

Chapter 2

The Core of the Methodological Question: Procedure, Rules, Classifications

2.1 Introduction

This chapter points forcefully to the fundamental methodological problem facing the social sciences: drawing up analytical criteria capable of identifying general principles and sound, reliable knowledge despite the rising flood of innovation within society. As discussed in Chap. 1, such a problem originates from the fact that, being social reality a product of human will and action, it cannot be investigated on the basis of the method of natural sciences, as social positivists do. The identification of general principles is obstructed to a remarkable degree by the dominant conflict between social scientists following rationalist constructivism and scholars who emphasize spontaneous behavior. The discussion of method that is developed below will show, purely on the basis of the crucial importance of spontaneous and non-intentional behaviors and also of the lack of knowledge, that these aspects are consistent with the unfolding of rational constructivism and, furthermore, that they imply and solicit it.

This chapter may also be seen as a study of the explanatory power of the rationality principle for the analysis and organization of social systems. Such a power has been largely misunderstood by scholars, who have both taken it to excess, e.g. in the Enlightenment and by the majority of positivists, and by default, by irrationalists, historicists and a large part of sociologists. In general, studies on method insist on the definition of the procedures and rules for the control and verification of theoretic formulations, while considering the achievement of the hypotheses on which those formulations hinge intractable from a methodological point of view, being the unfathomable result of some scientist's particular genius. Popper is the main defender of this position, which may tend toward doctrines of incommensurability and a refusal to embrace scientific method. We shall see that social theory must reverse such a methodology and insist on the definition of some procedures and rules useful to the specification of initial hypotheses, and on their classification, which are decisive in the deriving of general principles; at the same time, social theory must develop a distrust of the usual procedures of control and verification, whether expressed in a falsificationist or in a positivist form.

We have seen in Chap. 1 the importance of the distinction between ‘necessity’ and ‘choice-possibility’. The deepening, in this chapter, of our understanding of these two aspects will allow us to outline both a methodological arrangement of institutional analysis and, in particular, to prove that value premises are not always the object of choice and that they may sometimes admit of scientific explanation. This result opens the road to some important insights on ethical-ideological dimensions of social life. But there is much more.

Section 2.2 sets out the main theoretical foundations of our proposal on method, while Sect. 2.3 illuminates the way to derive, from such a basis, some general principles concerning the social sciences; a derivation completely different from the attempted discovery of constants, such discovery search having no sense with regard to social reality. Section 2.4 moves from the general to the particular and is concerned with distinguishing particular aspects and choices having long duration, such as civilizations, from less involved choices; this section also stresses the role of innovation. From this basis, in Sects. 2.5 and 2.6 a synthesis of the procedure of social science as well as the role and meaning of function and conflict are traced. Section 2.7 then treats the puzzling question of prediction of social events, shows how it may be aided by our main analytical categories, and illuminates the relation between micro and macro theory. Finally, Sect. 2.8 discusses the question of economic and social planning, a question that provides important lessons both from an empirical and methodological point of view.

2.2 An Alternative View on the Confrontation with Social Reality: The Priority of Rules for the Formulation of Hypotheses Versus Those Concerning the Control of Hypotheses; The Rationality Principle. Towards *Social Objectivism*

We have seen that constructivist procedure is inappropriate to the study of social reality as it tends to ignore or undervalue reality to the advantage of *doing*. We have also seen that the inductive experimental method, expressed by the stage H-O_c of the procedure currently designated as the scientific method, is not suitable to the investigation of social reality; such a reality must be investigated through deductive methodologies. In effect economics has, for the most part, a deductive content and sociologists like Weber and Parsons treated the method of social sciences from a deductive point of view. Unfortunately, the usual deductive approaches forget one or other of the following basic methodological requirement of social research:

First: Deductions directed to the explanation of the functioning and organization of social systems *cannot be based on conventional or nominalistic postulates*, such as those underlying the formal-logic sciences; rather, *they must be derived from*

premises concerning aspects of de facto reality. As we shall see in the next section, such premises may be identified with much greater clarity than is the case with natural reality.

Second: In social science, *the rationality principle*, which leads to the formulation of theoretic interpretations, has a completely different content than mere observational rationality, which latter is distinctive to the natural sciences and implied by the long run Darwinian processes of selection. The rationality principle in social science *must also take a constructional view* so as to include the normative elements of the situation within the interpretative framework, as considered in Sect. 1.3 of Chap. 1. In short, *the rationality principle must be referred to the explicit pursuit of the rational organization of social systems.*

Third: The usual teaching on method neglects a main requirement of the method of social science: *the definition of some classificatory procedure and, for each defined class, the further definition of some rules that facilitate the specification of initial postulates and ensure the profitableness of their subsequent use for analytical purposes.*

Let us further clarify these points.

We have established that the method of social thought should be centered on the organizational view (doing). Moreover, our considerations and criticisms of the role of observation and abstraction imply that such a method can be neither strictly inductive nor ignore reality. It must be *deductive*, and it must derive its deductions from *realistic postulates*. The real and basic problem thus concerns the selection of postulates.¹ In fact, the impossibility, due to the non-repetitiveness of social reality, of verifying and corroborating, with the help of econometrics or some other verification standard, the theories deducted negates the usefulness of a hypothetical generation of theories (a generation that Popper's observational falsificationism assigns to chance). In sum, *the impossibility of verifying theories (via observation) points to a decisive role in warranting the reliability and fruitfulness of theories to two basic factors: theoretical deduction from realistic postulates; the definition of rules concerning the formulation and classification of realistic postulates in order to replace the unreliable role at present pertaining (for instance in economic modeling) to the econometric control of hypotheses.* Those rules and procedure express the core of our proposal on method.

Some authors have envisaged the importance of selecting reliable and fecund postulates. H. Albert and J. Kapeller developments in the matter deserve attention. They refuse the apriorisms of 'model Platonism' and/or the search of expedients to escape the failures of observational-experimental standard (immunization strategies), through axiomatic variations, excessive use of *ceteris paribus*, alibi

¹ Long lasting discussions and controversies on axioms and postulates have agitated logical-formal sciences notwithstanding these sciences need, by their nature, a very limited number of postulates. The situation with regard to postulates is much more complicated when deductive procedure is applied in the social sciences; nevertheless, these sciences have dedicated little attention to the question of postulates.

assumptions in the form of unrealistic auxiliary hypotheses. Those authors insist on the realism of postulates, their information content, etc. and, on this basis, set out some acute criticisms to neoclassical economics.² It is evident from above the insufficiency of the mere realism of postulates as assessed, for instance, by critical realism.

We provide now some definitions, specification of rules and classification procedures intended to guide the research of scholars and, in particular, the corroboration of initial postulates concerning the organization and functioning of social systems. This will allow us to move from generic deductive method to a more penetrating deductive approach able to offer general formulations relating to a continuously changing reality. Some applications of the definitions, rules and classification procedures introduced below will be provided in Sects. 2.4 and 2.5 of this chapter.

At least four possible classifications of realistic postulates (together with implied deductive rules) can be set forth:

- (a) Postulates directed to the deduction of general principles demanded for pressing reasons of organizational efficiency; such principles will act as gravitational points, exerting strong attraction upon social processes. *These postulates must express very significant features of the general conditions of development*; they are, therefore, long-lasting, a product of the path of history, and they exclude specific ideological, technological and naturalistic elements and innovations. We denominate the general organizational principles so deduced *functional imperatives* and we shall see in the next section that, as so defined, the term 'functional imperative' has a very different meaning from the term as used by Parsons (1987) and Parsons and Smelser (1964).
- (b) Postulates expressing conditions of nature that have important institutional and organizational implications. These conditions are local and played a decisive role in characterizing the societies of the past (for instance desert, steppe, agricultural or seafaring peoples). Technological development has greatly reduced their influence (and hence the importance of the relative postulates), mainly through the increasing role of artifacts and the tremendous speed of communications. However, the conditions of nature underline the important role that *scarcity* has played from the first appearance of human beings on the Earth. The importance of scarcity traverses the whole history of the world and has always obliged humanity to work bravely and to realize its potential genius. Scarcity gives rise to the man as builder and as organizer, while the binary *scarcity-curiosity* generates the man explorer. Also basic technologies (i.e. indispensable to make possible the existing level of development) can be included in this category.
- (c) Two postulates concerning respectively *the unfolding of human evolutionary potentialities*, (i.e. of the natural human ability to develop) and *social cohesion*. The two postulates are strictly linked to each other social cohesion being an

² See Albert (2012 [1963]), Kapeller (2013).

important condition for the expression of human evolutionary potentialities, and are both deeply rooted in basic aspects of human nature. We denominate their implications '*ontological imperatives*', which express the true engine of social development. These imperatives have a very general character, more general and more enduring than functional imperatives of point (a); but many of them can be violated over very long periods of time (and often have been in the so-called closed societies) since their violation does not affect organizational coherence and, indeed, can even enforce it. It may be useful to make a distinction relating to two very important aspects of this postulate sub c about human evolutionary capabilities.

- (c') 'Human rational skills': an excess of the rational drive with respect to the creative drive may promote social organization and admirable developments (as B. De Finetti points out).
- (c'') 'Human creative skills': an excess of the creative drive with respect to the rational drive may cause social disintegration.
- (d) Postulates concerning ideological aspects, choices and creative events. The organizational and institutional forms deriving from these postulates define the field of 'choice-possibility-creativity'. They do not pertain, therefore, to the field of 'necessity', even if the most important of them, i.e. the choices of *civilization*, are characterized by long duration and pervasiveness. This makes it clear that the usual identification of durability with 'necessity' is erroneous.

The realistic postulates (a) and (b) together with their implications give the field of 'necessity' in the organization of social systems (but, of course, not with regard to individual decisions, where what is necessity under some circumstances may be choice under others). In the modern age of dynamic society, postulate sub c on evolutionary potentialities with its implications must be added as a component of the field of 'necessity'.

The rules above illustrate the methodological «separation» between 'necessity' and 'choice-possibility-creativity' in the social sciences, as well as its importance. Thus we arrive at the methodological succession and procedure CRP-TD (classification of realistic postulates-theoretical deductions) in place of O-H-O_c (observation-hypotheses-control observation) typical of the observational inductive and deductive methods, or the H-O_c typical of the Popperian hypothesis-falsification.

Our summary rules seem to add a more general and stringent treatment on the question of postulates and their specification to the one by Albert and Kapeller. However, those rules alone cannot guarantee appropriate selection of postulates. The fruitfulness of the selection depends also on the scholar's own intellect and sense of reality, and needs careful control.

In short, our method's relationship with reality basically concerns the search for fecund realistic initial postulates, not ex post verification of theories (the very nature of social reality makes such verification meaningless). All the deductive methods

that are used in social thought ignore the classifications we propose and so fall into a generic deductivism, or Popper's hypothesis-falsification deductivism. For their part, those deductions that follow the abstract rationality standard forget reality. So the methodology we suggest begins with the *classification and selection* of 'realistic' postulates, and then proceeds to deduce their implications for the organization of social systems. *Such a procedure implies the combination of being (realistic postulates) and doing (the organization of society)*. Let us remember that, unlike observational rationality, which is based on the acceptance of existing conditions (with the underlying idea that the real is rational) and is typical of positivist and evolutionary thought, prescriptive and organizational rationality is appropriate to a reality that is constructed by humanity.

To summarize, the method of social sciences must be *deductive* and must derive deductions from *realistic postulates* on the basis of the principle of *organizational rationality*. Moreover, it must be centered on the *specification of rules and procedure of classification* that lead scholars in their research into and corroboration of significant initial postulates, thus supplying some efficient tools to deductive analysis to replace the term $H-O_c$, i.e. *warranting the solidity of deductions notwithstanding the absence of an empirical verification of the theory*.³ So the proposed method, while suggesting a need to concentrate on the definition of procedures and rules suitable to facilitate the specification of initial hypotheses, which in social reality may be much more accurately defined than in natural reality, at the same time refuses the observational search for falsifying (or confirming) events, since social change causes a substantial evaporation of the usefulness of falsificationism as well as of other kinds of observation. In some sense, then, the falsification (observational) procedure might only be referred to initial postulates, i.e. the first term (O-H) of the succession O-H- O_c . In sum, the method we propose, instead of being based on the criterion of observational verification of theories, implying that reality means necessity, is based on the analysis of plausibility, efficiency and realism of postulates. *This implies that an important factor in the evolution of social science is represented by changes over time in the degree of plausibility and effectiveness of postulates*. Therefore, the method we propose differs from all deductive methods: the Popperian one; the method based on the principle of abstract rationality; and the deduction method based on mere observation, i.e. abstracting from the rules and classifications specified above. The nature of the difference will be further explored in the next section, devoted to the derivation of general principles.

³C.S. Peirce underlined the sterility of induction as a supposed seed of creativity, as well as the conservative inclination of logical deduction. He added, therefore, a third category to induction and deduction that he termed "abduction", which concerned creative formulation of explanatory hypotheses. But this new category has not generated any elaboration on method that facilitates creativity in formulating theoretical hypotheses. The role that Peirce attributes to metaphor in this regard must be considered with great caution; in fact, and as pointed out above, methods elaborated by other sciences are completely inappropriate to social research.

2.3 The Formulation of General Principles in the Social Sciences

2.3.1 *The Notion of Functional Imperative and the Methodological Centrality of Institutional Analysis*

We have noted above that the observer of social reality sees an effervescent world, replete with contradictions and changes that make orientation difficult. The overcoming of this disorientation requires an answer to the following questions: toward what long run order does the auto selective process that converts disorder into order, through often extremely painful trial and error, push the system? Which existing situations best approach such an adventurous tendency, and how best to accelerate the convergence of spontaneous behavior toward it? More precisely, the overcoming of this disorientation needs a method that allows for the articulation of the gravitational attractions and other stabilizing forces or, in other words, derives some solid and reliable generalizations that act as fundamental explanatory and leading principles. As just seen, the satisfaction of this requirement requires some appropriate classifications, as well as some methodological rules that help to select realistic postulates⁴ in the unfolding of the process of the deduction of general principles.

Not everything is free to change. In every society, the forces of continuity and necessity flank those of change. As we know, it is crucial to distinguish the elements expressing choice from those expressing necessity. Change is due to innovations. We shall see later the way in which innovations enter into modeling and explanatory analyses. Here we must concentrate on permanence, the factors of duration that allow the derivation of general principles, the skeleton of scientific knowledge, and bench-marks of theoretic modeling, that enable the scientist to find his bearings within the vortexes of changeable social reality. This section will discuss the method of deriving such general principles. Clearly, these general principles must concern necessity, not choice, as choice generates particular; besides, our principles must concern long duration. We are going to outline a notion satisfying those requisites, in particular, embodying both the aspects of *permanence* and *necessity*. We shall denominate this notion *functional imperative*, following T. Parsons' terminology.⁵

As is well known, Parsons listed some imperatives valid over time and space that the social system must satisfy in order to preserve interior equilibrium and its own existence. Unfortunately, the fact that Parsons' notion of functional imperative aspires to express historical constants gives the analysis a stationary imprint. In particular, Parsons' insistence on his functional imperative concerning the preservation of the value premises mixes necessity, duration and choice, thus causing a

⁴Note that structural change due to creativity impedes the use of conventional modeling and stability analysis, i.e. analysis based on a precise quantitative structure from which are derived eigenvectors and which allow the development of quali-quantitative analyses of the effects of changes in parameters.

⁵See Parsons (1987) and Parsons and Smelser (1964).

total confusion of those elements and thereby severely obstructing the progress of social theory. In effect, *Parsons' functional imperatives express, more properly, merely functional exigencies*. Moreover, Parsons proposes a treatment of the ethical-ideological aspect focusing upon the functional side, while almost completely neglecting the optional-innovative and conflictual sides, which are crucial for social change. But value premises mainly express choice, even when they involve long duration. The notion of functional imperative, if it is to possess all its potential explanatory power, must be emancipated from such limitations as well as from any confusion between necessity and choice. In particular, it is important to distinguish this notion from that of civilization (see next section), which, by contrast, is completely embodied within Parsons' concept of functional imperative. It is urgent to enunciate a definition and some rule for the derivation of the functional imperative immunizing it from these ambiguities.

The functional imperative must express an organizational order or principle imposed by mere reasons of systemic efficiency, it expresses necessary conditions of efficiency; in sum, *it must refer to pure organizational rationality. As such, it concerns the element of necessity, not of choice; in particular, it must not embody ethical-ideological' options' irrespective of their possible great importance and solidity*. It is also useful to underline that the functional imperative cannot be directed to the designation of some historical constants as these can be referred only to stationary societies; rather, it must express some dynamic entities that are variable over the very long run. A primary task for social theory is thus the definition of some rules that allow for the discovery of organizational categories fulfilling the above requisites. Let us attempt this task with more detail than hitherto.

Clearly, the greatest adversity with which the social sciences must contend in their effort to generate enduring principles, possibly valid over a wide geographical range, is the process of ideological and technological selection and revision – in a word, innovation. To deduce such principles, then, one must generalize with respect to innovative phenomena.⁶ More specifically, the deduction of general principles for the social sciences must begin from premises that concern the general aspects of the social reality considered, which descend from its general conditions of development; it must not begin from premises (postulates) that themselves include specific ideological or technological conditions and choices, or specific aspects of nature, however important and decisive (and even if extremely long-lasting), because these are particular, optional aspects.

A useful rule for the derivation of functional imperatives may consist in concentrating on the existing general conditions of development, in order to extract from them some extremely general and meaningful aspects, which will then act as postulates from which to derive all implications for the efficient organization of social systems, in the form of functional imperatives. Of course, the imperatives derived in such a way vary with the general conditions of development, thus providing a basic expression of the dynamics of society. In sum, these organizational categories emerge over the course of history, as the product of the *sedimentation* of

⁶Of course, abstracting also from the particular conditions of nature.

successive innovations, moral or ideological value judgments and technological choices (as opposed to specific choices and innovations). The realistic premises (postulates) from which these categories are derived are extracted from the previous sedimentation, making these organizational entities relatively steady points of reference demarcating continually changing social reality; they embody the aspect of duration. Clearly, these initial hypotheses derived by the general conditions of development are not some mere conjectures in the sense of Popper; they represent some clear and well corroborated premises, supplying solid foundations to deductive procedure.

As the product of a rationality that is not conditioned by specific technological or ideological assumptions but only by the general configuration of the situation, functional imperatives will reflect functional needs that are not linked to the pursuit of specific objectives and particular choices. Rationally speaking, the substance of these general principles is simply not a matter of choice. Ignoring them means adopting quite illogical and irrational courses of action and solutions, that is, entailing costs with no offsetting benefits, in that such actions are neither imposed by nor connected with a choice of aims. It follows that these general principles constitute some *necessary conditions of efficiency*. They are relevant to all situations characterized by similar levels of development, and their degree of generality obviously depends on the degree of generality of the postulates from which they are derived. The theoretical relevance of our notion of *functional imperative* mainly depends on the fact that *it embodies both the aspect of necessity and permanence*.

The above functional imperatives are eminently concerned with institutional order. They may contribute greatly to the methodological systematization of social theory and to remedying some misunderstandings characterizing the debate on institutions that confines this debate to a marginal position with respect to the great theoretical tradition. In particular, the concept of functional imperative may provide a stronger methodological base and legitimacy to institutional and neo-institutional analysis, as well as many formulations of economics distinguished by their closeness to reality.⁷ These imperatives represent the pillars of social systems and point to the great necessities that these imperatives must uphold. People must clearly see them in order to build the new functional imperatives imposed by changes in the general conditions of development.

It may be useful to confirm that, according to our methodological proposal, observation must concern only initial propositions and postulates (as derived, for instance, from the general conditions of development), but not the verification of theoretical formulations. In other words, the term O of the procedure O-H-O_c operates only initially, not in the final stage devoted to the control of theory.

⁷For instance, and as we shall see in the paragraph on exemplification, Kirzner's analysis of economic process implicitly specifies (and is hinged on) some basic functional imperatives of modern dynamic economies (the entrepreneur, market process, decentralization of decision making). Again, Williamson's analysis centered on transaction costs, as well as the economic analysis of rights (EAR), are substantially aimed at pointing out that the firm's organization and some rights represent functional imperatives.

In fact, reality may differ widely from functional imperatives, which latter only represent some gravitational attractions of the auto selective process of trial and error. There is no guaranty that they will be present in reality and thus constitute a possible object of experimental verification; indeed, very often they are not reflected by reality. It is a task of theory to enunciate their functional role, properties, the necessity of building them and the way to do so. The verification of general theories (i.e. characterized by high permanence) may cautiously be based on observation, but only in the special case that social organization satisfies (i.e. embodies) the functional imperatives pertaining to the considered development phase with its general conditions.

The above treatment allows us to understand that social research currently uses a deductive procedure more insidious than the *abstract deductive method*. This particularly problematic deductive procedure is represented by *observational deductivism*, which does not follow the rule of derivation of functional imperatives expressed above, but rather pretends to derive general principles from postulates that include particular ideological aspects; in this way, this procedure mixes indistinctly necessity and choice, ignoring the optional-creative aspect on the assumption that reality means necessity. Economics, which is the most advanced branch of social theory, contains numerous examples not only of the abstract deductive method (mainly represented by models of general equilibrium) but, even more, of observational deductivism (as represented by, for example, the opposite Smith's and Marx's appreciations on the market and the entrepreneur, which consider these synonymous with the capitalist market on the basis of an historical observation that shows these organizational forms strictly embodied in a specific kind of civilization, the capitalistic one, and on the associated value premises).

2.3.2 The Commensurability of Social Knowledge, Ethical Relativism and Natural Rights; The Scientific Derivation of Some Value Premises and the Notion of Ontological Imperative

1. The above notion of functional imperative entails some basic results concerning the crucial issue of value premises and the cumulativeness of social knowledge. We saw before that an important rule for the derivation of these imperatives is the exclusion from postulates of particular technological and ethical-ideological aspects, as these are objects of choice. The exclusion from postulates of specific ideological aspects denies the Weberian assumption that the building of theory cannot abstract from value premises and, therefore, this avoids the incommensurability (i.e. non comparability) of the theoretical principle (functional imperative) in question. The rationality principle and the comparability of social theories receive another important support from the fact that functional imperatives may also concern some basic values with which the system of values as a whole must cohere (we considered this already in speaking of 'necessity' and we shall further clarify this important point later through some

examples). This circumstance has another important consequence. The statement that some ethical aspects may represent (be derived as) functional imperatives and therefore express necessity, implies a scientific limitation (in addition to limitations of a religious and metaphysical type) to cultural relativism: the scientific, i.e. objective character of some value premises proves the groundlessness of the equal rank that cultural relativism attributes, in principle, to all such premises. The current failure to grasp this crucial point concerning value premises generates numerous, profound and well rooted misunderstandings in social theory, most notably an extremely harmful confusion between the elements of necessity and choice, impeding the building of a scientific theory of social and historical development.

In other words, the notion of functional imperative considerably reduces the indeterminacies and strong contrasts fueled by the idea of the inescapable pervasiveness and equal dignity of different “points of view”. This result amplifies remarkably the role of scientific analysis in the field of social phenomena and, in particular, the cumulativeness of scientific knowledge.⁸ But it may be useful to underline, in this regard, that Parsons’ approach, which emphasizes, as we have just seen, the duration of values and their functional role, forgets that the value premises not constituting functional imperatives are object of choice, i.e. are characterized by a scientific ambiguity. Some contemporary scholars insist upon the possibility of scientific investigation of impersonal, objective, social values that are shared by a large number of people, as distinct from strictly personal, subjective, individual values that cannot be the object of science. We think our notion of functional imperatives goes beyond such assertions and clarifies some of their limitations. The scientific nature of functional imperatives is unquestionable, even when they concern value premises, independently on their degree of sharing among people. Weber’s denial of the possibility for science to investigate ethical aspects of phenomena is exaggerated, while Parsons’ position on the matter seems too extensive as social values do not escape – in principle and in contrast to Parsons’ imperatives – options and creativity, and, hence, some sort of scientific ambiguity (except in the case that they represent functional imperatives in our sense).

The scientific derivation of values based on the notion of functional imperative does not deny the historical nature of social events and it does not need metaphysical supports, as does the doctrine of natural rights. In some sense *our notion of functional imperative lies between historicism and jus naturalism*. The theoretical principles that this notion allows us to formulate, being derived from the general conditions of development concerning the investigated society, represent a result of historical processes. But these principles share with the theory of natural rights a derivation based on the rationality principle and a non-relativistic content. *They express an inevitable need for social organizations belonging to the same phase of development*. Functional imperatives do not depend on some specific civilization

⁸The results presented in this and the previous paragraph may provide a substantial contribution to the solution of the “post positivist puzzle of relativism” and the incommensurability problem, pointed out by Ardebili (2003). R. Bhaskar’s solution here is not exhaustive since it eludes the ontology of science, i.e. “the scientists’ conception of reality”.

but, rather, and as we shall see, influence such civilization as this must be congenial to them. They express all that science may say on ethics that, for the remainder, admits only criteria of justification based on faith. We shall see in Chap. 8 that these imperatives may offer a basis for a contractualist notion of right immune to the criticism formulated by juridical positivism, and provide a foundation upon which to build a theory of right hinged on a science of social institutions and organizations.

2. The notion of ‘ontological imperative’ concerning, as we saw, the unfolding of human evolutionary potential, provides another important support to the scientific derivation of ethical values. This notion expresses some general and basic characteristics of human beings. In contrast to functional imperatives, ontological imperatives do not vary with the general conditions of development and hence are not pushed to impress themselves upon it over the course of history but, rather, remain valid for ever. They may be repressed, however, for unlimited periods of time if a particular social order is characterized by a civilization adverse to them. Their triumph is warranted only if the evolutionary process is not obstructed, so that they are transformed, sooner or later, into functional imperatives; at that point, the past insistence upon them by some scholar, wise man or religious seer will appear retrospectively as a sort of prophecy. One particularly important ontological imperative is the tolerance principle. This is a consequence of the limitations and the intensive differentiation of human knowledge, which both imply that nobody has a complete monopoly upon reason and that human beings may profitably use reason only if they accept (and look for) confrontation with different and dissident points of view; in fact, knowledge proceeds by trial and error and heterodox propositions may indicate some fruitful solutions to the problems of daily life. Another important ontological imperative concerns the role of the individual. The fact that the individual is the first source of both creativity and of the dynamics and variety of social processes implies the (ontological) importance of individual action and dignity and of the principle of personal responsibility as indispensable in warranting the social profitableness of that action.

The presence or absence (i.e. by violation) of ontological imperatives is a distinguishing mark of, respectively, open and closed societies. As we shall soon see, with the advent of the stage of modern dynamic societies some important ontological imperatives also become functional imperatives, for they are indispensable to the preservation of social dynamism.

2.3.3 *Some Examples*

The five chapters in Part II of this book will consider a wide number of ontological and functional imperatives with reference to the most important fields of social sciences. However, it is indispensable to provide soon some examples of those imperatives, aimed at reducing the abstractness of the analysis and improving understanding. It may be useful to start from some further examples of *ontological imperatives*.

An important ontological imperative is represented by the *division of labor*. In fact, such a division is an immediate consequence of the great variety of individual capabilities and hence a main organizational tool allowing for the expression of human potentialities. An important feature of this ontological imperative is its achievement, from early primitive societies onwards, also of the role of functional imperative, i.e. a principle strictly indispensable to the organizational efficiency of society. Of course, it is of the utmost importance to manage labor division in such a way that individuals' work corresponds to their natural skills, professional work being an important means of expression of human evolutionary potential.

The principle of reciprocity and the sense of fraternity, underlined by C. Lubich and S. Zamagni, are important ontological imperatives deriving from the postulate sub c representing social cohesion. Other ontological imperatives flanking the autonomy, dignity and sacredness of the principles of individuality and tolerance, are distributive justice and the practice of power as service instead of domination, i.e. according to well defined responsibilities that avoid abuse and 'free' judgment in the practice of power. In fact, the evolutionary potential of humanity springs from creative processes that, in order for them to happen, need the respect that flows from personal dignity and hence the elimination as much as possible of abuses of power and injustice. Moreover, the efflorescence of creativity and knowledge needs free confrontation between ideas, achievements and points of view, for human beings, possessed as they are of limited intellectual skills, require pluralism and tolerance. The degree of self propulsion of any one particular civilization depends on the manner and extent to which it incorporates the above ontological imperatives.

We come now to some example of *functional imperatives*. Let us refer, at first, to social systems characterized by advanced general conditions of development. These societies are *obliged* to satisfy the postulate concerning the unfolding of the human evolutionary potentialities at the base of the notion of ontological imperative. Therefore, they give expression of the transformation of some ontological imperatives into functional imperatives. In particular, we may deduce that the high degree of dynamism of these societies needs the work of innovators and, more generally, a social organization satisfying the following criteria: that it is open to criticism and to full appreciation of individual initiative and skill, it is able to deal with the high uncertainty caused by non-stationary change, that it is therefore agile, versatile, well-informed and quick to perceive and anticipate the changes in progress. Therefore, and as we saw, we deduce the need for a decentralized organization, for the entrepreneur, the market and exchange value as necessary tools of information and coordination in the presence of high uncertainty, and of profit, as an indispensable measure of the efficiency of entrepreneurial action and decision making. These fundamental economic categories appear to be tightly connected to modern dynamic society, being indispensable requisites of its organizational efficiency and the source of its dynamism; therefore, they are *functional imperatives* of these societies.

The above deductions tell us that some important *value premises* connected to institutional decentralization – such as pluralism, the acceptance of deviants and of criticism and the full appreciation of individual initiative – constitute (as with decentralization) objective necessities for the existence and efficiency of modern

dynamic societies, i.e. constitute functional imperatives. We can see, therefore, that some ontological imperatives considered above become, in modern dynamic societies, functional imperatives. This makes evident *an important law of social development: with the variation and advancement of the general condition of development, propelled by the presence of a civilization that incorporates important ontological imperatives, these latter become also (in modern dynamic societies) functional imperatives, that is, the satisfaction of these ontological imperatives becomes an organizational necessity of the resulting societies.* The violation, in a social organization that has reached this stage of development, of the above imperatives, generates weighty inconsistencies. Such a society must hurry to satisfy them, thus bringing itself in syntony with historic development; otherwise it will be destroyed by its internal contradictions and the competition with rival systems satisfying those imperatives.

Functional imperatives represent, as we saw, great gravitational centers exerting strong attractive force upon the spontaneous processes of trial and error; therefore, they cannot be eluded. It is important to consider this point with attention in order to accurately edify them, avoiding such edification is obstructed and delayed by misunderstandings, prejudices and the particular interests of dominating powers. One may give many examples across history of these basic organizational categories of society expressing historical necessity. So, those who study primitive societies see the relative familial organization at their centre. Such an organization clearly constitutes a functional imperative, after depuration of the various and sometimes eccentric ideological forms associated with family relationship in various cases. Levi-Strauss' analyses of the form of family relatives have clarified this aspect well.

The multiplication of functions and social differentiation, the development of transportation, of the size of territorial groups, of exchange, wealth and conflicts determine the need for a more sophisticated social organization. In particular, such multiplications and developments compel the birth of a more impersonal power than that embodied in the relative organization, endowed with a higher compulsory force: the command power. This new functional imperative, which first made its appearance through the phenomenon of companion-in-arms and other similar aggregations, later took the substance of state power that assumed various forms over the course of the development process; some expressions of them are imperial state, national state, and various forms of the centralization of political power.

The acquisition of a central position in the social process by the economy has some new functional imperatives pushed onto the scene. Economies characterized by small operational unities and markets regulated by demand and supply need very different institutions than do economies dominated by market power. For instance, in the latter case the functional imperative of the control of aggregate demand arises as a counterpart to the deficiency of effective demand. Economies passing through the takeoff phase need institutions and strategies suitable to combat the underdevelopment trap, while dualistic economies require structures capable of avoiding the trap of dualism.

The historical phase that we are now passing through imposes new functional imperatives that merit an accurate investigation. The rapid increase of international

exchange and the advent of the global economy require new economic institutions. More generally, the planetary breadth of modern societies determines an increasing need for supranational compulsory powers⁹ that, together with the need for decentralization expressed above, favors federalism over the national state; moreover, a penetrating operation of reciprocity is needed in order to warrant social cohesion, as underlined by S. Zamagni.

The entry of the masses onto the scene of contemporary society determines an increasing need for institutions capable of conjugating operational efficiency and social justice, for instance: the ‘separation’ of the firm from the conflict for income distribution thereby making the market a pure mechanism for efficiency and accountability, the rationalization and redefinition of welfare state, the definition of indicators of efficiency concerning activities characterized by market failure.¹⁰

Basic technologies, i.e. technologies that are fundamental to the existence of the general conditions of development, and the organizational forms that they imply, are also functional imperatives.

It is important to underline that the specification of ontological and functional imperatives is based on our notion of *organizational rationality*; they are inconsistent with other notions of rationality, previously criticized. A reference to S. Zamagni’s development of this matter may allow some further clarification. Zamagni opposes Ulysses’ *instrumental rationality*, exemplified by the command of this mythological Homeric hero that he be fastened to the mainmast so that he might listen to the song of the Sirens without being drawn to wreck his ship, to Jason’s *relational rationality*, i.e. Orpheus’ use of extraordinary lyrical and musical skills to allow the Argonauts to freely listen to the song of the Sirens without risking a shipwreck. Zamagni underlines that the virtues of relational rationality are: to conjugate efficiency and freedom, to allow the possibility of combination with different values, to not separate the head from the heart. This is wonderful, but it illustrates some scientific ambiguity. The heart is an ambiguous advisor; it is important to avoid it operating against the head, and this end requires some objective specification concerning both ethical values and the relation between efficiency and freedom. Our notion of *organizational rationality* has a much wider extension than instrumental rationality, in particular regarding important values that we proved to have an objective substance (in the form of ontological and functional imperatives), e.g. the values of reciprocity and fraternity (which Zamagni underlines) as deriving from postulate c regarding social cohesion; moreover, our distinction between necessity and choice-possibility provides a scientific conjugation of efficiency and freedom. These extensions avoid the possible ambiguities of relational rationality. Unfortunately, instrumental rationality is often considered the most genuine expression of scientific thought. This widespread conviction is helped by the above mentioned ambiguity of relational rationality.

⁹Such powers might be substituted by forms of imperialism; but these are strongly opposed by the conscience of modern Man.

¹⁰See (Ekstedt and Fusari 2010), chapter 8.

We hope that we have satisfactorily developed, in this section, the aspect of ‘necessity’. We shall concentrate now on the aspect of specificity and choice that evokes conflict.

2.4 From General to Particular: Continuity and Permanence Versus Change

Functional and ontological imperatives constitute, so to speak, the skeleton of social knowledge. Of course, theoretical research can hardly be content with such a high level of generalization, relevant to any number of different social systems. Theory requires more highly developed articulation if it is to be suited for more circumstantial analysis. The emergence of value-ideological and technological choices, innovations and specific natural conditions, together with their implications, are of decisive importance in characterizing individual social systems. It is here that we identify what forges and shapes societies. Thus, general principles need to be complemented by theoretical formulations concerning these particulars.¹¹ Note that the ‘particulars’ considered here generate some clearer initial hypotheses, even if they be more changeable than those suggested by the general conditions of development.

In contrast to the analysis of the preceding section, which concerned the aspect of permanence-necessity, this section is mainly devoted to the aspect of choice and social change. But there are some choices that remain unvaried for a very long time. It may be useful to analyze them first of all, with the primary purpose of deepening our understanding of the distinction between necessity and duration.

The conditions of nature express an important and long lasting element of reality; but they vary widely across geographical areas, thus representing the particular side of theory. This is quite obvious. But it may be useful to insist on the relation between duration and value choices; this will illustrate with lucidity the difference between the notions of duration and necessity, as the first may also concern value choices. Besides, such analysis will lead us, in addition to functional and ontological imperatives, also to enunciate another important pillar of the interpretation of social process: the concept of *civilization*.

2.4.1 *Grand Options and Civilizations; Their Relations with Functional Imperatives. About the Concept of Utopia*

That which is the result of choice does not always imply change and temporariness. One important exception is given by the basic ideological choices around which the entire social fabric revolves, is structured and is integrated. Such exceptions may be

¹¹ For instance, a desert people and a seafaring people will be induced by their differing environmental circumstances to construct dissimilar institutions and social orders. Institutional and organizational dissimilarities will also mark the social systems of peoples with – for example – different religious beliefs and/or different technological conditions.

defined as *grand options*. The following are examples of grand options: the idea of progress typical of Western societies, worship of the autocrat and of the state, the spirit of conformity and the culture of obedience typical of bureaucratic centralized systems. These key ideas define the fundamental physiognomy of the social system; they are its supreme, guiding criterion, the inner fire that warms its hearth. They are the product of very long lasting elaborations and cannot be overturned by sharp, sudden decisions but can only be removed gradually over a protracted period of transition; for their removal implies the dismantling of an entire and relatively cohesive set of concepts, behaviors, ideals, institutions, and so on. In a word, the removal of *grand options* implies the waning of the old social universe and the construction of a new one. Such *grand options* constitute an important factor of continuity. Their extensive persistence over time and/or their derivation from protracted sedimentation and synthesis assimilates them to the postulates from which functional imperatives are derived. But they differ from the latter (concerning necessity) in that they imply specific value-ideological choices. There can be no doubt but that they represent elements crucial for systems modeling. There exists a correspondence between the concept of grand option and that of *civilization*. *We define a civilization as an institutionalized set of value-ideological and technological choices, together with the organizational forms consequent to those choices and to the conditioning of the natural environment, marked by the grand options.* This concept of civilization differs from that of society and that of 'social system' in that it excludes: those ideological and technological choices and innovations not yet institutionalised, functional imperatives plus basic technologies (in that these categories characterize all societies at a given level of development, whatever their form of civilization).¹² We shall see in Chap. 4 that the concept of civilization plays a central role in the construction of a theory of social development and the historical process, in interaction with functional and ontological imperatives and with non-institutionalized innovations and choices.

There exists an opposition between the concepts of civilization and functional imperative. Both concepts refer to the long run, but the first concerns choice, while the second refers to the formulation of general principles and necessity. This opposition makes clear the great importance of the distinction between necessity, duration and choice. Civilizations are always the result of choice, notwithstanding their duration. As such, they have a conflictual character: they do not change automatically together with the general conditions of development, as do functional imperatives, but have rather a strong propensity to preserve themselves, together with their peculiarities. Thus, civilizations constitute an important conservative factor. More precisely, while they are born from a great creativity, which provides a strong initial momentum to their developmental processes, their

¹² It should be noted that the term *civilization* as so defined means something different than does the term *culture*. Even when this latter term is taken in the wide sense attributed to it by anthropologists, the notion of civilization just given is, still, the wider and more stringent one. Of particular importance, the term civilization as so defined expresses better than the term culture the imprinting of what I have called 'grand options' upon the basic features of the social system, side by side with the other basic organizational categories that I denominate functional and ontological imperatives, and avoids mixing with these categories.

inherent conservative tendencies make them subsequently a cause of sclerosis. Functional imperatives, by contrast, refer to the whole of societies characterized by similar general conditions of development. They have no conflicting content, as they express necessity. Functional imperatives assemble nations and individuals under the flag of similar exigencies. Moreover, they have no conservative inclination, but express rather some functional needs that vary with the general conditions of development. *The advent of new functional imperatives propels existing civilizations toward extinction and promotes new ones that are consistent with the new functional imperatives and, hence, more efficient and therefore more competitive (in the new phase of development).*

It is necessary to clarify that their integrating and inner role does not warrant the permanence of the *grand options* and their transformation into the moral duties that E. Durkheim, T. Parsons and some other sociologists identified as a milestone of social order. As a matter of fact, and as utopian movements clearly show, *grand options* may be the object of rude conflicts (mainly in modern dynamic societies), generating explosions of disorder as opposed to instilling social order. The circumstance that the grand options imply choice confers upon them (and, of course, the connected social values) an inherent ambiguity.

So the explanation of social order cannot simply hinge upon the integrating nature of ethical rules; it requires also the notion of the functional imperative. *The stabilizing nature of the grand options operates through their tight links with functional imperatives.* They may introduce themselves and resist only if they concord with functional imperatives, primarily those concerning value premises. Their strength and limits are due to this dependence, which confers upon them the attribute of necessity that warrants their permanence and, at the same time, determines their decay as soon as some long run change happens to reveal existing grand options as inconsistent with some functional imperatives. We shall discuss – and so elucidate – all this further in the chapter on social and historical development.

The notion of civilization underlines the role and the great importance, for social theory, of value premises and choices – therefore, of *utopian phenomena* that embody the more intensive expression of ethical-ideological aspects. On the notion of utopia, our previous analysis sheds some useful insight. Utopia may only concern choice. In this sphere it can operate without limits, violently challenge civilization and provoke (or try to provoke) great fractures. It is a primary cause of great qualitative jumps. Its fecund power usually emerges after long periods of incubation and often follows some strange and tortuous routes. The greatest propulsive strength pertains to the utopia that states some ontological imperative and anticipates some future functional imperatives, i.e. as supporting ethical principles destined to reveal themselves, in some more advanced phase of development, as necessary organizational conditions for efficiency. This kind of utopia can be seen as the scientific equivalent of *prophecy*; it possesses an extraordinary force and a great capacity to accelerate the development process. The Christian prophecy concerning the role and dignity of the individual (as referred in Chap. 10) probably constitutes the most important example of this kind of utopia. A closer inspection will often reveal these prophecies to be ontological imperatives.

It is also important to underline the opposite case of utopia contrasting with ethical-ideological aspects concerning existing or future functional imperatives. Utopia is impotent against these, as they represent historical necessity. Therefore, if utopia pretends to unhinge or deny them, it condemns itself to certain failure and acts as but a sterile and degenerate phenomenon. The struggle for existence among systems will sweep away this *degenerate utopia*, notwithstanding the forces sustaining it. It may be useful to meditate attentively on the above statements, as the history of utopian movements is tragically marked by senseless confusion between the aspects of necessity and choice; with the vicissitudes of communistic utopia acutely underlining the implications of such confusion.

2.4.2 *Innovation and Choice: The Factors of Change and Their Enemies*

The factors behind evolutionary motion are choice and innovation. More precisely, only innovative choices generate such a motion. A stationary system (e.g. a stationary economy) carries out choices; but these latter, which can be defined as adaptive choices to distinguish them from truly innovative choices, express stationary-repetitive motion and, as such, may be explained through some model of interaction.

We classify innovations in relation to two distinct categories.¹³ On the one hand we have ideological and value innovations, which are relative to the sphere of ideas, values, and world views. On the other hand we have technological innovations, which in an advanced state of knowledge stem from the application of the appropriate sciences to problems of life. In contrast to functional imperatives, these aspects of the social system are specific, contingent and reversible. They may be removed or altered without necessarily violating rationality or organizational efficiency, provided that one has the strength, capacity and resolve to do way with the premises (i.e. the specific choices and innovations) from which they derive. Of course, they provide some well defined initial hypotheses for deductive procedure.

It is important to articulate accurately the position that innovations occupy in the building of theory. Theory may explain innovation at the aggregate level, but cannot do so with regard to the specific character of innovations, as this depends crucially on creativity, which is unpredictable by definition. It is senseless to try to foresee or explain specific innovations. But this is no reason for alarm. It simply is, and all we can do is to recognize the fact. Some of the chief tasks of the social sciences comprise ensuring that society is as open as possible to the infinite variety of possible innovative choices, pointing out their implications and teaching us how to prevent

¹³ Naturally, the two types interact; indeed, the same innovation may belong to both categories. Other types of innovations, such as radical and incremental ones, should be considered; they play a crucial role in economic modeling (see, for instance, Fusari and Reati 2013; Ekstedt and Fusari 2010).

or promptly remedy any de-structuring consequent to the advent of the new. The social process is largely described by the interaction between two phases: the innovative dash and the subsequent structural organization. Such an interaction provides the engine of evolutionary motion.

The processes by which innovative choices mature are varied. They may be conflictual or participatory; they may be propelled by religion, by art or by science, and so on. Factors that put a brake on the occurrence of innovations are no less important. Changes in the way in which human needs are served, in custom and tradition, in life styles and decisional rules, in the very conception of life generated by the appearance of new technologies and new knowledge, cannot and do not impinge continuously upon everything and everyone. Entrenched habits and customs, especially the *grand options*, offer powerful resistance to the rise of technological or intellectual innovations that conflict with established ways. Although for reasons of efficiency they will eventually give way, arriving at that point will be a long drawn-out process involving a great deal of friction and not infrequently entailing postponement and only gradual introduction of the new ways. Besides, changes in moral or value premises are limited by the fact that they must not contradict those value premises constituting functional imperatives. Finally, some technological choices are broader in operational scope and more enduring in their effects than others. This applies to fundamental technologies, i.e. those that are an essential element of the general conditions of development and whose absence therefore implies that the corresponding level of development is unattainable. Such technologies have a vast and enduring impact on the social sphere. The well known phenomena of path dependency and lock-in confirm the above considerations.

Studying the diffusion and capacity for endurance of customs, traditions, value premises and technologies is of the greatest importance and allows an assessment of the friction and the contradictions that technological developments and other innovations (such as a plan of social reform) will have to overcome.

2.5 Synthesis of the Methodological Framework. The Interrelationships Among Social Subsystems

The first and crucial work that must be performed by the method of the social science is the definition of rules, procedures and classifications that facilitate the definition of postulates, which latter stand at the basis of the process of scientific construction. In particular, the first steps must derive: (a) general principles (functional imperatives) from realistic postulates not including specific choices and conditions of ideology and technology but concerning very general, significant features of society; (b) ontological imperatives. The next steps consist in the identification of the grand value-ideological options and the *civilization* that they characterize and which govern the society being studied or, in utopian constructs, the civilization to which one aspires. The resultant framework can then be enriched by considering more specific aspects of reality, for instance, conditions of nature. Hence, the implications of all that on the

organization of social system may be deducted. It is important to specify, with reference to the forces of evolutionary motion, the interaction between innovation and adaptation, as well as the endogenous factors stimulating innovation, the way social system selects and systematizes innovations (or obstructs them), and restores its interior consistency (see Chap. 4).

The requirement that all postulates and deductions must form a consistent theoretical framework implies that each step, commencing with the general principles, entail suggestions as to subsequent steps and systemic relationships.¹⁴ It would be useful to extend the general model to all the subsystems of society, in order to make explicit the linkages, in the context of social theory, between economics, political science, anthropology and sociology. Much more than the natural and logical sciences, social theory needs to structure its contents within an overall framework. This for at least two reasons:

Firstly, because the social sciences are not restricted to inquiry into what exists (or the investigation of abstract propositions), but are also implicated in the construction of social systems; and this entails bearing in mind the interconnections between the various aspects (political, economic, juridical, and so on) of the systems, as well as those between normative and positive aspects and between reality and ideals.

Secondly, because the social sciences involve both institutional and non-institutional mechanisms that, due to social change, are subject to multiple transformations that radiate from them. A science the aim of which is to master this unstable reality must be fully aware of the repercussions on the individual subsystems of these transformations, and this awareness can only derive from a unified basic method and an organic overview of the society in question.

If the model is accurately built, the differences between it and reality will provide an approximation of the difference between spontaneous phenomena and rational-efficient solutions, in the course of the gravitational process toward such solutions, based on trial and error. In this regard, it may be useful to underline that the study of social phenomena, although unlike the natural sciences in that it is deprived of the advantage inherent in the relative constancy of the reality observed, does have at its disposal a different, significant advantage which, properly exploited, can greatly facilitate research. This advantage consists in the fact that social studies deal with a reality forged by human beings and thus is in theory more readily intelligible to them than is the natural world. But – and this is the key point – it is more intelligible, not by virtue of introspection, but because the social sciences, eminently concerned as they are with the rational organization and administration of social systems (as opposed to individual actions), must proceed by deductive procedures (based, as noted, on realistic and well established postulates and on the canon of

¹⁴For example, it must be ascertained that the value premises adopted constitute a consistent set, headed by supreme ideals, followed by some other general value premises and, still further down, specific value premises. In other words, each norm must be coherent with the overarching system of ideals.

organizational rationality), which constitute a standard of inquiry more rigorous and incisive than that based on experimentation, to which we must necessarily resort when the object of study is a reality (nature) not constructed by human beings. But there is an obstacle that stands in the way of the work of the social researcher and with which the natural scientist needs not contend, namely that social change requires incessant revision of principles and deductions.

The analyses of social researchers are often based on the experiment-verification methodology that is appropriate only to the natural sciences; other social researchers rely on deductive procedures that fail to develop properly the principle of organizational rationality and, taking reality to mean necessity, develop a quintessentially observational character; and others, failing to ensure the realism of their postulates, overstep the border and enter the territory of that abstract rationality that is proper to the formal-logic sciences.

2.6 The Notion of Freedom and Necessity Areas as an Indispensable Tool for the Understanding of Function and Conflict

A pivot of the methodological approach outlined is the rigorous distinction between *freedom* and *necessity* in the organization and development of social systems. Such a distinction permits us to delimit the fields of function and conflict and to overcome functionalist equivocations deriving from the erroneous assimilation of necessity to duration.

We saw that in human society, *necessity* is embodied by:

- (a) Functional imperatives.
- (b) Natural conditions and their implications.
- (c) The basic technological innovations and the organizational forms imposed by them.

Together these categories constitute the *necessary conditions for efficiency*. *Choice* is represented by:

- (d) Value-ideological activity, headed by the grand options (or choice of civilization) and corresponding organizational forms.
- (e) All non-fundamental technological solutions and their corresponding implications.

For their part, ontological imperatives stand half way between necessity and choice.

However, we must bear in mind that the range of the choices listed under (d) and (e) is defined by the limits of their compatibility with the ideological aspects comprised in functional imperatives.

The necessary conditions for efficiency identify the area of function, while the process of choice identifies the area of conflict. Of course, as soon as a value choice has prevailed, it will imply some definite functions: the grand options and the connected form of civilization require some precise institutions. But the point is that the value choices generating them may be suppressed without damaging efficiency.

The elements of choice and the working out, through innovation, of man's creative capacities correspond to *freedom* in the development of social systems. This freedom is not significantly limited by the fact that choice must not contradict necessity as represented by functional imperatives (the necessary conditions for efficiency). This appears evident when it is recognized that *the realistic postulates in the general configuration of reality, from which our functional imperatives are derived, are generated by the historical accumulation of innovations*. In addition, this *sedimentation* of choices and innovations *will eventually alter* not only the general conditions of development but also the conditioning power of both nature and of the basic technologies themselves, that is, *all the elements constituting the aspect of necessity*, while the fulfillment of ontological imperatives determines the evolutionary strength of the social system.

It might seem that the above considerations darken our distinction between necessity and choice. But the point is that a society may not violate functional imperatives, natural conditions and basic technologies without seriously compromising its organizational efficiency. These are the necessary conditions of efficiency. Unfortunately, the ingrained tendency of choices, especially when they touch on the grand options, to take root and vigorously resist revision not infrequently induces people to mistake these optional elements for necessities and to give the preference to them over and above those functional and ontological imperatives with which they are not consistent. To further clarify the analytic importance of this distinction would require a treatment of social development and historical explanation (see Chaps. 4 and 5).

In social discussion, the failure to separate the merely functional from the ideological, necessity from choice, aggravated by the frequent identification of necessity with duration, inextricably entangles science and faith, thus generating fierce and irresolvable disputes. Operationally, the consequences are more harmful still, for the result is two diametrically opposed tendencies the effects of which are simply devastating on the planetary scale. **First** is the tendency, which can be termed "pseudo reformist", to reduce necessity to the rank of ideology, i.e. to substitute value-ideological options, mainly grand options and the related civilizations, for the necessary conditions of efficiency. This tendency has inflicted terrible defeats on movements for social reform. **Second** is the tendency, which can be labeled "pseudo-scientific", to raise ideology to the rank of necessity, i.e. to mistake (or pass off) value-ideological elements for purely functional necessities, as well as to justify and exalt moral choices for their alleged purely functional quality (functionalist prejudice). This latter tendency is strengthened by the propensity of optional elements to take root which, together with the axiomatic equivalence of reality and necessity implicit in the observational method, confers upon it a seeming seal of scientific standing. Confusion here is aggravated by the fact that the character of ontological imperatives stands half way between necessity and choice, thereby obscuring the importance of fulfilling these imperatives.

We have these confusions and theoretical shortcomings – among others – to thank for the fact that mankind has steadfastly condemned the just and elevated frauds and impostors.

2.7 The Problem of Prediction in the Social Sciences; From Micro to Macro Theory

We saw that it is impossible, using the observation-verification method, to derive “laws of motion” of the economy (or society) that can then be used to predict the future of the social system. This impossibility stems from the succession of innovative events and consequent social change. To forecast future events and social arrangements, we would have to be able to foresee the specific value-ideological and technological choices and changes that will ensue and derive all their implications. But making predictions concerning specific innovations, i.e. acts of creativity, is senseless. We can but put forward hypotheses in this regard, and the results obtained by such a procedure will not be predictions but merely hypothetical elaborations. This does not mean, however, that the effort to make predictions about social reality is useless.

We know that functional imperatives are enduring and that the replacement (or emergence) of grand options requires the dismantling (or realization) of a vast system of consistent and compatible arrangements, propensities, and so on, that can only be achieved over the very long run. These imperatives and grand options thus trace riverbeds along which social life must proceed and unfold, and this facilitates prediction. Furthermore, the formation of functional imperatives and grand options by protracted historical sedimentation implies the possibility of recognizing, within a broad margin of error, those new functional imperatives and/or grand options that are in the process of maturing. Moreover, the very notion of ontological imperative provides some basic and enduring knowledge about the social system. The above knowledge will furnish far-reaching and in-depth information concerning the features of the stage of development on the threshold of which we stand and with regard to the main problems that beset it. Reference to basic technological innovations, with their great permanence and multiple repercussions, will also help in forecasting future events. Adaptation, for its part, embodying as it does a large part of the social process, is in principle foreseeable. Moreover, social theory may profitably use the method O-H-O_c with reference to the long lasting aspects related to functional imperatives. For instance, the necessity of the entrepreneur in modern societies implies that it will be fruitful to conduct econometric studies on entrepreneurial decisions concerning innovation, investment and the output level.

It may also be useful to underline that, at the aggregate level, the traditional method O-H-O_c, i.e. one based on observation and empirical verification, may sometimes facilitate reliable foresight over short time intervals, primarily if the observed reality reflects functional imperatives so that it is not shaken by any confusing and sharp gravitation toward them. This reliability of the O-H-O_c methodology is due to aggregation that suppresses specific innovations, thus warranting some substantial invariance of structural relations.¹⁵ Macro theory is able to conjugate, in

¹⁵ Such an invariant structure permits quali-quantitative mathematical analyses directed to investigate the existence of equilibrium, its stability or to point out the existence of strange attractors shaping chaotic areas.

the investigation of social reality, both the O-H-O_c observational method (with its quantitative content) and deductive procedure previously discussed and proposed.

Nevertheless, a qualitative gulf separates micro from macro theory; a distance that is not due to the choice of a holistic perspective but results simply from aggregation. The dimension of this gulf varies according to whether one or other of the two following situations is in operation: (a) micro variables and macro variables act in the same sense, so that the observation of the latter permits the immediate perception of the behavior of the first; (b) the behavior of micro variables are not unidirectional and they take unexpected directions at the aggregate level. Situation (a) is frequent in the economy (think, for instance, of the aggregated and disaggregated functions of demand and supply); in this case, the discontinuity existing between the aggregated and disaggregated levels is to be imputed simply to the fact that aggregation suppresses particular innovations, on which evolutionary movement depends. But the economy also falls under case (b). For instance, the phenomenon of deficiency of effective demand may only be expressed at the aggregate level. L. Pasinetti defines as genuinely macro conditions “those relations that represent characteristics of the whole economic system”,¹⁶ and accurately analyzes them. Sociologists are acutely conscious of cases falling under (b), for instance, that individual discontent does not translate into collective discontent and mobilization.

The true disadvantage of aggregation derives from the fact that the suppression of variables can markedly distort the representation of reality. But this limitation goes hand in hand with some advantages, principally the fact that macro analysis is able to represent some phenomena that micro analysis does not perceive, and also the wide spectrum of methodological tools available to macro theory. However, the above two fields display complementary roles for the development of knowledge. It is important to be conscious of their methodological differences.

2.8 Economic and Social Planning

Economic and social planning and related instruments of reform have roused great expectations on a world-wide scale, but have been followed by bitter disillusionment. It may be useful to analyze the causes of such unhappy outcomes from the perspective of our inquiry into the method of social thought.

The main cause of the failure of centralized planning has been implicitly set out by our above analysis of the ‘necessities’ of dynamic economies, primarily the necessity of the market, entrepreneurship and related ethical values. Much more difficult is the explanation of the failures of economic and social planning in market economies.

Some important mathematical approaches to planning came to light in the context of the Soviet experience, for instance the linear programming of L. Kantorovich, L. Pontryagin’s maximum principle for the optimal control theory of dynamical

¹⁶ See Pasinetti (1993), p. 49.

systems, and the input-output approach of V. Leontief that flourished after this author's migration to West; but the major usefulness of the first two has proved to concern firms' planning while the major usefulness of the third has been in regard to statistical national accounting. The 1960s and the 1970s of the last century witnessed an efflorescence of what can be denominated the programmatic approach, which emphasizes *doing* in the context of economic and social planning. R. Frisch, J. Tinbergen, L. Johansen played a leading role in the field. Their teaching was concerned by the main lack of constructivism, that is, an inclination to disregard *being* in the name of *doing*; an issue previously considered but that warrants some further discussion. We shall see that economic and social planning offers the best grounds for a criticism of the constructivist perspective.

Many economists who lean towards the free market have underlined the ingenuousness and abstractions inherent to planning projects. Hayek is associated with some of the most caustic and sarcastic polemics against constructivism in the name of spontaneous behavior. Unfortunately, Hayek did not understand that constructivism and spontaneity mutually feed upon one another, owing to gaps in both of these schools of thought that allow each to assert itself as the remedy for the errors of the other. The more problematic of the two is no doubt constructivism, for its pretension to deviate from spontaneous tendencies infuses heavy error and turbulence into those already contained within spontaneous processes, if a science of the organization of social systems does not exist. One major theoretical consequence of constructivist errors and ingenuousness is represented by the blossoming of the most scientifically consistent kind of spontaneity represented by evolutionary social thought, which has expanded its tentacles into a large part of institutional thought, notwithstanding the intrinsically constructivist nature of institutional phenomena.¹⁷

The Keynesian discovery of 'the principle of effective demand', which was in the air from the beginning of the nineteenth century and that, as a matter of fact, must be basically attributed to Hobson's analysis of imperialism, opened the door to an age of great reformist hopes and to a large diffusion, in the Western world, of national planning. In fact, during the Great Depression and later, the violation of such a principle took the form of a deficiency of demand and this suggested therapies designed to increase aggregate demand that raised an extensive and attractive possibility of social reform related to income redistribution, the building of the welfare state, and increased public spending. But later bitter disillusion followed, caused by the partiality and one-sidedness of the approach and by inherent shortcomings of the diagnosis that will be diffusely considered in the last section of Chap. 3.

It may seem that the crisis of economic and social planning contradicts our statement that the organizational view, which stands at the basis of planning, is appropriate to social reality. We need to explain, therefore, why, if our analysis is correct,

¹⁷The European Association for Evolutionary Political Economy (EAEPE) provides one of the best instances of the attempt to marry evolutionary and institutional thought. This is expressed well, for example, in the convergence of the institutionalism of G. M. Hodgson and the social evolutionism of U. Witt.

economic and social planning has failed, the consistency of its constructivist character with social reality notwithstanding. The explanation is that the appropriateness of the vision at the basis of a method is, in itself, insufficient to ensure the correct investigation and management of the considered reality; some other requirements are needed, and these, unfortunately, have often been ignored or misunderstood by social planners. Let us investigate this matter more closely.

The vulnerability of planning is primarily derived from a lack of methodological rules allowing for the definition of realistic postulates in order to warrant the combination of being and doing and make possible the distinction between necessity and choice-possibility. We have seen that in both observational and spontaneity positivism, *being* dominates while *doing* is absent and that, by contrast, *doing*, i.e. the guiding aspect, dominates in social planning. Unfortunately, however, the reference of planning to being, i.e. *de facto* reality, is weak and confused; it is this that has generated the abstractness and the unconstrained constructivism that are often reproved to the various approaches to economic and social planning. A coherent combination of being and doing does not exist in social thought, as far as we know. More precisely, we have seen that social thinking disregards the selection of realistic postulates, notwithstanding the fact that this is indispensable to replace the control and verification of theories based on facts, such verification being prevented (as we know) by the non-repetitiveness of observed events. It must be added that planning and related schemes of reform constitute some further elements militating against the hypothesis of the repetitiveness of events. This makes it a terminological and substantial contradiction to hinge the (limited) reference of planning to *being* on the observational method. Notwithstanding, economic and social planning has used *strict* observation in the attempt to escape unrealism, as testified, among other things, by the extensive use of econometrics, which is a strongly observational science.

The dissociation between reality and the guiding aspect is well expressed by the distinction between economics (with its laws of motion) and political economy. In fact, the inductive or deductive experimental procedures typical of positive economics are inconsistent with the guiding character of political economy, since such a character (implicitly constructivist) contradicts the hypothesis of repetitiveness, which is indispensable to the inductive or deductive experimental method. Constructivism, specifically the guiding character of political economy, needs, let us repeat, a non-observational method of inquiry into reality. But economic and social planning has not been able to satisfy such a methodological need.

The difficulties and failures of planning can be better understood by returning to the distinction between necessity and choice-possibility. We know from our proposal on method that such a distinction derives from the rules of selection of 'realistic postulates'. The distinction cannot be enunciated otherwise, for instance, through the optimization models that can be considered the canonical formulation of planning. In fact, and as seen in Sect. 1.4 of the previous chapter, the distinction between necessity and choice-possibility precedes the logical structure of optimization approach. We shall try to further clarify this through some simple considerations.

The optimization principle (taken in Kantorovich, Pontryagin's etc. forms) is just a mathematical technique aimed at improving decision processes. By contrast, the distinction between necessity and choice-possibility acts at a much deeper level; it involves the meaning of institutions, ethical values and the whole substance of social phenomena. A centralized social system can readily turn to the principle of constrained optimization; in effect the Soviet reforms of the 1960s trusted in mathematical optimization to recover efficiency, but in vain. Well, the reason for that failure (and others) lay in the ignorance of the central planners of the 'necessity' of the entrepreneur, the market, etc. On the other hand, the distinction between constraints and objectives in the model of optimal choice requires the capacity to discriminate between necessity and choice-possibility. In the absence of such a distinction, substantial mistakes can be made in the definition of constraints and objectives. For instance, utility maximization may be pursued, implying a consumerist vision that the modern world should not venture into; furthermore, the objective function may include some ethical values inconsistent with opposing values expressing objective necessities.

We should also take note that constraints may include some technologies that do not represent necessities but only alternative choices to others. Even in the theory of the firm, the use of constrained optimization does not escape the equivocations caused by the absence of the distinction between necessity and choice-possibility. In short, constrained optimization does not remedy (and does not consider) the methodological problems that we have scrutinized. Such optimization is different from and subsequent to the procedure and rules of selection of 'realistic postulates' and the distinction between 'necessity' and 'choice-possibility' considered previously. In the absence of these rules and distinction, optimization supplies a poor support to programming; as a matter of fact, it may cause great misunderstandings.¹⁸

Planning projects will become weak and confused in the absence of a rigorous distinction between necessity and choice-possibility. As we know, such an absence implies that choice-possibility can easily be smuggled in as necessity by people interested in some choice, while necessities that are not convenient to dominant classes can be indicated as a matter of choice and hence set aside. This will generate heavy inefficiencies, thus leading reform projects to fall into discredit and to fail. Such failures enable the adversaries of planning to proclaim that we must all place our trust in spontaneous processes. In Chap. 1, we saw that the distinction between normative and positive side may imply crucial misunderstandings and that such a distinction needs to be replaced by that between necessity and choice-possibility. Well, such a replacement is of a central importance with regard to programming.

¹⁸F. Archibugi has argued acutely against positive economics. His emphasis on the 'programmatic approach' highlights the most relevant tools on optimal planning. But this kind of constructivism, which emphasizes doing and almost forgets being and ignores the distinction between 'necessity' and 'choice-possibility', expresses a totally unilateral constructivist feature, which is the main reason for the failure of the method of economic and social planning. See (Archibugi 2007), Preliminary draft, Italian.

Social planning and reforms always present a challenge because reforming actions invariably collide with existing interests and so engender opposition. The almost inert kindness of a lot of friends does not counter the rancor and determined opposition of only one enemy infuriated by the injury of his interests. If it is not scientifically evident *what must be done and what can be the object of mediation*, every social plan and proposal for reform is doomed to fail and spontaneous tendencies will prevail. More precisely, planning and reforming action, if deprived of scientific foundation, will succeed only if they are able to promote fanaticism or obtain the support of powerful interests.

The failures of social planning have been mainly caused by the analytical privations considered above. With significant exaggeration, national plans have sometimes been described as 'dream books'. But if planning is a book it should have been a book with two chapters: one chapter on 'necessities' and one on 'choice-possibility', the latter being a matter of political mediation. Reforms concerning 'necessity' should have priority and should never be omitted or postponed. What remains may be the object of political discussion.

The confusion between necessity and choice-possibility, between what must be done and what may be done, has often caused a deep fracture and contrast between the short and the medium term. More precisely, it has favored the advent of critical conditions that have suggested or determined short-term measures (monetary, budget and demand regulation policies) thus postponing structural reforms. In short, the urgencies of the short run have often been addressed at the expense of their structural roots. In this way, political action became the servant of spontaneous tendencies, thereby substantially undermining reform projects. It may be useful to provide a brief illustration of an outstanding failure of economic planning where this is highly necessary, that is, in the presence of extensive advanced and backward sectors and areas, as Italian experience shows.

Italian planning was largely inspired by the Keynesian teaching. The so called Reference Framework of the first national plan used a static Leontief model and the second national plan a dynamic Leontief model, thus taking the sectoral final demand as the engine of the economy. Detailed reference, in the plan, to the question of the territorial dualism represented merely an addition arranged outside the general framework. The industrialization of the South of Italy (almost one half of the country) was mainly committed to capital intensive investment by state industries benefiting from high incentives irrespective of productive efficiency. This, together with high wages paid by the sectors productivity leaders and aimed at promoting mass consumption (consumeristic capitalism) and at establishing constant prices in those sectors (i.e. avoiding prices declining), did not help the creation of employment in the South but, instead, favored a mass exodus from traditional sectors and backward areas, mainly agriculture and handicraft, the abandonment of social and residential capital existing in those areas, and a parallel shortage of housing and urban congestion in the regions to which migration was directed. Only one part of this massive migration from the South found employment in the dynamic sectors of Northern Italy. The consequence was a rapid expansion of a 'refugee sector' (the retail trade and other low productivity sectors with market power, employment in the public

administration and other forms of public assistance). The imitational extension to refugee sectors of the wage increases in the advanced sectors, and inefficient public expenditure mainly in the South, fostered a large inflationary potential and a growing public deficit and debt, thus obliging the turn to restrictive policies and hence pushing the economy toward stagnation. These absurdities were favored by a diffused Keynesian conviction as to the expansionary virtue of demand, whatever its content, that contributed to justifying all sorts of waste as useful in order to stimulate growth. Economic and social planning, as largely inspired by Keynesian view, did not propose policies to counteract those pathologies that constitute an unfortunate inheritance oppressing Italian society and stand at the heart of present day difficulties. Such vicissitudes of fortune bear witness to an impressive ignorance of the binary ‘necessity-choice possibility’. Some rethinking of the Italian experience of planning was expressed by one of its main authors, Giorgio Ruffolo,¹⁹ but within an overall Keynesian view.

A formal model describing this case and its vicissitudes, together with some econometric applications, may be found in Fusari (1987).

2.9 Conclusion

The initial development of social theory was heavily influenced by the thought and discussion of philosophers. Later, the separation of social from philosophic thought, fully justified by the deviations from scientific method generated by the links between the two, and the steady advance of specialization have led to the progressive narrowing of the scope of social theory. Furthermore, this provides an unsatisfactory treatment of the ethical-ideological problem, of the organic-functional and conflictual aspects and, more broadly, the distinction between choice and necessity and other related issues. The work of three of the most wide-ranging and famous social theorists – Marx, Weber and Parsons – fully bears witness to the analytical shortcomings of current social theory. The harm that results from this state of affairs, especially in the sphere of the organization and management of social systems, is glaringly obvious, and the present tendency is for the situation to be exacerbated.

We have seen in the previous chapter that reliance upon methodology based strictly on observation (and in this context it does not matter whether it is deductive or inductive-experimental) entails the implicit assumption that everything that happened had to happen and, furthermore, privileges the idea of spontaneous process: from the careful observation of reality (conceived of as necessity) one seeks to derive scientific “laws” as guides to action. We have also seen that the constructivist method that replaces the observation of being with an emphasis on doing does not offer a more satisfactory perspective; indeed, we have provided an extensive analysis of the shortcomings of such a method with reference to the main ground of its application: economic and social planning.

¹⁹ See, Ruffolo (1973) *Rapporto sulla programmazione*, Laterza, Bari.

The existence of the optional-innovative aspect refutes the validity of the observation-verification method. At the same time, it complicates the derivation of general principles. This chapter has sought a way toward possible solutions to these methodological difficulties and a way to remedy the failures of constructivism by delineating a proposal on method able to meet those basic features of social reality and to marry being and doing in the context of an organizational and realistic perspective upon the social sciences.

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