

CONVENTIONS OF CO-ORDINATION AND THE FRAMING OF UNCERTAINTY

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Introduction

Among the different social sciences (including economics), there is a large variety of models which account for human interaction. Three types of core assumptions are more or less explicitly formulated in each of these different approaches to interaction: the first type of hypothesis (H1) has to do with the competence, or the understanding with which social actors are endowed (their optimising rationality in the economic model); the second series of hypotheses (H2) identifies the set of relevant objects which, though they are exterior to the actors, are deeply involved in their interaction (commodities, in the economic model); and the third set of hypotheses (H3) addresses the mode of coordination between the actors, i.e., the institutions, conventions, or rules of the game upon which the actors agree (mainly market competition in the mainstream economic model).

The first type of hypothesis is at the heart of economic theory and is regularly brought to the fore. It leads to debates over the role of irrational behaviour, the detailed explanation of which is generally left to the other social sciences. The second type of hypothesis remains most often unspecified in mainstream economics, since the common identification of the list of commodities is generally considered as "natural." The third set of hypotheses has only recently been commonly brought up in economics, many authors being interested in forms of co-ordination which differ from pure market exchange in the New Institutional Economics, in the Principal-Agent approach, or in the *Economie des conventions*.¹

This essay deals with the tensions which occur in the economic model of action when it faces certain situations which we will call here critical because behaviour no longer follows a single mode of coordination that is universally applicable to everyone and in all kinds of circumstances such as market-coordination. In such critical situations, actors -- and researchers who interpret their action -- are torn between incommensurable rationales. This multi-faceted choice and the possibility of taking into account a plurality of forms of co-ordination has the advantage of enabling us to see through the supposedly natural character of each form: it undermines the basis for the objective character of a unique form of co-

¹ The notion of "convention" is at the center of a recent trend in French social sciences which pervades both economic sociology and institutional economics and which is coined as "*Economie des conventions*". A series of books have developed this trend, attesting the dynamics of this growing intersection between economics and sociology: Salais et Thévenot 1986, Thévenot 1986, *Revue économique* 1989, Boltanski et Thévenot 1989, Boltanski et Thévenot 1991, Orléan 1994, Eymard-Duvernat et Marchal 1997, Storper and Salais 1997. For discussions oriented towards sociology, see: Dodier 1993, Wagner 1994; towards economics, see: Wilkinson 1997; towards political science and philosophy, see: Bénatouïl 1999, Wagner 1999; or more generally towards humanities and the social sciences, see: Dosse 1998.

ordination or, in other words, a common world. Recent developments in the economic literature increasingly deal with critical situations, and must therefore have recourse to concepts which are foreign to the explanatory framework of the general market equilibrium, such as convention, commitment, trust, loyalty, solidarity, organisation, etc.

In this paper, I would like to mention some of the tensions bearing on the mainstream economic explanation of human action, as a result of the introduction of organisational, social, and institutional phenomena. Then, I will explore the conditions which must necessarily be met by a framework of analysis which aims at accounting for critical situations and yet intends to remain compatible with the economic analysis of market relations. I will, for that purpose, recall the main directions of a research program that I have conducted with Luc Boltanski (Boltanski and Thévenot 1989, 1991) in order to elaborate such a framework of analysis.²

Briefly outlined, our approach is the following. We focus on the forms of evaluation that agents use to co-ordinate their actions. Primarily, we considered the most legitimate forms which govern highly general modes of co-ordination and which we called "orders of worth" (Boltanski and Thévenot 1991, 1999). Market order of worth is viewed as one among a plurality of equally grounded modes of evaluation involved in the co-ordination of action. One finds in literature different versions of pluralism which can help us to differentiate social actions and their motives. The sociology of Max Weber insisted upon the irreducible plurality of value-spheres and principles of legitimate domination (Weber 1978). Michael Walzer's Spheres of justice (Walzer 1983) followed "liberal theorists [who] preached and practiced an art of separation" (Walzer 1984: 315) while extending this pluralism to institutional spheres of shared understanding. This pluralist stance assumes that the many forms of justifiable action do not fall into any discernible hierarchy dominated by an overarching principle, and that there can be no uniquely permissible value ranking of the feasible options. Does this demise of Aristotelian ethics necessarily lead, as Alasdair MacIntyre suggested in *After Virtue* (1981), to interminable moral disputes among rival claims as long as moral rules are attached to individual preferences?

Turning away from the former kind of approach, we considered that the different forms of justification which people refer to when they have to co-ordinate distant actions with anonymous others, are not relative to people, as cultural values are, but are adjusted to the situation encountered. Our main purpose has been to characterise what constitutes a justifiable action, i.e., an action on which a specific

² For presentations in English, see: Thévenot 1995, Boltanski and Thévenot 1999, 2000.

form of co-ordination can be grounded because a general judgement is involved in the decision-making which leads to this action. Justifiable actions need to be adjusted to circumstances although they aim at going beyond contingencies and claim a general validity. We related this classical tension between the rule and its application with the following question: how can justification be valid and co-ordination be effective if several underlying principles of justifiable action are available and each is supposed to be universally valid ?

The answer to this question requires a careful examination of the role of the relevant objects which, along with persons, are involved in this type of justifiable action. We consider that the justification of actions, and therefore the possibility of their co-ordination, presupposes the use of certain objects which will be coherent with each form of co-ordination -- as for instance commodities in the market co-ordination. The actions we are interested in involve repertoires of objects which contribute to the justification and the co-ordination of the different possible types of behaviour. The fulfilment of expectations -- which is the sign of a successful co-ordination -- depend on the probative power of the objects effectively engaged in the action. As soon as we consider resources for action according to their capacity for establishing an equivalence with other situations, namely one's own future or others' actions, they bear a part of the commitment which is anchored in intention. Paraphrasing Michael Bratman who illuminated the role played by the plans which "allow us to extend the influence of present deliberation to the future"(Bratman 1987), I would emphasise that objects are qualified for this extension. Thus, in market transactions, the common identification of a list of commodities plays a crucial role in the possibility of market equilibrium. If one admits the existence of multiple forms of co-ordination, then one must also acknowledge a plurality of what we have called "worlds" which are constituted by objects which are relevant for each of those forms.

The two previous arguments about the plurality of the forms of co-ordination (H3) and the role of objects (H2) suggest that we need to reformulate the hypotheses about rationality (H1). The uncertainty brought about by the plurality, on the one hand, and the necessity to identify a context of relevant objects for action before making any choice, on the other hand, both require a careful deliberation much in the sense of Simon's arguments about procedural rationality. An analytical framework allowing for an adaptation of action to contexts of such diverse natures implies significant changes in our way of addressing human action. It is to an outline of these changes that I now turn.

1. Critical situations for market agreement

As an introduction to the notion of critical situation, let us first consider an example, proposed by Oliver Williamson, of a situation that presents a conflict of

justifications, and therefore, of possible modes of co-ordination. It clearly puts into play two different modes of evaluation of action that cannot be simultaneously embraced and makes clear the conflict that arises between the different guiding principles yield in particular circumstances.

Williamson describes the behaviour of an individual who considers giving his blood. His behaviour can take two different and, in fact, contradictory forms: either he donates his blood as a gesture of human solidarity, or he sells it on a market place, as any other type of commodity, in order to increase his wealth. According to Kenneth Arrow (1972), the economists take for granted that the creation of a market, because it increases the possibilities for individual choice, is therefore always advantageous. However, the transformation of blood into a commodity goes against the altruism of the gift and destroys the donor's feeling of contentment which is based on a sense of solidarity and an inner persuasion of having contributed to the welfare of the community. Discussing this issue, Williamson adds a shrewd insight about the embarrassment of the spontaneous donor when the situation takes a critical turn given the confrontation of two good and yet incompatible reasons to act. He writes that a dual system is a cause of worry for the spontaneous donor who wonders if he is generous or else naïve (Williamson 1975: 38).

In order to show the problems posed by the necessity of a justification in a critical situation, let us place Williamson's insight in the larger framework of a confrontation between an actor and an interpreter -- the latter either being present during the course of the action or elaborating a model to explain it -- in a complex situation including two forms of justification allowing for two types of good reasons to act (see table 1).

Table 1
Figures of Judgement in a Complex Situation

		A C T O R	
		C (<i>civic</i>)	M (<i>market</i>)
I N T E R P R E T E R	C	sympathetic	greedy
		naïve	realistic

The first order of justification is *civic* (C) and is grounded on the notion of the common good constituted by collective solidarity. The second order is a *market* justification (M) based on the common good constituted by the possibility of a market agreement. The action of the "actor" can be performed according to either one of these justifications (columns C and M), but it can also be understood and evaluated by an "interpreter" according to either one of these two forms (lines C and M). The two diagonal cells correspond to situations we will call "natural" because both the actor and the interpreter agree upon the assumptions of the action. The off-diagonal cells, on the other hand, correspond to "critical" situations in which the actor and the interpreter analyse the situation according to different forms of justification. When studying this table, we can also observe that Williamson only considers the case of the first column.

The first form of judgement of the spontaneous donor's action, generosity, is based on a principle of collective solidarity coherent with this action (case 1.1); the donor's worth is enhanced and his happiness grows in proportion. The second form of judgement leading to the qualification of naïveté, is grounded in an interpretation related to a market principle, quite different from the first one. Here the behaviour of the donor becomes unjustifiable (cell 2.1). He is criticised for being naïve and his unworthy state -- in terms of *market* worth -- is held as the just consequence of his lack of attention to the opportunities for business.

In order to deal with action in a critical situation of this sort -- two modes of

justification of different natures being available at the same time -- the solution proposed by Williamson is to introduce a new object, incorporated into consumers' preferences, the "trading atmosphere." Indeed he advises us to "consider the process of exchange in itself -- and not only the commodity (which is being exchanged) -- as an object of value" (1975: 38). The presupposition for the action is thus reduced to the lower logic level of a commodity submitted to an exchange; the critical tension between different modes of action is thus dodged. However, the hypothetical optimisation encompassing these different atmospheres cannot be based on prices resulting from market transactions. Decision-making requires that another form of equivalence and evaluation be introduced in order to compare the two types of actions, leading to something like a deliberation upon the principle of action itself. Civic duties are ruled by evaluations which are other than monetary (1975: 44). Therefore, the hypothesis that the calculation remains unchanged and that there is a continuous shift from a "market" to a "civic" action, simply evades the difficulty illustrated by the previous example. It neglects the complexity of the situation brought about by the critical confrontation of these different modes of action, each grounded on radically opposed reasons for acting and forms of co-ordination³.

We have tried to demonstrate that, contrary to what is commonly admitted, the difference between the two good reasons for acting, illustrated by the donor's case, was not to be accounted for by a distinction between the individual and the collective, i.e., the individualistic and holistic frameworks of analysis. These two good reasons can both be part of the same construction which posits the possibility of a common valuation of action in relation to some sort of common good – the common good of market competition or the common good of civic general will. We have demonstrated elsewhere (Boltanski and Thévenot 1991) that these constructions follow the classical tradition, in political philosophy, of establishing the foundations of an order in commonwealth. The common matrix at the basis of different positive social sciences (economic theory included) and, therefore, of competing explanations for human behaviour, can usefully be related to a common system of constraints regulating the forms of dispute and agreement to which the members of a society may have recourse.

³. Such is the meaning of the critical propositions of Amartya Sen, when he considers "committed" behavior connected with a civic form of worth. He actually refers to the distinction made by Rousseau between the "general will" and the "common will", as the non egotistical game in the dilemma of deer hunting equally inspired by Rousseau (Dupuy 1989). In order to account for these actions, he proposes "a more complex preference structure including meta-ranking levels of order" (Sen 1977: 106, 109).

2. The place of objects in the co-ordination of actions

A great part of the success of the theory of the general equilibrium rests upon a co-ordination device which, given the mechanism of market prices, requires only little centralised information (Hayek 1945). However, as one moves away from a market situation -- i.e., a situation corresponding to a competitive market with perfect information -- the economist's view of the rationality of human beings (H1) becomes increasingly complex. For instance, we know that in a situation of imperfect information, expectations require a much higher capacity of calculation because they lead to infinite regressions whose convergence poses problems, both in terms of the expectations of the expectations of the opposite party and of the optimisation of the optimisation cost (Mongin and Walliser 1988). These speculations make the task of the theoretician much more complex and induce him to shift the burden of such complexity onto the capabilities of the actors. The economy of the market order, as suggested by the image of the invisible hand, is progressively reduced as the competence attributed to each human being comes closer to the science of the economist -- the hand becoming more and more visible. As Kenneth Arrow observes, without these hypotheses (equilibrium, competition, and perfect market regulation), the very concept of rationality is threatened, because the perception of others, and particularly of their rationality, becomes an element of our own rationality (Arrow 1987: 25-26).

The problems encountered in trying to explain co-ordinated actions by taking into account only the first set of hypotheses (H1, which deals with the competence of the actors), should therefore induce us to explore the two supplementary hypotheses (H2, about the objects, and H3, about the forms of co-ordination).

As we have mentioned, the co-ordination between the actions of different particular persons facing different kinds of situations, presupposes the possibility of going beyond contingencies in order to reach an agreement on the relevant context for the action. Our approach to the issue of co-ordination led us to conceptualise the notion of qualified object.⁴ The burden weighing on the anticipations of speculative actors becomes lighter as it is partially shifted onto the objects.

We highlighted the availability of several forms of objectivity, connected to the different modes of co-ordination of actions. One can easily recognise the role commodities play in the market co-ordination: they enable actions to be compared by providing a commonly accepted identification of objects external to the actors. Let us then now consider the objectivity of technical tools which differs from that of commodities, while still sustaining another mode of co-ordination. The standardised

⁴ On this concept of "qualification" and the way objects are crafted to qualify for different orders of worth, see: Thévenot 2000a.

functionality of a technical tool actually supports common and reliable expectancies about the future. In fact, the efficiency of this type of object is based precisely on the fact that it is valid for the future since, as an investment, it perpetuates a function of production which co-ordinates productive actions. By establishing a time equivalency, industrial objects thus allow for the constitution of a form of co-ordination of actions which differs from that of the market co-ordination in so far as they constitute the basis for decisions which engage people's future, enable them to move through time, especially when an actor sees himself as linked to his counterpart in the future (Thévenot 1984). Without such objects it would simply be impossible to reason and to reach an understanding about the future.

By acknowledging the place of objects in co-ordination, we lessen the weight of the rationality constraint placed on people and partially shift it over to their environment and the context of action, a shift which is now closely considered in some current of cognitive science and artificial intelligence oriented towards "situated cognition" or "distributed cognition" (Norman & Draper 1986, Lave 1986, Norman 1989, Conein Dodier & Thévenot 1994, Hutchins 1995, Conein & Thévenot 1997).⁵ People's evaluation of the outcome of their action, i.e., the operations which they perform in order to adjust their behaviour, assume that the objects upon which they rely have an appropriate form. The notion of "form investment" (Thévenot 1984) refers to the relationship between the objects upon which the actors rely and the co-ordination of their behaviour. The form is defined in terms of a capacity for time and space equivalency, and the yields on the form investment are the consequence of this generality which makes it possible for agreement to be grounded. The notion of form investment enables us to understand the implementation, particularly in the functioning of a firm, of conventional resources (rules, norms, trademarks, customs, etc.) which, though they are not exactly similar to tools, are clearly associated with a kind of efficiency, and which call for a redefinition of the function of production. The analysis in terms of form investments suggests that we recompose the roles attributed, in the economic model of action, to the three types of hypotheses dealing respectively with the rationality of the actors, the exteriority of the objective context of the actions, and their mode of co-ordination. The optimisation calculation (H1) requires that the elements which are extracted from the context and used as resources have an appropriate, objective form (H2). This objectivity is a capacity for equivalence necessary for co-ordination both by a single actor over time and between different actors.

⁵ One could parallel this orientation with the impact of the notion of "embeddedness" in economic sociology (Granovetter 1985).

3. The evaluation of worth in legitimate modes of co-ordination

A justifiable action requires that the objects and rationale involved in the actions be general. It is based on a common presupposition which ensures the convergence of the series of "why" and "for what reasons?". The strong hypothesis assuming that collective representations are simply shared must be rejected if we acknowledge the plurality of the principles capable of grounding an action. Our aim is thus to understand the composition of two hypotheses which are apparently difficult to reconcile: the possibility of grounding the co-ordination of actions on a common framework and the availability of a plurality of modes of co-ordination.

The analytical framework we proposed (Boltanski and Thévenot 1991) provides a model for reasonable action compatible with these two hypotheses. I will now introduce its major features while confronting it with a more classical economic presentation of rational action. I will, however, confine this presentation to a brief outline, highlighting only the definitions and hypotheses required to carry out the type of analysis that interests us here.

A major direction of this development, in the continuation of what has just been said about the adjustment of resources to action, consists of a more detailed explanation of the hypothesis (type H2) about the role of objects in the co-ordination of actions. These beings are good candidates to support co-ordination as long as they are resistant to the overflow of contingencies and idiosyncrasies. If we recognise several forms of generality, then we must face the possibility of several forms of objectivity. Objects are defined as germane things for action, as opposed to nameless scraps ("what-d'you-call-its") which cannot become reliable means. We therefore assume that objects are commonly identified and that they qualify for a certain form of co-ordination of the action. The industrial objectivity of the engineer, that of standard measures and statistical laws, which presupposes a certain stability and standardisation, has its place among other forms of objectivity. The market objectivity of commodities, though it belongs to another "nature," is no less objective and determining for self-interested action: standardised mass-products are not adjusted to the "market test," as is clearly shown by the critical tensions which nowadays come to bear upon this type of product when it has to face a competitive market place (Eymard-Duvernay 1986). We can infer the importance of this common identification of the objects from the consequences of its failure. Such is the case when the identity of the commodities becomes uncertain and when a doubt about their quality is introduced, thereby undermining the foundations of the market form of co-ordination (Orléan 1986). It is, indeed, the common identification of the objects which prevents the strategical manipulation of their identity.

Just as objects are important only insofar as they qualify for a certain form of

co-ordination, so are people. Their qualification is required for them to be taken into account within a justification. However, we assume that people can be qualified in all the "worlds," whereas objects are more easily attached to a single world⁶.

A justifiable action presupposes a qualification of things and people which orders them in an evaluative judgement. We designate by the term worth this common qualification which is scaled in degrees. To each degree of worth there corresponds a level of satisfaction for the actors who reach it, but also for the other actors, since co-ordination itself is possible because the measure of worth is common knowledge. Thus worth is related to a common or public good constituted by a given form of co-ordination.

A principle of worth establishes an order according to which agents place value on people and things in decision-making. However, all the orders available in complex societies are not legitimate, i.e., do not serve as common presuppositions ensuring the co-ordination of actions. We have linked the different legitimate orders that we encountered in empirical study of forms of co-ordination with different constructions of the city in political philosophy. We have brought to the fore a set of common properties upon which we have drawn a model of these legitimate orders or worth (Boltanski and Thévenot 1991)⁷. Although they satisfy these common requirements, orders of worth are historically constructed. The list is not closed and we have studied the genesis of new worlds and new forms of worth, as the "green" worth (Lafaye et Thévenot 1993; Thévenot, Moody and Lafaye 2000), the "information" worth (Thévenot 1997) or the "connectionist" worth (Boltanski et Chiapello 1999).

4. Natural uncertainty and critical uncertainty

Within the market co-ordination, the only objective things to be taken into account for rational action are the commodities. Their worth is commonly evaluated in terms of their prices, whereas the worth of persons is determined by their wealth, which demonstrates their capacity to engage in far-reaching market transactions. Natural relations are locked in budgetary constraints which link the person's

6. Bruno Latour has explored the rival hypothesis assuming that objects are also completely free from attachment (Latour 1984, 1987).

7. The development of this approach led us to craft the H3 type of hypothesis about the forms of coordination. The properties which we found to be shared by the different specifications of worth were the following:

- a1) a definition of a common humanity which enables the identification of human actors;
- a2) a differentiation assuming at least two possible states for the actors;
- a3) a common dignity endowing the actors with equal chances to reach all the states;
- a4) an order among the states which qualifies the actors (worth);
- a5) a sacrifice or investment formula linking together the benefits ensuing from a higher state of worth and the cost or sacrifice required to attain it;
- a6) a definition of the common good specifying the welfare associated with each state of worth, which posits that such a welfare, which increases with worth, benefits other actors.

resources with the price of commodities. More generally, each form of co-ordination enables actors to cope with a certain kind of uncertainty, that we shall call "natural". For instance, if the uncertainty about others' actions results from their purchasing desires, then the market principle makes it possible to overcome this natural uncertainty, thanks to the common identification of goods and to the common recognition of their prices.

The market test leads to a division between what can be evaluated on a market and what stems from contingencies and thus moves away from this form of worth. The notion of "state of nature" belongs to the latter category since it designates a background noise which troubles exchanges. The treatment of these states of nature most coherent with market prerequisite was developed by Kenneth Arrow and consists in embodying, in the definition of commodities, all the circumstances of the exchange which are likely to influence the market transaction. This attempt to eliminate the noise of contingencies without deviating from the market principle leads to a paradoxical stance, where one seeks to include what is contingent among the realm of what is objective. The impossibility of such an all encompassing explicative system that would thoroughly reduce contingencies is suggested by studies which take into account imperfect information as regards the states of nature. Thus Radner (1968) has demonstrated the market failure which arises when the structure of information, that is, the capacity to discriminate among the different states of nature, differs according to the agents. Contingencies lack the objectivity which, in the market world, is encapsulated in commodities.

In opposition to this natural uncertainty, there is a critical uncertainty which cannot be either reduced through the evaluation of worth, nor rejected as part of the noise of contingencies, but which casts doubt on the very nature of the action. Ruining the basis for co-ordination, this doubt may, however, lead to another form of worth⁸. The confrontation of several possible forms of worth brings about a critical questioning of the mode of co-ordination. In the case of the market world, a critical uncertainty is that which debilitates the common identification of commodities, their

⁸. Several classics have insisted upon this heterogeneous character of different forms of uncertainty. Knight (1971 [1921]) has outlined the difference between "risk" and "uncertainty," connected to the repetition or uniqueness of events. Keynes also tried to distinguish among probabilities according to different degrees of belief and Favereau has identified common points between the ideas Keynes developed in his *Treatise on Probabilities* (1921) and his considerations about short term and long term expectations, in the chapters 5 and 12 of his *General Theory of Employment...* (Keynes 1936). The connection between these two works is barely mentioned by the author himself --in a footnote in chapter 12 referring to the notion of "the weight of arguments" introduced in the Treatise on Probabilities. Favereau's work illuminates the connections between the keynesian conception of the different forms of probability as incommensurable "orders of similarity" (1921: 30, 39) and the "possible-worlds semantics" (Favereau 1988). It points out that the distinction in chapter 12 between two types of expectations -- which also implies two types of uncertainties -- according to the reversible character of the action, could be expressed in terms of different accessibility relations between possible worlds.

market objectivity. The uncertainty over the identity of goods is not located at the same logical level as the market uncertainty which is regulated by prices; it is more radical and denatures the market test.

The notion of "adverse selection," as a case of asymmetrical information on the quality of a product, includes phenomena which involve this kind of uncertainty. If we give up the idea of a contingent market which would absorb exterior contingencies by the proliferation of goods, we must admit that some species of uncertainty have to do with the very quality of the commodity, with the hard core of its definition. This is the case with second-hand markets which, in the simple model proposed by Akerlof, may not clear because buyers are not aware of the quality of goods -- while sellers are -- and thus estimate it on the average on the basis of their market price (Akerlof 1970). What thus lacks is a detour by an investment of form, which is necessary for the constitution of market commodities, and the making of objects which are resistant to manipulation and interpretation (Thévenot 1984). The crisis of the second-hand market may be analysed as the encounter between two conflicting modes of identifying goods, i.e., natural objects supporting co-ordination.

The notion of "moral hazard" points to a second type of situation characterised by asymmetrical information in which uncertainty is also critical. In such a situation, contingencies trouble the market exchange since they depend on the actions of certain agents who are thus confronted with the dilemma (said to be "moral") of having to decide between being honest or manipulating what others take for noisy contingencies.

As one moves away from "natural" situations, the relevant objects on which a justifiable action is based also change. The situation becomes disturbed, or, shall we say, "denatured", because the parties involved do not agree any more on the nature of the reality test for the evaluation of the situation. The lack of objectivity leaves the way open for suspicion. Each one is then lead to wonder what matters for the decisions of others and must pursue this interrogation by asking himself what others think of what he assumes about their action, etc. Addressing the convergence of this regression leads to the "common knowledge" issue (Dupuy 1989). As Schelling has already noted, in a problem of "tacit co-ordination," it is a question of co-ordinating expectations, "of reading the same message in a common situation" (1980: 54). Justifiable actions are grounded on a common presumption we have made explicit in the model of worth, and fit situations where this "common knowledge" is insured notably by the determination of objects (within the limits resulting from the plurality of worlds). Speculative regression about others' background knowledge is then forgone because of this common presumption and because of the support of the

objects involved in the action⁹. Our analysis of the key role played by objects in the coordination of conduct is in line with Schelling's remarks on salient objects in the implementation of co-ordination equilibrium. The natural character of this salience (Schelling 1980: 58) must be relativized by the plurality of worlds¹⁰.

5. The critical tension between several worlds and the search for compromise

What are the consequences of this plurality of forms of co-ordination within a complex universe, as regards actors' competence or rationality (hypothesis H1) ? In a complex society, each member experiences "shifting involvement" (Hirschman 1982). He has the ability to adjust his action to situations involving different natures, to attune his conduct to various setting which shape how he acts. The same person can, successively, and even within a short period of time, engage in a market transaction which requires detachment from the objects and persons he is dealing with (*market* co-ordination), then rely on domestic loyalty and stick to ingrained local customs (*trust* co-ordination), before finally planning investments on the basis of technical tools designed for accurate forecasting (*industrial* co-ordination) A complex universe impels actors to make a responsive shift from one form of justification to another, thus preventing them from considering each world as a closed system of determinations (Stark 1996).

The extension of the scope of action from one world to two -- a higher number of worlds does not significantly complicate the problem -- entails a substantial modification of the framework which can no longer be reduced to the model of a unique worth we encountered in classics of political philosophy. The relation of one world to another is thus a critical relation of inversion, since what matters in one is reduced to nothing in the other and what is general becomes particular¹¹. The critical situation in which beings belonging to several worlds are present opens up the possibility of criticism through an operation of revelation. This consists in abruptly

⁹. For example, in the case of an action whose generality concerns the future (the *industrial* form of coordination), technical tools can contribute to the coordination of actions. Schelling has mentioned a whole series of technical mechanisms sufficiently compelling to prevent manipulations and arrangements on the part of the persons involved, for example alarm systems which cannot even be controlled by their owners (1980: 38). Elster has developed this point while accounting for commitments which preclude market opportunism (Elster 1979).

¹⁰. Lewis' stress on the role of precedent, custom, familiarity, in the convergence of expectations (Lewis 1969: 36) can be understood in relation to the objectivity of the *domestic* order of worth and the justification by trust. But Schelling also gives examples of saliency which involve the *inspiration* order of worth (Boltanski and Thévenot 1999): finding a clue may depend on imagination more than on logic; it may depend on accidental arrangement, aesthetic configuration (Schelling 1980: 58). The salient character of objects is thus relative to the inscription of action within one world.

¹¹. The order of worth is an order of generality in which the greater encompasses the smaller, the latter being considered as the reduction of another form of worth. This relation of the greater to the smaller is somewhat similar to Dumont's "encompassing of contraries" (1979: 397).

swinging from the world of reference (A) to a different world (B), by calling attention to the importance of beings who are irrelevant within the first world (revelation in the sense of the showing off of a real worth). In a single movement, the beings which naturally mattered in A are denounced, from the point of view of B, as insignificant, and are thereby reduced to the state of noise (revelation in the sense of the exposure, the showing up of a false worth).

The operation of revelation is thus extremely radical and destabilising because it leads to a change of the reality test. The encounter between several worlds opens up the possibility of a crisis, since the very form of what is probable turns out to be doubtful and since several reality tests of different natures may be involved.

However, people can compromise to avoid such a crisis and go beyond the tension between two worlds, by aiming at a common good which would encompass both. What we mean by compromise is not a local arrangement of limited validity, which would only concern the persons who crafted it. It is an action subjected to more stringent constraints oriented towards justification. Such compromise setting is the stuff organisations are made of (Thévenot 2000b).

Conclusion: rationality in a complex universe

In this text, I have sought to suggest the advantages to be gained from a systematic analysis of a plurality of general forms of co-ordination, each being based on the same requirements. Every form of justification, by its aspiration to universality, maintains a critical relation with the others. The analysis of these general forms of co-ordination contributes to understanding situations which are themselves critical, at the fringes of the market place, and which have been increasingly discussed in the economic literature. A form of co-ordination may be considered as a constitutive convention, as long as we admit that its conventional character only appears in a critical relation with another form. The reference to the qualified objects of a relevant world, in a reality test, halts strategic speculation. In order to see this world and its inner relations as conventional, instead of taking them as natural, it is necessary to escape from that world, to dismiss the objects which belong to it -- which have a determining role in the foundation of a constitutive convention, as we have seen. It is the reference to another world which serves as a lever in this revelation; a theoretical framework which would only acknowledge one world could not account for this critical possibility.

In conclusion, I would like to mention some consequences of our analysis for the definition of the concept of rationality. I have mentioned before that optimising rationality must, when confronted with critical situations, be considerably burdened in order to continue performing its function, and that one may wonder whether the concept should not be profoundly modified. In such situations, it is patent that a

critical uncertainty about the relevant context for action deeply disturbs the process of maximisation. In each of the worlds we have brought to light, the rationality of action is simple: the definition of benefits is clear, as is the evaluation of the elements which matter for having access to those benefits. The reality test which must be applied is unequivocal. The "calculation" of benefits is considerably facilitated by the resources that each world makes available and which allow for it to be realised in practice. But the plurality of the worlds where the calculation can take place, the implementation of different forms of equivalence, require a rationality of another order, relating to the classical notion of prudence. This presupposes that people will deliberate on what matters and search the objects which qualify for the justification of the decision. They need to take into account circumstances, that is, pick out, among what is only contingency from the point of view of one form of justification, elements which are pertinent in another nature.

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