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Incomparable Assets and Special Currency

M. Aria and N. Bellanca

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Dipartimento di Scienze Economiche, Università degli Studi di Firenze
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The Polytheistic Condition: Incomparable Assets and Special Currency*

Matteo Aria,

Department of Storia Culture Religioni, La Sapienza - Rome University; Department of Economics, Florence University,
email: matteo.aria@unifi.it

Nicolò Bellanca,

Department of Economics, Florence University, via delle Pandette 9, 50127 Firenze, email: nicolo.bellanca@unifi.it
nicolo.bellanca@unifi.it

Abstract

In this paper we intend to rethink and to reinforce the arguments of the authors who critique the mainstream economic theories and the rational choice theory. We start asserting that a fundamental anthropological condition of the choice is the incomparability of many alternatives and that in this situations the subject chooses without being able to give any adequate comparison judgments. Then we show that these choices, even if not deriving from any rational processes, and not being measurable in terms of utility, can be made for "good reasons". Such incomparability roots in the polytheistic condition of the subject, in which numerous action criteria coexist conflicting with each other. We also elaborate a conceptual framework investigate the cases in which more institutional logics are combined, as well as the cases in which such logics mingle with each other. In the last part of the paper, rethinking the theories of Richard Thaler and Viviana Zelizer, we try to propose an explanation of the presence and diffusion of "special currencies" in economic life circuits.

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1. Incomparable Assets and Special Currency

A classical subject of Social Sciences focuses on the capitalism propensity to commodify and monetize any area of human activity. Authors putting forward their arguments against the universal establishment of this tendency usually invoke the heterogeneity of individuals and groups, the variety of cultures and the penetration of economic activities into social relationship networks. In our paper we intend to reinforce those arguments through an analysis coming from the heart of Economics, that is, from the rational choice theory. In p.2 we will show that a fundamental anthropological condition of the choice is the incomparability of many alternatives; that this causes the rejection of the hypothesis of completeness of the preferential relation, giving place to frequent and considerable situations in which the subject chooses without being able to give any adequate comparison judgments.

In p.3 we will show that these choices, even if not deriving from any rational processes, and not being measurable in terms of utility, can be made for "good reasons". In p.4 we will widen the topic, asserting that such incomparability roots in the polytheistic condition of the subject, in which numerous action criteria coexist conflicting with each other. We will also elaborate a conceptual framework that will let us investigate the cases in which more institutional logics are combined, as well as the cases in which such logics mingle with each other. Finally, in p.5 we will explain some points of difference between our approach and the one recently supported by heterodox economists as Richard Thaler and by economic sociologists as Viviana Zelizer. This comparison will let us propose our explanation of the presence and diffusion of "special currencies" in economic life circuits, both currently and in the past.

2. Economics and the incomparability of alternatives

The idea of various branches of Economics being unified by the resolution of all problems related to the maximum (or minimum) constrain for an objective function has been established since the classical work of Paul Samuelson (1947). This idea was developed along the path initiated especially by Gary Becker (1973, 1993), up to the analysis of numerous human phenomena, not just those belonging to the sphere of markets and production activities. Today, according to the typical comprehensive model appearing in major economic analysis journals, the *homo oeconomicus* pursues both material richness originated in the markets and moral, non-monetary costs and benefits (see Levitt and List, 2007). The objective function of the rational agent includes variables such as fairness and altruism, the sense of identity and social status etc., adding from case to case what is required to show that every choice maximizes its utility within the established limits. As it has often been observed, we are witnessing a tautological approach (see Hirschman, 1986).

As Economics study rational activity, considered as located in the optimal point of the relation tying it to its objective, then it is true *by definition* that the subject interprets in the best way the relation between the means and the purpose: if, considering a borderline example, he was a masochist, by seeking pain he would *always and anyway* be choosing the strategy which better identifies of all the available alternatives; and this would be true even if he went so far as to cause himself permanent damage or death.

In our opinion, another critic can be added to the accusation of tautology, and it is not less radical. The economic science conceives the subject as a decision-maker characterized by its capacity to order all the alternatives he takes into consideration according to a consistent and complete judgment . According to Sugden (2004, p.1017), «It is folk saying in the discipline that, as far as theory is concerned, an individual *is* a preference ordering: everything the theorist needs to know about a person is contained in that person's preferences. Viewed in this perspective, a person who lacks a

coherent set of preferences appears as lacking an integrated sense of his own self». This concept does not depend on a utilitarian philosophy. In fact, the subject does not have to maximize utility; it is enough for him to obtain the best result out of some alternatives. In its turn, the subject evaluates a result as “the best” according to *any* judgment criterion able to direct its choices, ordering the alternatives. Therefore, the utility judgment criterion, which historically has been often identified with the economic science, can be replaced with a criterion of ethical, aesthetical, political or other judgment, without any changes in the object and analysis methodology. The subject, considered as the carrier of preferences, judges *Alternative y* as more useful, more convenient, more beautiful, more virtuous, more fair, warmer or more intelligent etc. in comparison with *Alternative x*; so he prefers *y* to *x*. Preferences are no more than a set of comparison judgments based on a certain criterion. The theoretical limit of this concept emerges when we recognize that, in the decision-maker’s opinion, quite many social alternatives are incomparable to each other. If this is true, the subject cannot be identified with the preference judgment system and the basics of the economic science are put at stake. Let us focus on this point which is decisive for the formulation of our paper.

In the mainstream economic science, the subject is put before couples of alternatives: the collection of his comparative judgments on the pairs constitutes his relation of preference (see Kreps, 1988; Gay, 1992). If the subject considers *State x* better than *State y*, the first one is strictly preferred to the second one. If he prefers *x* to *y*, then for any other *State z* the results is that either *x* is preferred to *z* or *z* is preferred to *y*, or both judgments are true. Due to this hypothesis of *completeness* of the relation of preference, the agent is able to judge any alternative included into the set of *X* choice subjects, once the other two *x* alternatives have been evaluated: it is worse than the best one, or better than the worst one, or both.

Therefore, the relation of order creates a consistent and complete succession in which we are able to compare two of any *X* elements *establishing which one comes “first” and which one “second”*. However, numerous social

processes are initiated by alternatives that are incomparable to each other, thus avoiding the trichotomy of one being preferred to the other, or vice versa, or the two being indifferent among each other¹. What prevails in these processes is the incompleteness of the relation of order as, while we are under the condition of ordering a pair of *quite similar* alternatives, we can hesitate (suspend our judgment) in front of a third alternative that is “too distant” or “too similar” in terms of quality. Let us start from excessive dissimilarity. An example: imagine that there’s no preference for us in what to buy: Apartment x in New York or Apartment y in Boston. If Boston Apartment z is proposed to us, x and z continue to be the same (non-different) for us. For the transitivity of the non-difference relation, it must also be that we are indifferent to y and z. But this may also not happen: a Boston apartment can be preferred to the other one. Let us analyze the case of excessive similarity. If I touch Cookers 1, 2 and 3 in a certain sequence, I feel that all of them are cold. But if I touch Cooker 1 and then 3 in a sequence, I notice the difference: Cooker 3 is warmer. It means that Cooker 2 is not-comparable to the others. In fact, if the relation was complete, considering that 1 precedes 3, then either 1 would have to precede 2 or 2 would have to precede 1, or both; but in fact this does not happen. The above-described “good sense” cases mean that the possibility to order all the alternatives remains in place until we believe that we *notice adequate similarities* between them. Thus, if Set X is our universe of social processes, we compare its elements x, y and z only if they seem to us either not too dissimilar or not too similar to each other.

A decisive aspect for our argument consists in the fact that incompleteness does not derive from “failures of rationality” that can be remedied for: it is not caused by lack of information on the alternatives, nor by the limited ability of the subject to process such information. It emerges rather when the subject makes evaluations on the basis of different and contrasting opinions that are more difficult to unify in a consistent judgment when the number of alternatives are for him, as we have seen, too similar or too

¹ We distinguish between “comparability” (or “congruence”) and “commensurability”. While the second one requires a value unit scale to cardinally measure the differences between the alternatives, an ordinalistic ranking is enough for the first.

dissimilar. This is a general characteristic of qualitative judgments that cannot always be converted into quantitative comparisons: this is a *fundamental anthropological condition* of choice that can be met in any human society. But this is not all. There is at least one more reason making the incompleteness inevitable: «usually preferences on options are induced by preferences on results. I prefer an option because I prefer the result to which it leads, that is, its expected utility compared to the result of other options. However, if my situation is that of uncertainty or ignorance and not of risk, It is likely that I'm not be able to compare the results" (Elster, 2007, p.267).

In the event of uncertainty, «certain decisions that our individual is asked to make might involve highly hypothetical situations, which he will never face in real life; he might feel that he cannot reach an "honest" decision in such cases» (Aumann, 1962, p.446). In the event of ignorance, for instance when we choose among several food menus, we usually consider several attributes: taste, authenticity, calories etc. Such a circumstance may generate incomparability in the terms discussed above. To avoid it, let us imagine artificially that the subject considers just the "taste" criterion. The incomparability emerges anyway: in fact, «to be able to make a choice, the agent must order the whole set of alternatives on the basis of his preferences. But to be able to express a preference or indifference on the basis of the "taste" he should have already "tasted" all the different alternatives», that is, he should have come out of the ignorance which is inherent to the major part of new human experiences (Laise, 1998, p.43). Therefore, also this second reason, evoking uncertainty and ignorance, indicates that incompleteness originates from the *anthropological condition of choice* and not from any formal characteristic that could be removed or introduced to favour the analytical tractability of the economic model (for experimental tests of this thesis please see Danan and Zieglmeyer, 2004; Eliaz and Ok, 2006).

The subject's difficulties to put alternatives in order according to a finalized and consistent judgment criterion become, if possible, even heavier when social interactions are considered. We propose three key examples. Let us imagine that we classify an organization of society with three numbers (**a**,

b, c), where **a** is the degree of economic welfare; **b** of political influence; **c** of the social status. (However it is enough to consider the order of the three judgments: no reference to numbers is required). Which is the order of preference of the possible combinations? Is an organization producing levels (2, 1, 3) better than the one producing (1, 2, 3)? There is no definite answer as it is not possible to univocally calculate the *compensations* between one dimension and the other ones (see Fleurbaey, 2009). Let us imagine once again – as a second example – that Anna and Bruno have different rates of transformation of resources into utility. A government wanting to distribute equally their opportunities may equalize their share of resources, thus creating a difference in their levels of utility (both total and marginal). Alternatively, it could even their utility levels thus creating a difference in their resources. But will not be able to even both their levels of utility and their shares of resources. It will necessarily have to equal one thing together with the inequality of the other one (Carter, 2001, p.15).

Finally, «let's consider the case of an individual seeking to improve his social position given a certain dominating scale of values in a society. He will have the three alternatives: either to act individually (more work, more initiative on the market etc.); or to develop a political activity with others who share his objectives, seeking to obtain some government measures that would improve his position and the one of his category; or to act so as to modify the scale of values determining his social position in relation to others (e.g. modify the evaluation of manual labor, modify ethnic prejudice etc.). To choose he will have to be able to compare the costs he will bear in the three cases. What should he do if he does not have a common value criterion for the three action types?» (Pizzorno 1993, p. 164).

Taking into account the individual and intersubject reasons referred to above, it appears relevant to assume that in many circumstances the alternatives are incomparable. This implies that it is impossible to simultaneously maximize the numerous dimensions of the phenomenon under examination and that the very basics of the economic science should be reconsidered. First of all, the incomparability changes the nature of the

economic choice. As long as the preferences are complete, a problem of (constrained) optimization consists of some decision variables (we should determine their optimal value), an objective function (indicating the functional relation between the decision variables and some variables having a value that should be maximized or minimized) and an acceptable set (which is the set of the available alternatives for the decision-maker). The *homo oeconomicus* maximizes (profit, satisfaction levels deriving from consumption, social welfare) or minimizes (the costs required to produce a certain amount of output) his objective function given some constraints; for him a relative maximum is also an absolute maximum if the objective function is almost concave and the acceptable set is convex. His behaviour is predictable: given the preferences, given the nature of constraints and assuming the appropriate formal restrictions, his choice is unique.

However, this deterministic conception fails in the presence of the incomparability. As the subject chooses in a voluntary manner, he avoids any worsening, that is, avoids those alternatives that, in his own opinion, are dominated by other alternatives. However, while in the event of the comparability the non-dominated alternatives coincided with the dominant ones and the latter selected the best one among themselves (the maximum state), now the subject seeks just to enter the set of *maximal* alternatives dominating all the others without any domination among themselves. In other words, while for maximization purposes the subject adopted the rule of rising *as high as possible* in the order, in the search of the maxima his rule is to rise *when* it is possible: thus his choices depend both on the initial state and on the process followed to take those choices. But this is not enough. The set of the incomparable maxima has a paradoxical nature: this is a set of choices in which judgments focused on the best or on the equivalent are suspended. In fact, it misses both the preference judgments (otherwise they would not be maxima!) and the indifference ones (as "I think this one and that one are just the same" supposes a utilitarian judgments which is instead absent, according to the hypothesis). So the paradox consists in the circumstance that, when

comparability fails, the subject has to choose between alternatives he cannot order, that is, without having any criterion to do it!

How is such choice void of any judgment made? When the alternatives appear incomparable to the subject, he may adopt four basic strategies. The first one consists in *trying to introduce the comparability*. This may be performed by turning to arbitrary expedients consisting in criteria deriving from a case, a caprice or a habit. According to John Maynard Keynes (1973, p.294), «generally speaking, when we make a decision we have to choose from a great number of alternatives, and none of them can be proved to be more “rational” than the others, which means that one is in condition to order the aggregate amount of the benefits obtainable from the set of the consequences of each of them according to the merit. To avoid falling between two stools we must consider other kind of reasons that are not “rational”, meaning related to the evaluation of consequences, but are determined by habit, instinct, preference, desire, will etc.". This is a theoretically weak answer as the invoked motives, even being quite relevant, are not susceptible to specific rigorous analysis: in fact, case, caprice or habit appear to be external factors justifying an action without explaining it. Otherwise, and this is the second strategy, comparability can be *re-established by means of an objective logic of the structure*. E.g. Marx «had warned that the transformational powers of money subverted reality, “confounding and compounding ... all natural and human qualities ... [money] serves to exchange every property for every other, even contradictory, property and object: it is the fraternization of impossibilities”. As the ultimate objectifier – a “god among commodities” – money not only obliterated all subjective connections between objects and individuals, but also reduced personal relations to the “cash nexus” [...] As pure exchange value, money necessarily assumed an “unmeaning” form, which in turn neutralized all possible qualitative distinctions between commodities. [...] For Marx, money was thus an irresistible and “radical leveler”, invading all areas of social life» (Zelizer, 1994, pp.7-8). In this passage it's not the subject anymore who wishes that dissimilar alternatives can be evaluated in monetary terms; the incomparability of the choices is *actually* reduced by means of a

coercive institutional device introduced by the capitalist currency. Another good example regards the elementary relationships that, according to Lévi-Strauss (1949), have an invariant structure under which the various particular-concrete relationship systems are just “transformations”, in the algebraic meaning. The reason for organizing this structure does not transcend only the individual conscience and existence, but also society and history, referring to some kind of collective subconscious (or *esprit*). Such positions as those of Marx and Lévi-Strauss do not face the problem of the subjective answers to the incomparability of the social alternatives but dissolve it invoking a more profound homogeneous reality. The third strategy aimed at restoring the comparability consists in *showing that the power relations are the ones to establish a standard for all alternatives leveling*. A paradigmatic case is the “governmentality” theory of Michel Foucault (2005). This neologism resulting from the crisis between the “government” and “rationality” terms denotes the diffusion of appropriate domination strategies and logics among all the population. Foucault and the scholars inspired by him, such as Espeland and Stevens (2007) and Fourcade (2011), examine the practices used by politicians, ideologists, technicians, lawyers, professional economists *et similia* to actively try to find an effective way of commensurating and evaluating social assets. Their approach has the benefit of expressing a power conception that is not just punitive, coercive and violent, but able to put subjectivity under control. However, they reject the idea (the one we are insisting on here) that quite many relevant social processes can *treat the incomparability of the social assets without dissolving or eliminating it, through the voluntary and conscious choices of individuals*. And this is the fourth strategy: the one that received little focus in the literature but that appears of extreme relevance to us.

3. The choice in front of the incomparability

To show in the simplest terms how a subject can choose *according to reasons in the absence of judgments*, that is, when his alternatives are

incomparable maximal elements, two fundamental cases must be distinguished: the one in which the incomparability of the maximal elements is total and the one in which it is partial. Let us start examining the first case. The access to a maximum is not a state of peace: the end of any stimulus towards a change, the block of any further choice. In fact, a maximal element z , according to the relation of preference P , can stay on a path of improvements, which includes a x that is non-different from z , for which some better values than x but not than z exist. As shown in Figure 1, Element x acts as a "bridge" between a maximal element according to P and any subsequent improvements. The P relation of preference and its inverse value (of dis-preference), taken together, create the G relation of judgment. The G residual value indicates Set N composed of the alternatives that cannot be judged.. Being outside G , we cannot define in N an equivalence (or non-difference) relation in terms of pairs of alternatives judged by the subject as having equal utility. Instead, it is possible to establish the non-difference through a third alternative that can be accessed simultaneously from the first two: therefore, in a space N void of any judgments, the non-difference requisite does not mean equal wellness or utility any more but *having the same relation with other alternatives*. On Figure 1, x and z have the same relation with Alternative w , or with Alternative k , and are thus non-different. Being incomparable, x and z cannot replace each other (according to a judgment); however, they can be replaced as elements of the same class of non-difference. Therefore, the subject may wish to replace Maximal z with Maximal x because x allows the shift in y , that is, because a change is made from x (the utility of such a change is ignored). Here are the choices expressing the fourth strategy: the incomparability of the alternatives cannot be eliminated, it causes the "suspension of judgment" and there is no choice criterion deriving from a rational calculation of utility. However, the circumstance in which the subject does not know how to improve (or remain non-different) and doesn't even know how to define the improvement (or non-difference) does not imply that he would not like to change: in fact, a change is a improvement in itself due to the possibility of experimentation and knowledge that it opens, regardless of

the fact that it increases the direct and immediate welfare of the subject (Hayek, 1960). The transfer from z to y through x is the elementary mechanism of the fulfillment of this strategy.

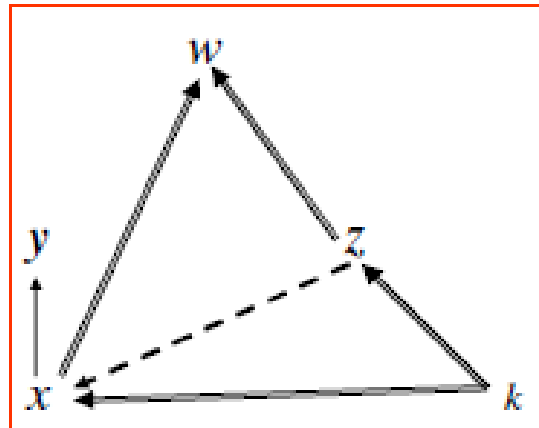


FIGURE 1

Let us pass to the most rigorous explanation that can be skipped by readers who are not quite interested. If X is a set of choice objects, the decision regarding them, made by a single subject able to give judgments of value, is traditionally based on a binary relation between the elements of X named as relation of *preference* and that we can denote with P . Given $P \subset X^2$ is the binary relation of “tight” asymmetric preference (thus unreflecting) and transitive of the subject interpreted in the traditional manner: $(y, x) \in P$, when the subject prefers y to x . Given $P^{-1} = \{(x, y) \mid (y, x) \in P\}$ is its inverted value. Given $G = P \cup P^{-1}$ is the binary relation of judgment, also unreflecting and transitive but symmetrical: $(y, x) \in G$ when the subject is able to express a judgment of “tight” preference between the two states. If $x \in X$, we define the set of values that are better than x according to P as $P(x) = \{y \mid (y, x) \in P\}$ and the set of values worse than x as $P^{-1}(x) = \{y \mid (y, x) \in P^{-1}\}$. We then define $G(x) = \{y \mid (y, x) \in G\}$ as the set of states that can be judged, according to the subject’s tight preference, in relation to x . $N = X^2/G$ is the residual value of the judgment; obviously, $(y, x) \in N$, when the subject does not judge the two states according to his preference. N is reflecting and symmetrical but not necessarily transitive. If it happens that N is transitive, it is an equivalence relation dividing X in classes named as equivalence classes, not empty and separated, put in the linear order set by P on representative

elements of the classes: so P is named as regular. Therefore, in terms of finiteness P can be represented numerically by a real function $U : X \rightarrow R$, which is traditionally named as utility function. Due to such possibility to be represented, if $(y, x) \in N$, then $u(y) = u(x)$, and such equality is interpreted as "equal evaluation of welfare" of the states by the subject who judges them as non-different.

If P is not regular, it is always possible to impose some transitivity constraint on the N elements in order to define its restriction being an equivalence relation, interpretable as non-difference. Also in the absence of any numeric representation it will, in fact, be reasonable to imagine that the subject, even with irregular preferences, is able, under certain circumstances, to elaborate a judgment of non-difference between pairs of states and that this non-difference judgment based on an equal evaluation logic meets the transitivity requisite. An example of a case in which it seems reasonable to keep a non-difference judgment is the comparison of each state with itself: here the non-difference judgment naturally derives from the relation of identity. In general, we say that when a set of pairs in Residual Value N meets the transitivity requisite, it characterizes them as non-different. Various restriction criteria sufficient to guarantee the transitivity can be considered. We will recall use the equilocation criterion: two states, x and y , are called equilocated only if $P(x) = P(y) \text{ e } P^{-1}(x) = P^{-1}(y)$. In this case $(y, x) \in N$ necessarily, as otherwise, e.g., $(y, x) \in P$, so $y \in P(x)$, when $y \notin P(y)$ obviously. If x and y are equilocated, as well as y and z , then x and z also result equilocated. Therefore, $(x, y) \in N$ and $(y, z) \in N$ imply that $(x, z) \in N$: so equilocation implies transitivity. What is particularly important is superior equilocation, i.e. equality between the best values that can be defined as $E^U = \{(y, x) \in N \mid P(x) = P(y)\}$.

If $Y \subseteq X$, and $P(x) \cap Y = \emptyset$, we will say that x is a maximal element (according to P) in Y , i.e. tout court maximal when $Y = X$. The existence of maximal element is guaranteed by the finiteness of X . M is the whole set of maximal elements for the subject. If for each $x \in M$, $y \in q(x)$ is a maximal element, we will say that Q is equimaximal and will name $q(x)$ as maximum

equivalence class. If Q is equimaximal, then it parcels M out: in fact, it cannot happen that each element of the Q partition can contain both maximal and non-maximal elements. In the event of regular preferences we will have the only maximum equivalence class and, in general, if two states are not in the same non-difference class, they are sorted by tight preference and at least one of the two is not maximal. If the preferences are not regular, they may be not unsorted and both of them may have maximal elements. It is shown that Superior Equilocation E^U is the maximum equimaximum equivalence guaranteeing that the maximal elements are in one and only equivalence class.

Let us summarize. The loss of transitivity of the residual value makes it impossible to represent the preferences numerically. It causes the important consequence of the impossibility to put forward an intrinsic welfare concept related to each alternative state by means of the utility function, even if this is possible in spite of the numerous numerical representations, i.e. in the event of states with equal "utility". In fact, when two states are non-different, they give the same welfare regardless of the kind of numerical representation. Rather, when we reconstruct a non-difference relation as transitive restriction on the residual value, we cannot say any more that two equal states give the same welfare because they give the same "utility" as we do not have any numerical representation. In the event of irregular preferences, when we have run out of the state improvements with strict preference and we have reached a maximum, the incomparability with other states does not allow any further transfers. Here a definition of non-difference can be fit, and its interpretation is no more the traditional "equal welfare" but that of "equal relation" with other states. E.g. $x \in q \in E$ and $y \in q \in E$, i.e. x and y belong to the same equivalence class, so they are non-different not because they ensure the same welfare, but just because both of them have access to the same best values and are, say, the result of the same improvements. Or $x \in q \in E^L$ and $y \in q \in E^L$, x and y are non-different just because they result from the same improvements, even if they do not have access to the same best values. If now we stipulate the possibility to switch some elements of the same non-difference class (even if we continue not to allow the possibility to switch

incomparable elements) that is, if we build the relation of non-difference using criteria which are consonant with the hypotheses of replaceability we would like to adopt; if, for example, this construction makes us consider a relation as highly equilibrated, we can replace a maximum (according to P) with its non-different non-maximum value and take advantage of improvements that would be otherwise precluded.

Let us now consider the second fundamental case, the one in which it is possible to compare a maximum with some other maximal elements, but not with all of them, namely a case where the incomparability is partial.

Within the theoretic approach we are supporting, the subject acts voluntarily and the incomparability is unavoidable. Therefore, partial comparisons neither are made because someone imposes them, nor they restore the completeness of the relation of preference. Nevertheless, they allow to act reasonably, through an economic protocol which defines the cost of leaving one incomparable alternative for another, and which therefore sets the reasons for making (or not making) a choice. This protocol can be illustrated in the following way. Let us consider some sets which include comparable elements, but which are incomparable among them: one includes alternatives 1 and 2; a second 2 and 3; a third 3 and 4; and a final fourth 4 and 5. As figure 2 shows, alternative 1 is comparable with 2, but it is incomparable with 3, 4 and 5. In turn, 2 is comparable with 3, which is comparable with 4, which is comparable with 5. Thus, between alternative 1 and 5 there is a qualitative distance of four steps, namely if 1 the subject moves to 2, 3 and 4, it can reach 5. That is, the subject can make 1 and 5 closer, not because he makes them comparable, but because he explores a way to get them closer. The four steps are a qualitative measure of the cost the subject undertakes to reach 5 starting from 1; they are a measure of the of the shift from goods available in 1 to goods available in 5

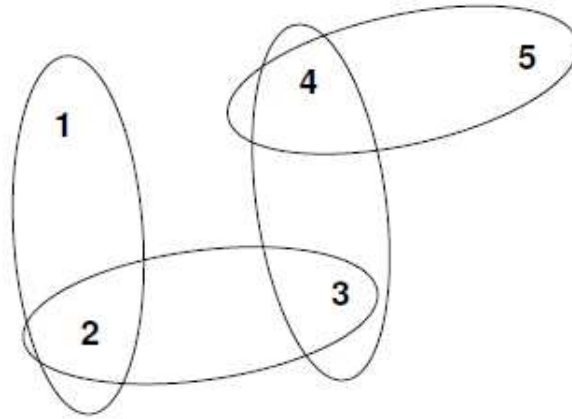


FIGURE 2

Three different examples help to clarify this protocol. Let us suppose the first set is composed by two sculptures the subject can compare. Alternative 1 is a female Fidia statue, whereas 2 is the Discobolus of Myron. Within the second set, alternative 3 is a Rodin statue representing an athlete. Whereas Fidia 1 and Rodin 3 are incomparable to each other, the subject sets a criterion of comparison between Myron 2 and Rodin 3, since both the sculptures represent athletes. Alternative 4 is a Picasso painting representing a juggler. Whereas for the subject Myron 2 and Picasso 4 are incomparable to each other, he identifies comparability between Rodin and Picasso 4, since they are works of art of the same period, made in the same country, and dedicated to male characters doing physical exercises. Finally, alternative 5 is a Rembrandt picture portraying a merchant. Between Rodin 3 and Rembrandt 5 there is not comparability, but there is some between Picasso 4 and Rembrandt 5, since both are paintings, they are tempera works, with a particular attention to bright colours and roughly of the same dimensions.

The second example is considered by Ludwig Wittgenstein (1967). Among board games and card games, ball games and sports competitions, building block games and games of chances, sleight of hand and game requiring patience, there are not requisites common to all of them, and certain are incomparable to each other. Nevertheless the subject conceives a cognitive map in which each game is included using the protocol described above: 1 is associated to 2, which in turn is associated to 3 and so on. «These phenomena have no one thing in common in virtue of which we use the same word for all – but there are many different kinds of *affinity* between them. [...] We see a

complicated network of similarities overlapping and crossing each other» (Wittgenstein, 1967, pp-XCIII- XCIV). The subject establishing connections does not know/want/have to and cannot remove the heterogeneity of games which he examines; instead he practices a protocol of “conversion” among alternative places in one set (institutional context) and another.

The third and last example considers, at the extremes 1 e 5, a common material good and a noble immaterial good. Let’s say Alternative 1 is a laundry detergent, while 2 is a delicate hand-washing solution for coloured clothes. Let’s say Alternative 3 is a hand-made ashtray. 1 and 2 are comparable between them because they are variants of the same good, whereas 1 is incomparable with 3. Instead, for the subject, 2 and 3 can be comparable, because in his cognitive map both are related to handmade activities. Let’s say Alternative 4 is a handicraft statuette representing a deity. If 2 and 4 seem incomparable to the subject, 3 and 4 can be comparable, since both are related to handicraft. Finally, Let’s say 5 is a unit of prayer to one’s deity. In this case, if 3 and 4 are incomparable, 4 and 5 can be comparable, since both refer to religious activities.

Whether they are highly different works of art, very diverse games, material or immaterial goods, and so on, the protocol format is universal, but its contents are peculiar to each case. Everyone tries, according to subjective criteria, to move from some alternatives to others. (It is therefore unavoidable that every reader, according to his own criteria, will find some of our examples more convincing than others). But the theoretical point does not concern single criteria, nor cultural influence and inter-subjectivity they obviously reflect; rather, it concerns the universality of the protocol. Among alternatives, this measures the cost of leaving one good for one other through the qualitative distance between two alternatives, namely through the needed steps to go from one to another. But this «cost is subjective, it exists in the mind of the decision maker and nowhere else. [...] The cost cannot be measured by anyone except the decision maker, because there’s no way the subjective experience can be directly observed » (Buchanan, 1969, p.96). Add to this the fact that

the nature of the protocol is not deductive, because the subject does not find out *ex ante* what “aligns” all the alternatives, to consider them one by one later on. On the contrary, the subject explores *in itinere* what (for him) associates one single alternative to another, and what in turn associates that one to another different one, until he can give shape to a setting where to act. The minimum number of steps between an alternative and another, to which it is incomparable, represents the subjective measure of the cost from the Fidia statue to Rembrandt’s merchant, from the chess game to the tennis match, or from the laundry detergent to the prayer. We all act like that, and we couldn’t do otherwise.

Until now we have discussed how a single subject, in presence of an incomparability (total or partial) of the alternatives, can make choices according to reasons, even without a coherent judgment. Let us investigate now how reasonable choices can be made in an *inter-subjective field*, laying no claims to include comparability. Let us consider for instance a crucial phenomenon characterizing the market: the formation of a uniform rate of profit. According to mainstream economists, it is a case peculiar to the institutional sphere of economy. As rather Becattini (1983, pp-46 and 55) outlines: «It is evident – and only a “scientist doping” can make it unclear – that every human subject, both worker or capitalistic entrepreneur, shifts his resources from an activity to another according to the representation that he subjectively figures out concerning: a) his own resources; b) their returns, somehow defined, in all different possible uses; c) their actual possible uses. If it is like that, it becomes necessary to understand how the subject represents resources, how he evaluates their returns, how he distributes them. Real capitalistic systems go through phases in which “straining” of cultural process is stronger and phases in which this “straining” is weaker. When it is less marked, meaning when those values and meanings that the profits’ sub-system produces move “quasi-naturally” with those ones resulting from a “cultural evolution”, the socio-economic growth process develops regularly: all of the subjects read and evaluate reality more or less in the same way; consistent and self-justifying configurations of expectations develop, the

economic process produces fulfilment of needs and profits, simultaneously and jointly».

Thus, the investments return rate evens out, not because of the lack of an impersonal and automatic mechanism which excludes an extra-profit by making capitals migrating from a business to another; rather, because entrepreneurs represent to themselves the business activities included in the institutional sphere of economy, within the institutional cultural sphere. and they do that in rather stable and mutual ways, bringing them to the perception that, for each of them, the final investment is convenient, considering the investments made by the other members of the community. What happens is the establishment of a self-enforcing expectations system. Let us think of a group of investors. The n.1 divides reality in 10 sections: section I ("metallurgic") boundary goes from 0 to 3 (of a hypothetical line), II ("information") from 4 to 8, III ("building") from 9 to 15 and so on. Also n.2 divides reality in 10 sections, but sector I boundary goes from 0 to 4, II from 7 to 13 (since the entrepreneur does not see options 5 and 6, or they are not accessible to him, or he refuses them), III goes from 14 to 19, and so on. N.3 divides reality in 12 sections, since two of them are separated in independent sub-sections, and so on. What is crucial? That n.1 expectations can be confirmed, given n.2 ones; at the same time it is crucial that n.2 expectations can be confirmed, given n.1 ones. It does not matter that sections (or industries) really exist out there, and that each entrepreneur calculates suitability of moving his capital to one or another sector, until balancing marginal returns.

In a few words, considering the incomparability of alternatives, it is possible to obtain social consent on the "unit of measurement" of judgments and actions, *instead of trying to establish a form of comparability*. This "consent" is a set of shared individual expectations A referring to a collective self-enforcing behaviour Q in a social setting X. it does not demand univocal judgment criteria, therefore it does not demand comparability of alternatives. I can ignore how to *measure* (one to each other, or using the same "currency") detergents, prayers units and flight tickets; actually, It is possible that I am not able to set them in order sensibly on the same scale. Nonetheless I can recognize that during the social encounters among me holding detergent packs, you who have units of prayer, and him holding flight tickets, there is a concurrence towards reciprocally confirming expectations. We often make this

cognitive action in situations in which alternatives are incomparable, and it is well described by the famous comment of the philosopher Jacques Maritain: «do you want to know if I and my colleagues agree on subjective rights? Sure, but don't ask us what they are!».

A powerful instrument formulated by the recent neo-institutionalist economic analysis enables to understand how this consent is built: it is the "institutional complementarity" (Aoki, 2001). Two variables (in consumption, production and organization, among institutions) are complementary if, when subject A enhances one variable, , incremental benefits deriving by enhancing the other variable for subject B. Let us suppose that x' and x'' are two alternative institutions (equilibrium outcomes) in domain \mathbf{X} , whereas z and z' are two alternative institutions in domain \mathbf{Z} . Let's suppose that payoffs difference $U(x')-U(x'')$ grows for each player of domain \mathbf{X} (it does not need that all of them have the same function of payoff), when z' or z'' prevails in domain \mathbf{Z} . At the same time, let us suppose that payoff difference $V(z')-V(z'')$ grows for every players within domain \mathbf{Z} (they can be partially or totally overlapping players of domain \mathbf{X}), when x' or x'' prevails in \mathbf{X} . Then games in \mathbf{X} and \mathbf{Z} are called super-modular, and x' and z' (alternatively x'' and z'') are complementary to each other.

If the condition of super-modularity holds, a combination of balance, and especially an institutional viable equilibrium, can be either (x', z') or (x'', z'') . Furthermore, even if one of them is less efficient in terms of Pareto-ranking, it may nevertheless establish itself as a balance, once it is obtained. The institutional complementarity is thus defined by the following two circumstances: (1) the additional benefit of having the institution x' instead of the institution x'' in some domain X , is greater when the institution z' (instead of the institution z'') is chosen in the domain Z . (2) The additional benefit of having the institution z'' instead of the institution z' in some domain Z is greater when the institution x'' (instead of the institution x') is chosen in the domain X . There are therefore two Nash equilibria for the system which includes X and Z : (x', z') and (x'', z'') . In the case of (x', z') , the choice of x' in X is optimal, given the choice of Z , and the choice of z' in Z is optimal, given

the choice of X; there is thus a pair of expectations on the choice of each player such that, should even be known the choice of the other, nobody would want to change his choice.

4. A conceptual framework of the polytheistic condition

We already argued that the non-comparability of alternatives modifies both, the single subject's and the intersubjective voluntary choices. Let's now discuss the implications of the non-comparability in the analysis of the institutions of a society. The topic can be effectively introduced by referring –in a transdisciplinary perspective– to the indications of an economist, a sociologist, and an anthropologist. Maffeo Pantaleoni, whose writings date back to the end of the XIX century and the beginning of the XX, is one of the few economists who recognizes the centrality of the non-comparability of alternatives in social life. He upholds the idea that each individual is rooted into many different institutions and that his preferences for one or the other are heterogeneous (Pantaleoni 1917a, p.175; 1925, p.178). According to Pantaleoni, we can make a distinction between the ideological/cultural sphere, the political sphere and the economic/material one. Therefore, «there are at least three kind of relationships between human beings, two of which aren't ruled by economic laws. Such kinds of relationships are so different one from another that I wouldn't know which kind of bridge I could build to connect them. It's necessary to jump, because there is a *hiatus*. You enter in a new world by moving from one to the other» (Pantaleoni 1925, p.186). Given that the subject elaborates different selection criteria according to the institutional sphere, within each area the subject tends to apply a sole selection criterion: thus, in the market economy he acts in a univocal and coherent way, in the family he acts in a different but equally precise way and in the political area in another peculiar way. According to Pantaleoni, if the society had well defined boundaries between institutional spheres, we'd have many positive implications. «Let's suppose, for example, that seats in a theatre or on a train are distributed not only to those who are willing to pay more for the tickets,

compared to those unwilling to do so, and that have therefore voluntarily excluded themselves. Which other method could be applied? Do we want to give the tickets at a set price, to those who arrive first? Who will win, strong shoulders and fists or those who will pay such strong shoulders and fists? Do we want to draw lots? This way, those who don't want to pay for the tickets will receive them and will sell them, and also those who are willing to pay will receive them, on condition that they could set a good price to sell them back. Will tickets be given as 'favors'? Bribery will arise among the dispensers of favors, and will play a role in obtaining the role of favor dispensers» (Pantaleoni 1925, p.275). However, Pantaleoni ascertains, usually this doesn't happen, because each sphere's social assets can cross boundaries and can be used to get benefits in a different one. Indeed, in the absence of «a criterion to decide which of these different hedonic structures is the strongest and which is the weakest» (Pantaleoni 1925, p.352), each one struggles with «the game rules [...] extremely various in the different games called life» (Pantaleoni 1917b, p.15), and «the requirements to win change constantly » (Pantaleoni 1925, p.357).

The subject doesn't limit himself solely to calculate how to optimize within a given sphere, but starts a dynamic process of inter-institutional optimization: one can obtain a payment by giving affection, or sell his vote in return for 'favors', or avoid to pay a service physically threatening the tax collector. Often it is strategically more convenient to use the assets of the X area in the Z one, instead of the X sphere, because the assets' transfer from one institutional area to the other contributes to overcome constraints and to take opportunities. Pantaleoni's position, above mentioned, is heterodox among economists.

For sociologists, Max Weber constitutes an essential classic. He elaborates, in the same years, a similar consideration, analyzing the human condition in terms of *polytheism of values*. Polytheism in fact, indicates the coexistence of numerous gods, having each one of them separate functions and specific fields: there can be gods linked to a place (Athens or Sparta), to an activity (fishing, hunting, love, war), to a profession, to the protection from diseases or dangers. In polytheism the values can't be scaled; «what is given to

understand is just the acknowledgment of the divine in one or the other case, or rather in one system or the other» (Weber 1948, p.32). Whereas in the past times' polytheism, the spheres of influence of each god were kept separated; it is during modernity, according to Weber, that «impersonal forces have taken over personal divinities; antagonism has taken over polytheistic –as well as monotheistic- hierarchies of values, an irreconcilable “endless fight” over different values. Human beings are compelled to face not only depersonalized needs but also pretentiously universalizing, and for this reason conflicting, needs. This is, according to Weber ‘the destiny of our epoch, a destiny which cannot be mitigated neither by any theology, nor by any science» (Schluchter 1979, p.44). Thus, Weber's thesis notices the irreducible opposition among the final reasons of social actors. As many interpreters have underlined, his position is strategic: a human being «has to choose which gods he wants to believe in and he has to serve at times one or another» (Weber 1970, p.124). Among the gods «it is impossible to relativize or find a compromise. Of course, it is impossible according to their sense. Since [...] *in almost all peculiar definition of stance by real human beings, , the spheres of values intersect and intertwine*» (Weber 1974, p.332, added cursive).

This last quotation, as well as Pantaleoni's similar intuition, sets the theoretical topic faced by the anthropologist Paul Bohannan in late Fifties: how can incomparable and often antagonistic values be contaminated? How can the alternatives within one institutional area be used in another one?

Bohannan, through the study of the Tiv population of Nigeria, replies that, according to his interpretation, such population shapes «a multi-centric economy [...] in which a society's exchangeable goods fall into two or more mutually exclusive spheres, each marked by different institutionalization and different moral values. In some multi-centric economies these spheres remain distinct, though in most there are more or less institutionalized means of converting wealth from one into wealth in another» (Bohannan, 1959, p.492). For goods, or more generically alternatives, of an institutional sphere to be transacted with those of another one, it is necessary that the subject controlling them is able to estimate the *quid pro quo*, meaning the cost of their

conversion. The term "conversion", suggested by Bohannan, appropriately reminds us that not all the *quid pro quo* are commercial trades because not each *quid pro quo* requires the goods' comparability. While the trade on a market takes place thanks to a universal currency used to buy goods, the conversion of a good belonging to a certain sphere into a good of another sphere is a completely different operation, and it needs the protocols mentioned in §3 that will be discussed again in §5.

Furthermore, as Pantaleoni noted, the conversion makes «the ultimate type of maximization» possible (Bohannan, 1959, p.497). In general, until it operates in a mono-centric economy, the subject improves his condition cleverly using the given rules of that sphere. When instead, he participates to a multi-centric economy, he can use the rules of a sphere to take advantage within another sphere: he can take advantage of the status' goods to obtain more food than he could actually purchase, or take advantage of the power assets to change the rules of the sphere in which women circulate, and so on. In spite of the fact that in the following years «Melanesianists and Africanists provide important correctives to Bohannan's model» (Maurer, 2006, p.21), the notion of "conversion" is still a precious contribution.

Now that Pantaleoni, Weber and Bohannan's important ideas on the polytheism of the human condition have been discussed, we suggest a simple framework to represent them. When we talk about a conceptual framework, we think of a methodological path similar to the one that inspired, for example, Douglas North's remarks, who, in his last book dedicated to the links between social orders and historical change, writes: «We develop a conceptual framework, not a formal or analytical theory. [...] We do not present a formal model that generates explicit empirical tests or deterministic predictions about social change. Instead, we propose a conceptual framework that incorporates explicitly endogenous patterns of social, economic, political, military, religious, and educational behaviour» (North-Wallis-Weingast 2009, p.xii). So, in this paragraph we try to indicate the conceptual coordinates within which a modelling of the suggested ideas should be placed. The social dynamics of polytheism can be schematized by using a double interpretative grid. The first

grid suggests four institutional "places": caves, temples, palaces and bazaars, as suggested by Martinez Coll's simple but powerful classification (2006). In the caves, groups of human beings join together according to proximity ties, determined by blood and territorial proximity; the institutionally-specific rationality is led by instinctive and emotional impulses. In the temples, humans are sharing the same god or the same ideology to join together; they obey to a rationality rooted in the tradition. In the palaces political groups meet, supporting a rationality consisting in the respect of a set of informal rules or a system of formal rules. And finally, in the bazaars those who have something to sell to others who are willing to buy meet; they follow a rationality oriented towards the calculation of the cost-benefit proportions. Each subject can inhabit one, two, three, or even all the institutional forms. As Pantaleoni noted down, the subject's strategic choices are coherent when referred to a form of rationality, but often are inconsistent if judged according to a different form of rationality.

The second interpretative grid indicates that each player can choose among four fundamental strategies: cooperate (C), not cooperate (N), abstain from the social game (A) and destroy (D). To intuitively justify the relevance of these strategies, let's imagine using a bus as an example of common good. If we pay the ticket, contributing to the financing and/or production of such social resource, we are cooperating (C). If we travel for free, defecting the collective action and leaving our engagement to others, we are not cooperating (N), and we are putting in place a strategy of redistribution/expropriation which is favorable to us. If we don't take the bus and we prefer to go by foot, since using the bus is optional, we are abstaining from the social game (A); such strategy is also called the loner's strategy: someone who neither cooperates, nor defects, and instead avoids to participate to the game of society (Hauert *et al.*, 2002). And finally if we damage the bus, in addition to not paying the ticket, we are practicing a destruction strategy (D) (Lee, 1988). Each player can choose one out of the four different strategies for each situation.

The double interpretative grid brings out complex outcomes (I,j,k,l): an actor of the type i plays a pure j strategy when he meets an l actor playing a pure k

strategy. We can imagine that all the encounters are taking place in a square, meaning the “place” of the society in which the rationalities of the other institutional places face each other/collide. We obtain, in figure 3, a matrix of $16 \times 16 = 256$ possibilities, since the strategies are four [C = cooperation; N = non cooperation; A = abstention; D = destruction] and four are the institutional “places” [G = cave; T = temple; P = palace; B = bazaar]. The resulting combinations are AG (T, P, B) = abstaining according to cave (temple, palace, bazaar); NG (T, P, B) = non cooperation according to the cave (temple, palace, bazaar); DG (T, P, B) = destroy according to the cave (temple, palace, bazaar).

	CG	CT	CP	CB	AG	AT	AP	AB	NG	NT	NP	NB	DG	DT	DP	DB
CG																
CT																
CP																
CB																
AG																
AT																
AP																
AB																
NG																
NT																
NP																
NB																
DG																
DT																
DP																
DB																

FIGURE 3

Obviously a matrix of 256 boxes has no significance until we confer a ranking to the possible strategic choices’ payoff. A consistent ranking takes inspiration from one of the four specific rationalities; we refer here to the bazaar’s one (or “economistic”), in which each player limits himself to assigning importance to his own payoff. In the encounter between two actors, it is the following: $(N,C) > (C,C) > (A,C) > (A,A) > (N,N) > (C,A) > (C,N) > (D,C) > (C,D) > (A,D) = (D,A) = (N,D) = (D,N) = (N,A) = (A,N) = (D,D)$. The player choosing the first term of each interaction, obtains the highest payoff when defecting (N) while the other cooperates (C). However, the actor feels better if he cooperates (C)

while the other cooperates as well (C), compared to if he abstains (A) while the other creates the common goods (C) he isn't using. The box (A,A) in which both avoid to participate to the game is better than the box (N,N), in which both player play to defect.

The (C,A) box, in which the actor commits to the common good while the other doesn't, is better than (C,N), where the actor commits while the other defectors. Proceeding down in the chart, the strategy D makes the scene: (D,C) is better than (C,D) because in the first case one actor enjoys to destroy the common good created by the other, while in the second case it is the other way round. At the end of the list, we find the cases in which no one fuels the public good and for this reason the "society's cement" fails: an abstaining (or defecting) actor while the other destroys, or vice versa, or two destroying actors, are all strategic combinations incapable of reproducing the community. The framework outlined above, is methodological. It doesn't claim, following some sort of scheme built upon stages - today discredited - that the cave is pre-modern compared to the temple, which is at the same time anachronistic compared to the palace, and that the bazaar's society is "really rational". On the contrary, it claims that its critical function lays in the practice of polytheism's social action criteria.

It in fact it makes explicit that the above mentioned payoff system is plausible *only* when referred to the self-interested rationality of the bazaar. If we considered, for example, the instinctive rationality of the cave, it would be reasonable -as the anthropological literature in potlatch documents- to suppose that the choice of destroying gratifies as much as the choice of defecting, so that the (D,C) case would be on top of the system. If we considered instead a situation in which a wider community is not formed yet, the A strategy (not entering in the social dynamics) would have such an importance that the combination including it would be overriding; and so on. Therefore, the framework shows in a complex grid, where we can observe different outcomes, what would happen in a society if the actors practiced just the bazaar's rationality in each type of encounter.

The fact that the game's matrix is never entirely used in its wholeness is another methodological merit of such framework. Instead, it needs to be justifiably sectioned each time in small sub-matrixes, which are able to focus on the specific nature of specific encounters. For example, in the sub-matrix 3 x 2 of the figure 4, we imagine a situation in which the actor I moving from the cave rationality –through the C, A, or D strategies- faces an actor II, who instead applies the C strategy, applying it to the temple or palace rationality. The ranking payoff's hypotheses, since the nature of the intersections need to be taken in account, are different from the "economistic ranking" mentioned above.

	CT	CP
CG		
AG		
DG		

FIGURA 4

Last but not least, the matrix is a methodological instrument that makes it possible to abandon the rigid hypothesis according to which a player not only "wears" just one dress for each institutional "place" (and the corresponding rationality form), but also adopts just one strategy of selection.

As Pantaleoni, Weber and Bonhannan suggested, a hybridization between "places" and strategies can occur. Let's then just restrict our analysis to two significant examples. One case of hybridization between institutions occurs within the bazaar, when uncertain and complex transactions, requiring a high inter-subjective trust, are carried out. The bazaar's logic, where subjects confront themselves with others only according to what needs to be sold or purchased, mixes with the temple logic, where instead the subjects share a socialization modality: this strengthens the market anonymous relationships, favoring the traders' loyalty (Greif, 2006). A case of hybridization between strategies is the co-opetition (Brandeburger e Nalebuff, 1998): subjects interact within forms expressing both competition (D and N strategy) and cooperation (C strategy). Let's consider two companies that cooperate on risky and expensive joint ventures, while competing on the commercial results of

such cooperation. And let's consider a farming company and a group of consumers who start together a cultivation of biological apples, so, on the one side the company commits to commercial horizon and other side the consumers assure the demand. Nevertheless they are competing when on the market since the company tries to higher its profit margins, while the consumers claim lower prices. In the sub-matrix 2 x 2 of figure 5 we imagine a situation in which the actor I moves from the bazaar/temple's rationality through C/N and C/D strategies, to face actor II, who instead moves from C strategy applying it to the temple or palace rationality. It is an example which helps to understand the frameworks' potential.

While in fact figure 4 enables to examine the *combinations* of multiple institutional rationalities with various strategies, figure 5 enables to investigate their *hybridization*. The comparison between the two types of matrixes' payoffs, combinatory and hybrid, is an instrument to interpret the subject's choices in a polytheistic condition.

	CT	CP
C/N-B/T		
C/D-B/T		

FIGURA 5

5. Confronting with Thaler and Zelizer: towards a new research perspective

When a subject making a choice evaluates non-comparable alternatives, it is immersed in a "polytheistic condition". We already discussed about the subject's capacities to choose when he is immersed in such a condition. What at this point is left to discuss, is a crucial theoretical issue: how many prayers are worth the hundred euros that could purchase five packages of detergent, if prayers and detergents aren't comparable alternatives? What happens to the currency, when it measures both prayers and detergents, *but not the one with relation to the other?*

Let's start by recalling the answer, substantially similar, suggested by the economist Richard Thaler and by the sociologist Viviana Zelizer. We'll then sketch out an answer, partly different, based on the above stated argumentations.

Each mainstream discussion regarding monetary economy defines money according to its functions, establishing mainly two functions. In the first case, money is everything that is generally accepted in return for goods and as an instrument to extinguish debts. Everything can become money, as long as it is universally accepted as a payment; more specifically, money can be a mark without any intrinsic value, meaning pure credit. Each form of money is fiduciary, in the sense that the creditor establishes when to accept it, apart from the money issued by the State that has by law the "releasing power": it is called currency and it is the only one that can't be refused by those who have to receive a payment.

In the second case, money is the measure of value, or the unit of account, or the numerary.

If, for example, I bought a pair of shoes in absence of a shared unity of measurement, I should ask which, and how many, goods are necessary to each merchant for remising those shoes.

If a merchant wants apples but I have watches I should know the trade ratio between watches and apples, and accordingly between apples and shoes; and likewise, if another merchant wants clothes, or wine, or books. Hence, I should know all the possible trade ratios between existing goods: if the goods are n , those ratio are $n(n-1)/2$. Instead, thanks to the unit of account, the trade ratios reduce to $n-1$, since it is sufficient to relate each good to what has been selected as currency. But «it isn't necessary to use as a measure of value each good that is used as trade intermediary;[it is just necessary] but only to state it in terms of something that is a measure of value » (Robertson, 1928, p.242). The intermediary can be a food voucher issued by a supermarket chain, while the unit of account is the euro; other examples are certificates, coupons, expense accounts or local currencies. According to this thesis, which falls under the standard discussions of monetary economy, it is essential that

the unit of account is universal, or that trade ratios are elaborated among all the goods according to the same currency. It instead appears of secondary importance that markets are fragmented on the payment means, generating special currencies with a limited, special and temporal, acceptability. One of the most important XX century's economists even theorized that in a free society manifold currencies could and should proliferate as mediums of exchange (Hayek, 1976).

In that regard, heterodox economists such as Thaler and sociologists such as Zelizer innovate theoretically. They suggest that *the contrary can happen*: the intermediary, or the means of payment, is constituted by euro, a legal currency, while the measure of value or unit of account is special currency. The latter upraises and is acknowledged only in a limited "commercial circuit" (Zelizer 2006), establishing trade ratios not among all the goods of the economic system and the currency, but between those circulating in that specific circuit and the currency. Welfare and social assistance services, charity and gifts (Zelizer, 1994); life and children's life evaluation (Zelizer, 1979 e 1985); access to sexual performances (Zelizer, 2005); migrants' remittances (Zelizer, 2009); religious practices (Iannaccone, 1988); political activities (Pizzorno, 1986); symbolic goods, such as Royal jewels or others trophies, and intangible goods such as love and honor (Gregory, 1982; Weiner, 1992); non reproducible artistic and environmental assets, such as a Leonardo painting or a valley of the Dolomites (Fourcade, 2011); new knowledge fluxes (Boulding, 1966); the relational goods (Belk, 2010); the relational assets (Uhlener, 1989); the informal economy goods (Hart, 1973); the status assets (Thaler, 1985); are all examples of limited circuits². When a subject enters in one of these commercial circuits, the currency he makes available measures only the goods belonging to that specific circuit, and not all the others. Many families, for example, create separate accounts for the children education, holidays, medical treatments, retirement, rent, bills, transportation, cultural expenses, and so on (Thaler, 1999). Gross and Souleles (2002) documented that the

² Among some special currencies of commercial circuits there are common requisites. One that is particularly relevant, since it contradicts the traditional idea according to which money can be subdivided to one's taste, is that money shows some forms of indivisibility in certain circuits, such as the religious goods' one, the artistic-environmental one, the sharing one, and many others.

American families of their sample have more than 5.000 dollars in cash and a negative balance on the credit card of about 3.000 dollars. Since the passive interest rate is on the paper substantively higher than the one on the savings accounts, it would be convenient to extinguish the debt, but the majority of the families don't extinguish it, because they believe they are dealing with different piles of money.

Moreover, also in a commercial circuit of consumption goods, the subjects uses money in different ways, according to its provenience, or rather according to the circuit in which it was obtained.

«We have a friend called Dennis, when he turned 65 he started receiving his retirement, despite of the fact that he and his wife are still working full-time. [...] Dennis, now that he's still healthy, wants to be sure to satisfy all his whims (in particular some trips to Paris including abundant gastronomic experiences) without being discouraged by costs. So he opened a special saving account, called "fun account", in which he deposits regularly his pension. With the money deposited on this account, he could buy a new expensive bicycle or a case of good wine, but surely not fix the home roof» (Thaler e Sunstein, 2008, p.60). Therefore, the exchange rate between the safety of a child and money, or between a trip to Paris and money, it's not calculated *together with* the exchange ratio between a box of detergent and money (according to the consumption), or between an hour of extra-work and money (according to the profit); even if the means of payment is always the euro. According to the *mainstream* economic theory, it doesn't matter from where the money comes from, nor the way it is used: what is important is that the consumers' utility, or the worker/producer's payoff, is the highest. According to Thaler and Zalizer, instead, money has never a perfect fungibility: a euro never equals a euro when the consumption goods' category changes, or the category of activities through which it was obtained.

A different approach is the one recently systematized by Lucien Karpik (2010). He focused on the uncertain and incommensurable "singularities", meaning the goods with multidimensional economic characteristics. For example, the home brew beers respond to multiple purposes (multidimensionality), their taste is

surprising (uncertainty) and they are difficult to compare since they belong to different cultivation areas (incommensurability). Karpik asserts that the subject doesn't formulate evaluations based on calculus to choose among peculiar goods, but rather on merely qualitative opinions. Such opinions summarize a plurality of criteria in a consistent way, in which a good is preferred to another one, since they are based on personal and impersonal devices (Foucault): in the first case they give importance to advices made by friends, or others within the same social network; in the second case, they include quality clues, experts' opinions and any kind of grading. Karpik's thesis can be interpreted as a refined version of the "rational ignorance" idea (Downs, 1957). Up against peculiar goods, the subject feels incapable to elaborate informed decisions. The goods characteristics appear to him as so complex and blurry, that the effort to obtain directly better information would be much more expensive and probably inadequate. So, for the subject is rational to remain ignorant, delegating to others, or to institutional mechanisms, the judgment formulation. His thesis appears, paradoxically, to fall under the classic paradigm of rational choice from which it aims to detach itself. But the hardest difficulty is traceable comparing Karpik to Thaler and Zelizer. Karpik focuses on a limited number of case studies on goods, as they are the only peculiar goods on the market. On the contrary, Thaler and Zelizer document that a wide part of ordinary goods is mistaken with peculiar ones. The devices orienting judgments exist even when, going to the supermarket, we check the labels or the consumers association's indications, or when, investing in the stock exchange, keep in account the rating agencies' grading or the financial advisors' and mutual fund managers' opinions. Peculiarities are much more central in the market's functioning than Karpik does actually recognize. Thaler's and Zelizer's structuring appears theoretically and empirically stronger. Peculiar goods develop in commercial circuits that subjects built and actively share, and not under the foucaultian devices' regulation which mould the subjectivity.

And yet, despite of the fact that Thaler's and Zelizer's approach is illuminating for many aspects, it doesn't explain, in our opinion, why so many different

currencies spring. Thaler evokes a mental accounting based on barriers and cognitive distortions, while Zelizer evokes the society articulation in culturally and ethically variegated fields³. They are both weak explanations, because it is possible to intervene on cognitive difficulties by mitigating them or orienting them, while it is not to be excluded, in principle, that the marketing of the world goes so far that special-purpose currencies are eliminated in favor of an all-purpose money. Their explanations have a contingent validity, which depends on circumstances that can change. In particular, such circumstances can fail thanks to processes, not connected to the destiny's caprices or to imponderable historical swings, that appear central to the authors: Thaler dedicated the recent years to studying policy interventions aimed to "straighten up" the subjective categorizations of goods, which are only little rational (Thaler e Sunstein, 2003); while Zelizer has always acknowledged the theoretical position expressed by Marx and Simmel, according to which money (and the connected economic ideology) becomes the universal leveling of social and cultural differences (Zelizer, 1988, pp.620-22). In this paper we outlined a third theoretical perspective, founded on the incompleteness of the preference relation. It explains that the euro spent for prayers or detergents are only little fungible, since the economic subject *doesn't know or doesn't want to judge* how much detergent equals a prayer, and vice versa; and he doesn't know or doesn't want because his qualitative judgment on detergents and prayers, as already seen in § 2, can't be translated in quantity terms. Our explanation is complementary to those already outlined and doesn't invalidate their validity. It though, appears more solid since it argues that polytheism is a non removable anthropological condition of the subject's choice. Furthermore, without the non-comparability basis of alternatives, the social activities that transform objects or signs into trading means, and the activities that divide money into distinct categories, are placed on the same level (Zelizer, 2007, p.1062). Instead, while the first activities multiply money as a means of

³ We are here recalling the remarkable differences between the Thaler's and Zelizer's elaborations, on which Zelizer writes (1989, p.350, squared bracket added): «[Thaler's] mental accounting cannot be fully understood without a model of "sociological accounting". Modern money is marked by more than individual whim or the different material form of currencies».

payment, the second ones multiply money as a unit of account; moreover, while the first ones are easily recognized by the mainstream economists, the second ones brake with the traditional way of conceiving money.

Last but not least, our approach is able to explain a crucial point, on which Thaler and Zelizer have nothing to say: what happens to money when it measures both prayers and detergents, *but not one in relation to the other*? In wider terms, referring to Pantaleoni, Weber and Bohannan's arguments, what happens when the subject evaluates as non-comparable goods prayers and detergents, and for this reason he tries to take advantage from transferring the goods (or the peculiar money connected to them) from a commercial circuit to another? The formal model, indicated in §3, clarifies that the subject creates an unconcerned relation between goods (or peculiar money) belonging to the two different circuits, based on their position in regards to other goods (or money) and not on their equal utility. Given such relation, the subject explores where a good (or peculiar money) arrive from, or where a good (or peculiar money) leads to; and finally he chooses, even if in absence of comparative judgments able to evaluate the most useful alternative, either because he follows the circuit open to change, or, on the contrary, because he follows the one conserving the *status quo*.

When there is a partial comparability, as demonstrated in §3, the subject follows a protocol, already illustrated by Wittgenstein, that allows him to choose, by exploring the non-transitive similarities between alternatives, according to reason. Thanks to the conceptual framework illustrated in § 4 we outlined the ways in which it is possible to represent the *combinations* of the multiple institutional rationalities and the various strategies as much as their *hybridizations*; and the ways in which it is possible to compare a combinatory matrix payoffs with those of a hybrid matrix, that can explain, on the one side, when a subject moves his goods (or peculiar money) from a circuit to another, and on the other side, when this doesn't happen. Obviously, we just outlined a research perspective: we will tell how fruitful it is from future research developments.

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