

The more information we have at our disposal, the better decision we can make (Olivera, 2012). In order to obtain more information, this information must be transparent and accessible (*Secretaría Nacional de Planificación y Desarrollo* [SENPLADES], 2010). SSE makes subjects be related and gets this access to economic issues and develop cognitive skills and, this manner, increase the quality of democracy by forming better-instructed citizens; more critical with all aspects of Political Economy, in particular, and with all Public Policies, in general (Salazar, 2009).

Limitations and future studies

The main limitation of the study is given by its descriptive nature. The author intends to continue this line of research and address the problem from a correlational perspective in a future paper.

Acknowledgement

The author thanks the University of Granada for his training.

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