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**TELEOLOGY DEPRIVED OF THEOLOGY: A HAYEKIAN
READING OF ADAM SMITH**

TELEOLOGIA SEM TEOLOGIA: UMA LEITURA HAYEKIANA DE ADAM SMITH

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Dissertação apresentada ao Departamento de Economia da Faculdade de Economia, Administração, Contabilidade e Atuária da Universidade de São Paulo (FEA-USP) como requisito parcial para obtenção do título de Mestre em Ciências.

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Abstract

The intellectual imbrication between Friedrich Hayek and the Scottish moral philosophers of the 18th century, especially Adam Smith, is well known. Hayek claims that they grasped the connection between spontaneous orders and evolution, in the sense that they were the pioneers in realising that they are “twin ideas” (Hayek, 1967a, 1973a, 1988). The conflation of these two theoretical traditions in Hayek’s late social theory has been criticised by several authors (Barry, 1982; Vanberg, 1986; Petsoulas, 2013). Most of them associate this alleged misconception with Hayek’s misapprehension of the theory of spontaneous orders evoked by those moral philosophers. In this sense, this work employs a Hayekian reading of Adam Smith and shows that the conflation is possible if we employ a teleological approach to the latter. Through the secular and teleological Hayekian lenses, Smith’s social theory emerges as somewhat deterministic, since commercial society would already have been inscribed by nature in human beings, guiding their behaviour towards the conducts that are most conducive to the rise and maintenance of that social order.

RESUMO

A imbricação intelectual entre Friedrich Hayek e os filósofos morais do século XVIII, especialmente Adam Smith, é bastante conhecida. Hayek afirma que os escoceses foram pioneiros em notar a relação entre ordens espontâneas e evolução, reconhecendo-as como “ideias gêmeas [twin ideas]” (Hayek, 1967a, 1973a, 1988). A combinação de tais tradições teóricas na teoria social tardia de Hayek foi alvo de crítica por diversos autores (Barry, 1982; Vanberg, 1986; Pet-soulas, 2013), de modo que a maioria deles atribui a origem desta suposta confusão à inapreensão de Hayek com relação à teoria da ordem espontânea nos autores escoceses. Nesse sentido, este trabalho apresenta uma leitura hayekiana de Adam Smith e mostra que a combinação teórica proposta por Hayek é possível se empregarmos uma interpretação teleológica da teoria smithiana. Através das lentes seculares e teleológicas de Hayek, a teoria social de Smith emerge sobremaneira determinística, já que a sociedade comercial já estaria inscrita pela natureza nos seres humanos, guiando seu comportamento em direção às condutas mais propícias ao surgimento e manutenção desta ordem social.

It says: "In the beginning was the *Word*."
Already I am stopped. It seems absurd.
The Word does not deserve the highest prize,
I must translate it otherwise
If I am well inspired and not blind.
It says: In the beginning was the *Mind*.
Ponder that first line, wait and see,
Lest you should write too hastily .
Is mind the all-creating source?
It ought to say: In the beginning there was *Force*.
Yet something warns me as I grasp the pen,
That my translation must be changed again.
The spirit helps me. Now it is exact.
I write: In the beginning was the *Act*.
(*Goethe's Faust* - v.1224-1237)

If God did not exist, it would be necessary to invent Him
(*Voltaire*)

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Although written in two hands, this dissertation was hardly conceived by a single mind. It may seem as a lonely endeavour, but it is actually a collective and, in some sense, spontaneous intellectual formation. It may appear as a preconceived and designed exercise in which every piece was carefully allocated, thus creating a harmonic totality. However, it is a retrospective illusion caused by the fact that every chapter ends up performing a particular function on the whole. This academic work is the emergent result of several contributions.

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In honour of
Annita Edith Veiga (1934-2023)
and Antonio Alves Veiga (1927-2020);
To Eduarda Miller de Figueiredo

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1 Introduction

Friedrich August von Hayek (1899-1992), one of the Nobel Prize in Economics laureates of 1974, is arguably one of the most influential economic thinkers of the twentieth century. Commonly seen as one of the towering figures of the Austrian School of Economics, side by side with Carl Menger, Eugen von Böhm-Bawerk, and Ludwig von Mises, he is very much indebted to the works of a group of Scottish moral philosophers of the Eighteenth-Century, particularly to Adam Smith (1723-1790). Throughout the 1930s, when Hayek was already Professor at the London School of Economics, his discomfort with neoclassical orthodoxy increased. From this moment of his intellectual development on his references to Adam Smith and other Scottish moral philosophers grow in importance. In Chapter 2, we analyse in detail three moments of this reception, roughly divided into decades, beginning with *The Abuse of Reason Project*, of the 1940s and finishing with the *Evolutionary Turn* of the 1960s.

In the 1940's, Hayek saw them as proponents of true individualism, as opposed to the false individualism of Cartesian lineage, in the sense that they would have correctly apprehended methodological individualism. Hayek ascribes this to the fact that they took into account the severe limitations in human knowledge. Accordingly, Adam Smith and the Scots interpreted human institutions as social formations that emerged through the actions of the individuals, although none of them intended to produce any of these institutions. The result is what he would later call spontaneous order. This view on the Scottish thinkers is part of a ten-year project in Hayek's career that would later be denoted by *The Abuse of Reason* (Caldwell, 2008)

In the 1950's, Hayek delves deeper into human psychology in order to understand the ontological and epistemological limitations on human knowledge (Hayek, 1952a,b). He begins to understand social phenomena as complex structures, which demands a different take on scientific endeavours in accordance with their proper degree of complexity. In contrast to physical sciences, social sciences cannot grasp their objects in their totality, which means that social scientists should follow a *compositional method* based on a mental reconstruction that imposes unity on social wholes (Hayek, 1955b). According to Hayek, this method would already have been employed in the field of historical reconstruction by Adam Smith and the other Scottish philosophers, as they worked with a method known as conjectural history.

From the 1960's onwards, Hayek blends this spontaneous order tradition with evolutionary the-

ory, claiming that they are “twin concepts” (Hayek, 1967a, 1973a, 1988). The conflation of these two ideas would have already been anticipated by the Scots, as they understood social institutions as byproducts of a process of selection that gradually takes place as individuals unconsciously follow rules of conduct, whose observance is responsible for the maintenance of the social order, thus supporting the survival and material improvement of the social group that adheres to them. Hayek understands that spontaneously generated social orders undergo an evolutionary process, that is, the unconsciously observed system of rules of conduct is selected as it competes with others. Hayek claims that social orders are purposive systems but deprived of intentionality (Hayek, 1955a), that is, agents act *as if* they intended to produce and maintain them, thus social formations, such as markets, are best regarded as *quasi-teleological* (Hayek, 1961, p.383).

We finish this Chapter by exploring the criticism directed at Hayek in this third moment. The critics claim that Hayek conflates two very different ideas that should not go hand in hand. Despite their different targets — some claim that Hayek would not have described the causal mechanisms that explain social adherence to self-sacrificial behaviour (Vanberg, 1986; Petsoulas, 2013) and would not have employed a proper invisible-hand argument; others insist that Hayek would have misused functionalism, which again would not entail a proper causal explanation (Vanberg, 1986) – we show that the majority of these authors associate the problems they see in Hayek’s theory as a misreading of the Scottish moral philosophers. The “twin ideas” conundrum of late Hayekian social thought sets the stage for the remainder of our work, based on a partial reassessment of Adam Smith’s philosophy. Our thesis is that we can read Smith in a way that supports this late Hayekian reading, thus showing that spontaneous orders and evolution may not be antagonistic. In other words, we intend to show how a late Hayekian interpretation of Smith can be made to work.

We argue that one does not fall into contradiction by conflating the twin ideas if one considers that both spontaneous orders and evolution use functional teleological reasoning to explain their scientific objects. In Chapter 3 we offer an epistemological digression to dissect three concepts mobilised by Hayek and his critics: invisible-hand arguments, unintended consequences, and functionalism. To deal with the latter topic in particular, we must engage with philosophy of biology, since Hayek himself draws from there (Bertalanffy (1933, 1950a, 1968); Braithwaite (1953); Hardin (1959); Popper (1979) are among his sources). Following Hayek, we argue that Darwinian evolutionary theory faces the same kind of problem that social theory does, namely, the absence of historical record concerning

the origin of phenomena. To circumvent this issue, biological evolutionary theory and social theory resort to similar tools, such as final causes explanations and conjectural reconstructions. We show that a possible way to respond to these problems is by using Ernst Mayr's (1974; 1988; 2004) concept of *teleonomy*, which embraces teleology without using the expedient of intentionality, since it adopts the concept of a pre-inscribed codification present in the organisms, which directs their behaviour, namely, a *programme*.

If, in Chapter 2 we discuss how Hayek employed these kinds of tools, in Chapter 4 we show how they appear in Adam Smith, exploring three themes where he unambiguously employs functional-teleological arguments. The final cause arguments developed by Smith form the backbone of a theological reading, the *New View of Adam Smith*, which draws on the work of Jacob Viner (Alvey, 2007). This reading seeks to ascribe to teleology an importance that more traditional Smithean scholars refuse to concede (Macfie, 1967; Schneider, 1979; Haakonssen, 1989; Otteson, 2002). We contrast this *New View* with Hayek's secular interpretation, which we reconstruct in the following chapter using the toolkit borrowed from biology.

In Chapter 5, we show that the secular teleological reading of Smith, the one we argue would be Hayek's own interpretation of the moral philosopher, is possible if we recover Smith's methodological and epistemological texts. Orders are a product of the observer's imagination, which she projects onto the world and also onto religion. That is why, we maintain, religion may not have induced Smith's views of Nature, it would actually be the other way round. In this sense, we interpret Smith's circumlocutions as metaphors of a dynamic self-organising process, whose rise and maintenance are achieved *as if* agents intended to produce these results. As Hayek, Smith would have employed these fictional notions in order to interpret the paradoxical notion of purposive systems deprived of intentionality. Fictional heuristic expedients are common in the history of scientific thought and are welcome in situations where experimentation is unavailable and the degree of complexity is high (Vaihinger, 2021), which seems to be the case in both social and biological sciences.

However, reading Smith through Hayekian lenses is not without consequences. If Smith emerges as a secular author who understood social systems as spontaneous orders, the conflation between order and evolution makes his Four Stage Theory a somewhat deterministic account of the origin and development of a commercial society. Even if not designed, the latter would already have been programmed in human nature. In this reading, modern commercial society is a spontaneous order but

the only one possible. Depending on the prevailing institutions of each society, it might take more or less time to get there, it might even take an unnatural inversion of stages, but the end is the same for all of them.

2 Hayek and the Journey towards Evolutionary Theory

In this chapter, we will go through part of Hayek's intellectual trajectory. We begin with Hayek's approach to the Scottish Enlightenment in the 1940s, when he focused on how the moral philosophers conceived human rationality and how they differed from Cartesian rationalism. This first period, denominated by *The Abuse of Reason* project, is characterised especially by the construction of Hayek's understanding, with the help of Adam Smith and others, of the social formations as emergent spontaneous orders. From the 1950s onwards, Hayek conceives the social orders as complex systems which cannot be grasped in their totality, thus entailing the need for explanations of the principle through mental reconstructions. From the 1960s onwards, Hayek consolidates the view that spontaneous orders are also adaptive; that is, they are subjected to a process analogous to natural selection, in the sense that both the order itself and the rules of conduct that prompt both its origin and maintenance are selected and evolve in time. This discovery, Hayek argues, would have already been made by Adam Smith and the other Scots, in the sense that Hayek claims that spontaneous orders and evolution are twin concepts.

In the last section, we will present several criticisms that were directed towards Hayek's late social theory. Most of the authors criticise the conflation of spontaneous orders and evolution in the sense that they are two different concepts that should not go hand in hand. They ascribe this potential mistake to Hayek's misapprehension of the ideas of spontaneous orders formulated by the Scottish Enlightenment.

2.1 The Abuse of Reason Project

2.1.1 Individualism

Scottish moral philosophers of the 18th century, along with traditional German historical scholarship and the historical school of law, figure as the main theoretical influences on Hayek (Caldwell, 2008, p.25), subsidising his views on rationality, individualism, and scientific method. The Scottish approach was grounded on a judicious apprehension of *individualism*, which, in its turn, was the result of proper considerations of the limits of *rationality*. These conceptions engendered a particular social view, which Hayek very dearly believed, that "many beneficial social institutions were not designed but emerged spontaneously" (Caldwell, 2008, p.279). It is by providing "a plausible explanation of

the formation of ‘spontaneous social products’ ” (2008, p.280) that the Scottish moral philosophers, markedly Adam Smith, contributed, in a first moment, to Hayek’s project of the *Abuse of Reason*, spanning roughly ten years, from 1941 to 1952 (2008, p.241). In this sense, in this first section, we will see the differences that Hayek has drawn on what he considers to be the true and false individualism, as well as the limits of human rationality that produce these very notions. For Hayek, as we shall see, there is a clear and insurmountable limitation of human knowledge, which could only be circumvented by social institutions, for they constitute the embodiment of previously accumulated human empirical knowledge, and although they were not designed for any specific purpose, they still fulfil important social functions.

Hayek discerns between two streams of thought regarding individualism. The British tradition, encompassing, mainly, Scottish Enlightenment thinkers, such as David Hume, Adam Smith, and Adam Ferguson, is considered to be the *true* conception of individualism (Hayek, 1946, p.48); whereas the French, or Continental, tradition, descending from Cartesian rationalism and contractualism, would be regarded as the *false* kind (1946, p.50).

Hayek makes it clear that individualism is in fact a theory of society and “an attempt to understand the forces which determine the social life of man” (Hayek, 1946, p.52). This statement, according to him, should be enough to demote any attempt to classify individualism in terms of “isolated or self-contained individuals, instead of starting from men whose whole nature and character is determined by their existence in society.” (Hayek, 1946, p.52). For Hayek, the individual is embedded in society and should be analysed from there. Far from admitting the precedence of an entity that “exist[s] independently of the individuals which compose them” (1946, p.52) named society, Hayek deals with individuals as they live *in* society, exploring the consequences of sociability on them. The individual engages in social processes and, since she inhabits a complex society in which the consequences of her actions extend “far beyond his [her] possible range of vision”, she must adhere to certain abstract principles embodied in rules, in order to make conviviality possible.

The main difference concerning the two kinds of individualism is that the true one, which descends directly from Adam Smith, does not resort to any designing agent that conceives and produces social institutions. The latter are the product of the “spontaneous collaboration of free men” which “often creates things which are greater than their individual minds can ever fully comprehend” (1946, p.53-4). According to Hayek, this conception is “the great discovery of classical political economy

which has become the basis of our understanding not only of economic life but of most truly social phenomena” (1946, p.54). As for false individualism, this view insists that social phenomena are designed consciously¹ and deliberately to attain human needs, thus societies are formed by the bond established by a contract comprising individuals who perceive the benefits that accrue from being in society and, consciously, submit to the authority of a sovereign. This kind of social conception portrayed by Hayek embodies a rationalism which he calls by the name of *constructivism* (Hayek, 1955a, p.91), whose “basic conception [...] can be expressed in the simplest manner by the innocent sounding formula that, since man has himself created the institutions of society and civilization, he must also be able to alter them at will so as to satisfy his desires and wishes (Hayek, 1970, p.338).

The tendency to interpret social phenomena as the byproduct of a designing mind² comes from “a deeply ingrained propensity of primitive thought to interpret all regularity to be found in phenomena anthropomorphically” (Hayek, 1973a, p.9). This disposition to classify events in this sense comes from the fact, according to Hayek, that organisms, during the process of their development, acquire a repertoire of perceptual patterns by having as a reference the movements of their own bodies (*proprioceptive*). In this sense, these impressions are internalised and become a way of classifying external events in a sort of animistic way³. This primitive way of thinking tries to give some coherence to otherwise dispersed phenomena, making it possible to conceive them as wholes. In Hayek’s words,

Our tendency to personify (to interpret in anthropomorphic or animistic terms) the events we observe is probably the result of such an application of schemata which our own bodily movements provide. It is they which make, though not yet intelligible, at least perceivable (comprehensible or meaningful) complexes of events which without such perceptual schemata would have no coherence or character as wholes. (Hayek, 1962, p.241)

There is yet another important difference between false and true individualists. The divergence

¹Hayek even claims that socialism and the view that economic calculation is possible was influenced by the French tradition. In his own words, “The result of this was that the transition from the older rationalist views of society, which regarded it as a conscious creation of man, to the newer view which wanted to re- create it on scientific principles, took place in France without passing through a stage in which the working of the spontaneous forces of society was generally understood. The revolutionary cult of Reason was symptomatic of the general acceptance of the pragmatic conception of social institutions — the very opposite of the view of Smith” (Hayek, 1955a, p.222).

²Hayek criticises legal positivism on the same terms. For him, justice is a system composed of inherited and inarticulated rules that have arisen spontaneously, instead of being, as the rationalist conception would like, deductive constructions of ‘natural law’ (Hayek, 1967c, p.299).

³Hayek claims that this kind of thinking influenced constructivism, in the sense that, although the latter deals with intelligent design it does not ascribe the possession of a mind by aggregates such as society. In Hayek’s words: “We shall in general refer to this propensity as ‘anthropomorphism’, although the term is not wholly accurate. To be more exact we ought to distinguish between the even more primitive attitude which personifies such entities as society by ascribing to them possession of a mind and which is properly described as anthropomorphism or animism, and the slightly more sophisticated interpretation which ascribes their order and functioning to the design of some distinct agency, and which is better described as intentionalism, artificialism, or, as we do here, constructivism” (Hayek, 1973a, p.27)

here is on the method of social analysis. The rationalistic approach attempts to copy the model of natural sciences by treating “the objects of human activity in terms of their ‘real’ attributes instead of as what they appear to the acting people” which requires that the “student of society [be considered] as endowed with a kind of super-mind, with some sort of absolute knowledge, which makes it unnecessary for him to start from what is known by the people whose actions he studies” (Hayek, 1955a, p.51). False individualists, or rather, constructivists, treat social phenomena as if they were strictly objective. Hayek denotes the latter approach as *scientistic*, that is, as a way of thinking and theorising that is based on the assumption that social sciences should proceed as physical sciences do, using the same methods and supposing the same degree of objectivity of their concepts. However, in social sciences, the very conceptions people carry regarding a particular element in the social structure, inasmuch as it is the cause of a social phenomenon, have to be considered by the social scientist. Nevertheless, Hayek makes a distinction between ideas that impinge causality and those related to the considerations people have about social phenomena (Hayek, 1955a, p.37). In order to distinguish clearly the two sorts of conception, Hayek gives as an example the opinion people have on the behaviour of prices, which ultimately end up causing changes in their values, as opposed to the beliefs people have on the nature of the economic system which does not affect it altogether. In his own words,

The first kind of opinions and beliefs are a condition of the existence of the “wholes” which would not exist without them; they are, as we have said, “constitutive,” essential for the existence of the phenomenon which the people refer to as “society” or the “economic system,” but which will exist irrespectively of the concepts which the people have formed about these wholes. (Hayek, 1955a, p.37)

However, people’s conceptions are not the object that has to be explained, “but merely the elements from which we build up the structure of possible relationships between individuals” (Hayek, 1955a, p39). The social analyst must consider what people think about social phenomena and must consider them only insofar as they guide and *cause* human action. They consist of a common mental procedure carried out by people’s minds in order to classify and organise their empirical experience. In this sense, it is “merely another way of saying that the qualities which we perceive are not properties of the objects but ways in which we (individually or as a race) have learnt to group or classify external stimuli” (Hayek, 1955a, p.47). Instead of appealing to an objectivity, Hayek understands that social phenomena have to be mentally reconstructed since they do not present themselves immediately as wholes, and they cannot be apprehended by mere observation. The social scientist can only identify

the elements of social structures, so she has to infer the relations among their elements, “a procedure which often leads to the discovery of principles of structural coherence of the complex phenomena which had not (and perhaps could not) be established by direct observation” (Hayek, 1955a, p.38).

Therefore, social sciences must work differently from natural sciences, in the sense that

the physical sciences necessarily begin with die complex phenomena of nature and work backwards to infer the elements from which they are composed. The place where the human individual stands in the order of things brings it about that in one direction what he perceives are the comparatively complex phenomena which he analyzes, while in the other direction what is given to him are elements from which those more complex phenomena are composed that he cannot observe as wholes. While the method of the natural sciences is in this sense, analytic, the method of the social sciences is better described as compositive or synthetic (Hayek, 1979, p.38-9)

Hayek criticises what he calls *historicism* on the same grounds. Historicism proceeds by observing historical facts and deriving inductively the social laws of motion. They would work through generalisations. However, this would not be the same position that the “older historical school” defended, since the latter saw historical phenomena as “singular or unique”, so that they could only be understood *genetically*⁴ “as the joint result of many forces working through long stretches of time” (Hayek, 1955a, p.65). This causal-genetic, or compositive, approach “which explains how such institutions can arise as the unintended result of the separate actions of many individuals” is the one in which “Adam Smith occupies an honorable place” (Hayek, 1955a, p.65).

The *historicism* notion of generalisation would be impossible for Hayek, since he apprehends social phenomena as something that is reconstructed from elementary parts in the social scientist’s mind. There is a precedence of theory upon empirical experience, in such a way that people understand phenomena through an abstraction process, that is, “only by recognizing it or its parts as members of certain classes of phenomena, and the explanation of the particular phenomenon presupposes the existence of general rules” (Hayek, 1978, p.67).

The differences between false and true individualists amount to divergencies regarding rationality. The tradition that goes back to Aristotle and Cicero was inherited, mainly, by the Scottish philosophers of the eighteenth-century, “in particular Adam Smith, who built up a true theory of society and of the

⁴On this subject, Mayer (1932) establishes a division on the theory of prices regarding those that had a *causal-genetic* approach and those with a functional view. The former sought to explain prices by referring to their formation process, that is, how prices came about; whereas the latter sought the best representation of prices, usually done through mathematical expressions. Causal-genetic theories are associated with the Austrian School, whereas functionalist theories are associated with general equilibrium theories. Caldwell (2008, p.47) considers the causal-genetic, here identified with the *compositive method* approach as one of the “fundamental Austrian tenets”, along with “the notion of unintended consequences”.

rôle of reason in the growth of civilization” (Hayek, 1964, p.52). The proponents of constructivism conceive of social institutions as they do since they assume that “Reason, with a capital R, is always fully and equally available to all humans and that everything which man achieves is the direct result of, and therefore subject to, the control of individual reason” (Hayek, 1946, p.54). The rationalistic approach rests on

The belief that only a synthetic system of morals, an artificial language, or even an artificial society can be justified in an age of science, as well as the increasing unwillingness to bow before any moral rules whose utility is not rationally demonstrated, or to conform with conventions whose rationale is not known, are all manifestations of the same basic view which wants all social activity to be recognisably part of a single coherent plan (Hayek, 1946, p.68).

This conception of the ubiquity of reason is especially problematic in economics. In his seminal article of 1937, *Economics and Knowledge*, Hayek exhibits his concerns with the notion of equilibrium that permeated economic theory in his time. Hayek maintained that formal equilibrium analysis would have fallen into tautology once economic theory ignored the question of how knowledge is acquired and transmitted in society. By assuming complete and perfect knowledge, the proposition of equilibrium became a mere transformation of the assumptions from which it was deduced, that is, a truism without any empirical validity (Hayek, 1937, p.57). This tautology is well described in the following passage.

If we possess all the relevant information, if we can start out from a given system of preferences, and if we command complete knowledge of available means, the problem which remains is purely one of logic. That is, the answer to the question of what is the best use of the available means is implicit in our assumptions.(Hayek, 1945, p.93)

If complete and perfect knowledge is assumed, the economic problem of society is thus annihilated⁵ since it is not a matter of how to allocate *given* resources, but, instead, a matter of how to make “the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge which is not given to anyone in its totality ” (Hayek, 1945, p.93). In this way, economic theory should

⁵Hayek’s view on what the object of economic analysis contrasts with the one of Lionel Robbins, an important economist that discussed methodological issues. The latter thought that economics should deal only with those phenomena that assume the form of choice, that is, those which have various ends, in which time and the means for achieving these ends are limited and capable of alternative uses (Robbins, 1932, p.12-3). Robbins seems more concerned with scarcity, whereas Hayek seems more preoccupied with the use of this individual and particular knowledge that is not available as a whole, as a comprehensive unity, to anyone.

elaborate a hypothesis on how “experience creates knowledge”(Hayek, 1937, p.69), that is, how individuals engaging in the market sphere learn and convey socially produced knowledge.

Another economic problem arises when one assumes perfect and complete knowledge. In this sense, Hayek develops another contention with neoclassical theory; he opposes the perfect competition approach, since it relies mainly on the same assumption of perfect knowledge by the individuals. The problem is the same as before, that is, by assuming perfect knowledge, the theory loses what it is fundamentally trying to state. In other words, the theory of competitive equilibrium, stating perfect competition, ends up with a scenario deprived of any activity that resembles competition (Hayek, 1948, p.105). In a state of perfect competition, every agent has the same amount of knowledge about the economic system. Producers are widely and completely aware of the best methods of production. In this way, when a new method of production is introduced, the knowledge of this change spreads throughout producers, so that the economic system immediately adapts to such changes. However, as Hayek (1948, p.113) asserts, competition operates precisely in the interstice between the previous state in which the change had not yet occurred and the state after the adaptation to the change took place. Therefore, competition consists of a *discovery procedure* in which new knowledge is formed and spread throughout the social body through a process of adaptation (Hayek, 1948).

The important thing for Hayek, since human knowledge cannot be galvanised in one single entity, is how it is going to be articulated by social agents. If in his 1937 article Hayek acknowledges the wider scope of his conception of knowledge, he broadens it even more in 1945 in his *The Use of Knowledge in Society*. In the former, he focuses on the alternative possibilities of action, whereas in the latter he concentrates on the knowledge of the “particular circumstances of time and place” that each individual has access to (Hayek, 1945, p.95). The focus now is on the uniqueness of the information possessed by each one rather than the omniscience⁶ that homogenises all agents as in neoclassical theory. The fragmentary⁷ character of knowledge through which “each member of society can have only a small fraction of” (Hayek, 1973a, p.14) does not preclude the progress of society;

⁶Omniscience also poses a threat on liberty, since it is from the unpredictable situations, as well as his ignorance regarding his own wishes, that man has new opportunities to attain his goals. “If there were omniscient men, if we could know not only all that affects the attainment of our present wishes but also our future wants and desires, there would be little case for liberty. And, in turn, liberty of the individual would, of course, make complete foresight impossible. Liberty is essential in order to leave room for the unforeseeable and unpredictable; we want it because we have learned to expect from it the opportunity of realizing many of our aims” (Hayek, 1960, p.81)

⁷“The only fact which we can regard as given is that there are particular people who have certain concrete knowledge about the way in which particular things can be used for particular purposes. This knowledge never exists as an integrated whole or in one mind, and the only knowledge that can in any sense be said to exist are these separate and often inconsistent and even conflicting views of different people” (Hayek, 1955a, p.52).

on the contrary, in market societies, agents are capable of putting in motion much more knowledge than they possess since they are embedded in a social structure capable of conveying information that all of them can use through the price system and culture.

Hayek values the individual experience of each agent and the small changes in their known and particular environment to the point of stating that statistical aggregates cannot capture the movements of these minor changes, and thus the ‘law of large numbers’ would have no application in this case, since it does not deal with a large number of elements. In this sense, “the continuous flow of goods and services is maintained by constant deliberate adjustments, by new dispositions made every day in the light of circumstances not known the day before, by B stepping in at once when A fails to deliver.” (Hayek, 1945). For Hayek, it is fundamental that people are not constrained to exert their capacities⁸ and “use their knowledge to the best effect”, insofar as they are “in the best position to know the circumstances surrounding their action” (Hayek, 1960, p.139). Although reason plays only a small role in human action, it should be carried as far as possible and used in the most effective ways. Hayek works with a narrow concept of reason, in the sense that it “can mean no more than some degree of coherence and consistency in a person’s action” (ibidem).

2.1.2 Price System as Knowledge Communicator

The change in particular circumstances and the process of learning of each individual are of great importance since we are dealing with a system of decentralised and dispersed knowledge. However, since the plans of all individuals in society are woven together, there has to be some sort of mechanism that communicates the small changes of each particular circumstance to the other agents in order for them to plan their actions. According to Hayek, the price system meets this requirement “by attaching to each kind of scarce resource a numerical index which cannot be derived from any property possessed by that particular thing, but which reflects, or in which is condensed, its significance in view of the whole means- end structure” and thus the individual “by adjusting the quantities one by one, he can appropriately rearrange his dispositions without having to solve the whole puzzle *ab initio* or without needing at any stage to survey it at once in all its ramifications” (Hayek, 1945, p.99). Prices condense a huge amount of information to which the individual has access, and thus does not need to

⁸About this Hayek also states that: “What is essential to the functioning of the process is that each individual be able to act on his particular knowledge, always unique, at least so far as it refers to some particular circumstances, and that he be able to use his individual skills and opportunities within the limits known to him and for his own individual purpose”(Hayek, 1960, p.80)

know everything beforehand. To summarise the importance of the price system, Hayek argues that

The most significant fact about this system is the economy of knowledge with which it operates, or how little the individual participants need to know in order to be able to take the right action. In abbreviated form, by a kind of symbol, only the most essential information is passed on and passed on only to those concerned. It is more than a metaphor to describe the price system as a kind of machinery for registering change, or a system of telecommunications which enables individual producers to watch merely the movement of a few pointers, as an engineer might watch the hands of a few dials, in order to adjust their activities to changes of which they may never know more than is reflected in the price movement. (Hayek, 1945, p.100)

In this sense, Adam Smith, according to Hayek, would have noticed this aspect of the price system, that is, its capacity in “inducing the individual, while seeking his own interest, to do what is in the general interest” (Hayek, 1945, p.102). Therefore, when individuals are “governed in their actions, not by the known concrete needs and capacities of their intimate fellows, but by abstract signals of the prices at which things were demanded and offered on the market”, they are of most help to the entire society (Hayek, 1976, p.120). The price system is a mechanism that helps man overcome their “constitutional ignorance of most of the particular facts”, thereby inducing them to make “the fullest use of the knowledge of concrete circumstances widely dispersed among millions of individuals” (Hayek, 1976, p.121). Hayek’s reading of Adam Smith portrays him as an anti-rationalist author, who realised men’s cognitive limitations, although he also recognised the role of mechanisms that convey knowledge, so man can circumvent this constitutive constraint and make the best use of the knowledge dispersed in society.

2.1.3 Social Institutions and Habits as Knowledge Communicators

The price system is not the only vehicle that transmits knowledge, insofar as habits, customs, rules, and social institutions are also the crystallisation of socially acquired knowledge. Human experience is embodied in these structures. Hayek thus focuses on two aspects regarding knowledge, namely “the transmission in time of our accumulated stock of knowledge and the communication among contemporaries of information on which they base their action” (Hayek, 1960, p.78). The first has to do with the “tools” men developed as human race which were transmitted as “the results of the experience of successive generations” (ibidem), whereas the second aspect concerns the guidance of human conduct by symbols or signs, such as the price system. About these tools Hayek maintains,

They consist in a large measure of forms of conduct which he habitually follows without knowing why; they consist of what we call 'traditions' and 'institutions', which he uses because they are available to him as a product of cumulative growth without ever having been designed by any one mind. Man is generally ignorant not only of why he uses implements of one shape rather than of another but also of how much is dependent on his actions taking one form rather than another. He does not usually know to what extent the success of his efforts is determined by his conforming to habits of which he is not even aware. (ibidem)

By apprehending social institutions as mechanisms of knowledge transmission that are a product of human experience which, in its turn, is the result of cumulative growth, Hayek makes an important step towards the comprehension of the social structures, mainly the market, the legal order as well as language, morals, and other important human institutions, as self-organising adaptive systems. That is when Hayek shifts his view on the Scottish Enlightenment, and Adam Smith in particular, towards the realisation that they would have been pioneers in conceiving those institutions as evolutionary adaptive orders. What enabled the Scottish Enlightenment to reach the conclusions they did, to which Hayek subscribes, was their antirationalistic approach, that is, their opposition against Cartesian rationalism. Instead of assuming that, since men are endowed with the faculty of reason, then they must have created the institutions that serve their needs, the Scots operated an inversion in this reasoning by claiming that it is the very social framework, *spontaneously* generated through the blind actions of many individuals pursuing their own interests but not aiming at the overall result, that created the proper environment that allows reason to flourish⁹ (Hayek, 1960, p,112). Let us now see how Hayek's approach to the Scots has changed as he develops an evolutionary approach to social theory.

2.2 The Evolutionary Turn

2.2.1 Complexity as Scientific Criterion

In his evolutionary turn, Hayek elaborates different criteria regarding scientific classification. Instead of the old division between the natural and social sciences, Hayek turns to the differences in the degree of complexity existing in the different scientific fields. Therefore, he seems to abdicate its previous division between purely objective facts, which were dealt by natural sciences, and those facts that had to account for the conception that each agent had about them, characteristically present

⁹About this: "The spontaneously grown institutions are "useful" because they were the conditions on which the further development of man was based" (Hayek, 1955a, p.83)

in the social sciences. He assumes that the only scientific method is the hypothetico-deductive one proposed by Karl Popper, as opposed to the inductive method. The former comprehends the formulation of some hypotheses which, by logical deployment, lead to conclusions that cannot be “definitely ‘verified’ but only increasingly confirmed by persistently unsuccessful attempts to prove them false”(Hayek, 1955b, p.197).

There is a negative character in Hayek’s considerations about the extent to which a scientific theory is able to predict new social phenomena. Scientific theories“ ‘forbid’ the occurrence of certain kinds of events” (ibidem). Therefore, there is a range of phenomena that can be predicted¹⁰ by theory. In this sense, the important thing is not what the theory allows, but what it precludes; thus, in the case of complex systems, it may not be possible to elaborate new hypotheses through observation, since “in the face of the variety and complexity of such a situation our imagination cannot suggest more precise rules than those indicated, no systematic testing will help us over the difficulty” (1955b, p.200). The paradigmatic example of a successful theory that deals with complex phenomena is, according to Hayek, the *theory of evolution* by natural selection (Hayek, 1955b, p.203). The latter does not aim at obtaining specific predictions about specific events, nor can their hypotheses be tested and refuted by observation, but the theory of evolution does preclude some events from happening and by doing so it can be refuted and thus is considered scientific (1955b, p.204). In this sense, since evolutionary theory, as a theory of complex phenomena, does not forbid a very large set of events and is only capable of predicting general abstract patterns, it carries a “small empirical content” (Hayek, 1964, p.264) and thus cannot be easily falsified.

There is still a cognitive limitation that precludes the assessment of complex social formations in their totality, in the sense that we are only able to make what Hayek calls *explanations of the principle*¹¹, which are “predictions merely of the abstract pattern the process will follow” (Hayek, 1973a, p.).

Since there are a very large number of variables involved, which interact with each other, the mere observation of the elements does not allow one to determine all the causal relationships between the variables or to infer the pattern of the whole structure empirically. In this fashion, when one deals with

¹⁰“For the purposes of this article it would indeed make no important difference if instead of ‘degrees of explanation’ we spoke throughout of ‘degrees of prediction.’ ” (Hayek, 1955b, p.201)

¹¹“By such an ‘explanation of the principle’ we shall provisionally understand an explanation which not only confines itself to showing ‘that such and such actions lie within the range of known physical actions, or that known physical phenomena produce effects similar to them’, but also that, though we may be able to explain the general character of the processes at work, their operation may be so complicated in detail as to place their full description forever beyond the power of the human mind.” (Hayek, 1952a, p.173)

social theory, which for Hayek is a kind of complex theory, she cannot reduce this intricate pattern of behaviour to simple and isolated relations as physics does. Since social theory involves the study of human action, it consists of men trying to unveil men's own behaviour and therefore their own minds, which according to Hayek are complex classificatory apparatus themselves (Hayek, 1952a).

2.2.2 Abstraction and Human Mind

Hayek understands the human mind as a structure of many elements (neurones) interacting with each other and ever changing their arrangement pattern in order to respond to changes in the external environment, that is, “[t]he classifying system may in this sense be regarded as embodying a theory of the external world” (Hayek, 1952b, p.366).

Any mechanism which makes the structure respond to different combinations of external events according to the different further events they are likely to produce implies that there exists inside the structure a system of relationships between events caused by the external circumstances, which is in some measure structurally equivalent to the system of relationships which exists between those external events (Hayek, 1952a, p.247)

We saw that Hayek understood the human mind as a classifying apparatus, but it consists of more than that. Its connections and patterns reflect what takes place in the external environment, thus impressing a kind of empirical knowledge in its structure. This knowledge is the product of an empirical experience that occurs both at the individual and at the species level; or, as Vanberg (2017, p.47) maintains, knowledge is a product of both phylogenetic and ontogenetic learning. In this sense, Hayek introduces an evolutionary dimension and presents the human species itself as a bearer and communicator of knowledge through generations. In Hayek's words

Sense experience therefore pre-supposes the existence of a sort of accumulated 'knowledge' of an acquired order of the sensory impulses based on their past co-occurrence; and this knowledge, although based on (pre-sensory) experience, can never be contradicted by sense experiences and will determine the forms of such experiences which are possible (Hayek, 1952a, p.280).

Therefore, what the social theorist does is try to explain another system of the same degree of complexity, and she can only do so by explanations of the principle; however, to assume that one is capable of comprehending the human mind and consequently, social phenomena, in its entirety, involves a logical contradiction (Hayek, 1964, p.269). In this fashion, one may argue that besides the

epistemological problem of knowledge dispersion, there is also an *ontological* limitation on knowledge, since the human mind is constrained by its own degree of complexity.

So far, we saw that Hayek highlighted the importance of the price system, social institutions, conventions, morals, and human mind itself as mechanisms that circumvent men's constitutive limitations on knowledge. However, there is another important element underlying these structures, namely, *rules*. In fact, for Hayek, "institutions are successful adaptations to the irremediable limitations of our knowledge, adaptations which have prevailed over alternative forms of order because they proved more effective methods for dealing with that incomplete, dispersed knowledge which is man's unalterable lot" (Hayek, 1968, p.72). Hence, "the reliance on abstract rules is a device we have learned to use because our reason is insufficient to master the full detail of complex reality" (Hayek, 1960, p.127).

A crucial aspect in Hayek's analysis is that people do not, and sometimes cannot, know the rules that govern their behaviour. The human mind itself not only operates in accordance with rules, but also is consisted of rules (Hayek, 1973a, p.18). The brain identifies certain aspects of reality and classifies them into groups according to certain attributes of the environment, so that when an individual faces the same conditions, she is able to evoke a class of actions that are adequate to and compatible with the external stimuli. Ultimately, rules are *dispositions* "towards *kinds* of movements can be regarded as adaptations to typical features of the environment, and the 'recognition' of such features as the activation of the kind of disposition adapted to them" (Hayek, 1969, p.320). Now, knowledge and rules become intertwined, since "knowledge is primarily a system of rules of action assisted and modified by rules indicating equivalences or differences or various combinations of stimuli" (Hayek, 1969, p.320). In relation to this, Hayek claims that

all sensory experience, perceptions, images, concepts, etc., derive their particular qualitative properties from the rules of action which they put into operation, and that it is meaningless to speak of perceiving or thinking except as a function of an acting organism in which the differentiation of the stimuli manifests itself in the differences of the dispositions to act which they evoke [...] the primary characteristic of an organism is a capacity to govern its actions by rules [...] its actions must be governed by abstract categories long before it experiences conscious mental processes, and that what we call mind is essentially a system of such rules (Hayek, 1969, p.320-1)

There is a precedence of the rules embedded in the human mind that guide our conduct over the capacity developed to articulate them in words. Actually, as we saw, for Hayek, it is not possible to

verbalise the whole body of rules that determine people's behaviour. In this fashion, it is appropriate to invoke Hayek's considerations on conjectural history in order for us to grasp why reason is a faculty that needs a proper and specific environment to develop itself. In other words, there is a precondition that allows men to develop reason, and only then are they able to use it in order to explain in verbal form the functioning of the external world.

2.2.3 Conjectural History: the Social Analogous of Evolutionary Theory

There are some similar difficulties regarding biological evolutionary theory and social theory which helps Hayek explain the importance of the impossibility concerning accurate predictions in complex systems. The reason why evolutionary theory falls into this logic of the other complex theories is that one cannot trace back all the changes that occurred in the environment that moulded and caused the phenotypical modifications during the process of natural selection¹². There is no record of these events, and the biologist can only infer, by observing successive changes in the organism's traits, what has happened in the course of its natural history. In this sense,

If it were possible to ascertain the particular facts of the past which operated on the selection of the particular forms that emerged, it would provide a complete explanation of the structure of the existing organisms; and similarly, if it were possible to ascertain all the particular facts which will operate on them during some future period, it ought to enable us to predict future development (Hayek, 1973a, p.16)

In the absence of historical record, one should resort, according to Hayek, to *conjectural history*, that is, “when we cannot say precisely how things did happen, to understand how they could have come about may be an important insight” (Hayek, 1979, p.156). Conjectural history is a heuristic procedure adopted by the Scottish Enlightenment¹³ to explain the rise of some social institutions, insofar as they also realised, as we saw, the limitations of human knowledge. In this sense, Hayek also uses conjectural history when he needs to address the problem of the origin of social institutions, that is, when he asks about what elements caused a specific social configuration, thus providing us “with the outline of a conjectural history of the origins of morality that approaches the generation of norms of behaviour in functional terms” (Smith, 2006b, p.134).

¹²“Though it is reasonable to believe that structures of the kind will in a definable environment always behave as they do, the existence of such structures may in fact depend not only on that environment, but also on the existence in the past of many other environments, indeed on a definite sequence of such environments which have succeeded in that order only once in the history of the universe.” (Hayek, 1967b, p.286)

¹³Hayek also mentions Bernard Mandeville as one of the thinkers that resorted to conjectural history as he describes how man rose above other animals by forming societies (Hayek, 1967a)

Hayek implements this technique to analyse social formations, claiming that “the problem of the formation of such structures is still a theoretical and not a historical problem, because it is concerned with those factors in a sequence of events which are in principle repeatable, though in fact they may have occurred only once” (Hayek, 1967b, p.287). The last quotation goes in line with Hayek’s criticism on historicism, since he seems to be advocating a primacy of theory over history; one cannot analyse history without having a previous conceptual framework guiding their thoughts. It also goes in line with the fact that Hayek understands that social orders are not immediately accessible to the human mind as wholes, but they have to be mentally reconstructed by inferring the relations amongst the elements that form the social structure. In Hayek’s words,

Conjectural history in this sense is the reconstruction of a hypothetical kind of process which may never have been observed but which, if it had taken place, would have produced phenomena of the kind we observe. The assumption that such a process has taken place may be tested by seeking for yet unobserved consequences which follow from it, and by asking whether all regular structures of the kind in question which we find can be accounted for by that assumption. (Hayek, 1967b, p.287)

Hayek claims that Carl Menger¹⁴ was the one who clearly recognised the need for a *genetic element* in social theory, that is, the need for an evolutionary theory of complex phenomena that accounts for by this causal-genetic element; in other words, what one needs is the explanation, even if it is a conjectural one, about the elements that *caused*, or *originated*, certain specific social formation. One could argue, in this sense, that conjectural history works in analogy with biological evolutionary theory, since they both perform mental reconstructions that take place in the absence of historical record, and they both work with *ex post* explanations.

Hayek explicitly used conjectural history for the first time in the epilogue of *Law, Legislation and Liberty* (1979) when he countered those theories which maintained that reason gave birth to culture, in the sense that man lives within functional social institutions because he deliberately designed them to attain his needs. Once again, Hayek revolves around the opposition between design and spontaneity.

Hayek claims that mind and culture developed concurrently instead of successively. His rationale is that man previously internalised a body of rules of conduct, which he observed without comprehending its effects. Ultimately, “[i]t was when these learnt rules, involving classifications of different

¹⁴Hayek asserts that Menger continued the evolutionary tradition that started with the Scottish Enlightenment. In his words, “After the beginnings made by the Scottish philosophers, the systematic development of the evolutionary approach to social phenomena took place [...] in the great survey of 1883 of the methods of the social sciences by the founder of the Austrian school of economics, Carl Menger, the central position for all social sciences of the problem of the spontaneous formation of institutions and its genetic character was most fully restated on the continent” (Hayek, 1973a, p.50)

kinds of objects, began to include a sort of model of the environment that enabled man to predict and anticipate in action external events, that what we call reason appeared” (Hayek, 1979, p.157).

2.2.4 Cultural Evolution: Group Selection and Rules of Conduct

Beyond biological evolution, which retains and transmits successful empirical knowledge obtained by humans as a race, there is another process of evolution, namely *cultural evolution*, since “there was certainly no justification for some biologists treating evolution as solely a genetic process, and completely forgetting about the similar but much faster process of cultural evolution” (Hayek, 1979, p.154). Although it is a separate process, cultural evolution has “in many respects the same pattern as biological evolution” (Hayek, 1971, p.359). When Hayek speaks of evolution he does not refer to an “unwinding’ of potentialities already contained in the germ”, that is, he does not mean ontogeny, and he does not mean a process governed by certain laws that “imply such a succession of particular steps” (Hayek, 1973a, p.24). However, about their similarities, Hayek claims that

Biological and cultural evolution share other features too. For example, both rely on the same principle of selection: survival or reproductive advantage. Variation, adaptation and competition are essentially the same kind of process, however different their particular mechanisms, particularly those pertaining to propagation. Not only does all evolution rest on competition; continuing competition is necessary even to preserve existing achievements (Hayek, 1988, p.26).

Moreover, both processes may interact, in the sense that “culturally transmitted patterns may in turn contribute to determine the selection of genetic properties” (ibidem). The reason why cultural evolution is much faster is because it has the advantage of having the transmission of acquired characters, that is, the inheritance of “characteristics in the form of rules guiding the mutual relations among individuals which are not innate but learnt” (Hayek, 1988, p.25). The process of learning is cumulative, making it possible for the child to learn, by imitation, abilities that their ancestors¹⁵ took a long time to learn through a process of trial and error (Hayek, 1971, p.359). Another important difference is that “cultural evolution operates largely through group selection” (Hayek, 1988, p.25). Let us now see how rules of conduct and group selection are related.

Rules of conduct do not serve any specific end; they are general principles that, in most cases, prohibit certain courses of action, and thus can be considered as *negative principles*¹⁶. That is why

¹⁵ “[C]ultural evolution is brought about through transmission of habits and information not merely from the individual’s physical parents, but from an indefinite number of ‘ancestors’” (Hayek, 1988, p.25)

¹⁶ It is interesting to notice that, as in the case of scientific criteria regarding complex systems, sometimes it is more

Hayek emphasises that the rules of conduct will never be the cause of one's actions, which could only be an external stimulus or an internal drive (Hayek, 1967b, p.280). They "largely consist of prohibitions ('shall not's') that designate adjustable domains for individual decisions"(Hayek, 1988, p.12), laying down "the principles determining the protected domain of each on which nobody must encroach" (Hayek, 1973b, p.123). These rules of conduct embodied in tradition gave rise to private property, tort and contract laws Hayek (1973a).

The rules of conduct are not static and have been the same since the dawn of men¹⁷. They evolve and get replaced by others through a process of *selection* in which the rules that survive are those that allowed the groups which adopted them, sometimes even accidentally – but always without knowing in advance¹⁸ what their consequences would be – to prevail over others. The success of a group is then perceived by other individuals that *imitate* the prosperous behaviour. In Hayek's words

The cultural heritage into which man is born consists of a complex of practices or rules of conduct which have prevailed because they made a group of men successful but which were not adopted because it was known that they would bring about desired effects. (Hayek, 1973a, p.17)

Although the adoption of those rules benefit the group that follows them, they are not created *aiming* at obtaining utility out of them, let alone an utility that accrues to the individual, it consists of a supraindividual benefit. Therefore, "The only 'utility' which can be said to have determined the rules of conduct is thus not a utility known to the acting persons, or to anyone person, but only a hypostatized 'utility' to society as a whole." (Hayek, 1973b). In consonance with his view of reason as a limited faculty, the overall result of the adoption of a rule cannot be predicted and the "functions' which these rules serve we shall be able to discover only after we have reconstructed the overall order which is produced by actions in accordance with them" (Hayek, 1967b, p.282).

This explanation that the rules are selected through their societal function or 'utility' makes up for a *functionalist* argument, that is, one that explains the occurrence of phenomena by the function it

important, for Hayek, to establish prohibitions, limits to what cannot be done, rather than asserting positively what has to be done.

¹⁷"the basic conclusion that the whole of our civilization and all human values are the result of a long process of evolution in the course of which values, as the aims of human activity appeared, continue to change, seems inescapable in the light of our present knowledge. We are probably also entitled to conclude that our present values exist only as the elements of a particular cultural tradition and are significant only for some more or less long phase of evolution— whether this phase includes some of our pre-human ancestors or is confined to certain periods of human civilization. We have no more ground to ascribe to them eternal existence than to the human race itself" (Hayek, 1964, p.273)

¹⁸"these rules and institutions embody knowledge distilled from past experience that is not apprehended in a conscious manner. For example we follow the rules of morality not because we are conscious of the beneficial results that will arise, but rather because we have some sense of the importance of obeying the rules themselves" (Smith, 2006b, p.116)

performs on the whole. However, this seems to imply an inversion of cause and effect “in the sense that the structures possessing a kind of order will exist because the elements do what is necessary to secure the persistence of that order” (Hayek, 1967b, p.288). Consequently, elements of an order are understood *as if* they had the *purpose* of maintaining that order, which entails a *teleological* argument, that is, the one that deals with end-directed phenomena. That is why Hayek establishes another connection between evolutionary biology and social theory, wherein the metaphorical purpose ascribed to the elements, such as organs in an organism, serves as an appropriate explanation for systems that have a self-organising tendency. Therefore, Hayek uses teleology in an almost paradoxical way, that is, depriving it completely from intentionality but preserving a blind orientation towards a goal.

Like some of the patterns of biological phenomena, those of the market are sometimes best comprehended if we regard them as quasi- teleological, that is, as if they were designed for a purpose, although, of course, we know that there is no such directing mind, no ‘invisible hand’ which directed events to such a purpose. Yet what Adam Smith really meant with his celebrated—and much derided—phrase about the invisible hand was in fact that it was the spontaneous appearance of an order which served human purposes which called for an explanation by a theoretical science (Hayek, 1961, p.383)

Hayek inscribes Smith’s invisible hand in a teleological scenario, as the metaphor that captures the situation in which a persisting order arises through the regularity in the individual behaviour. This order serves human purposes in the case that none of the individuals planned for this structure to appear, much less intended for these purposes to be attained. More than this, Hayek inscribes Smith’s invisible hand in an evolutionary scenario wherein the elements of the social structure get selected precisely in view of the function they perform on the order.

However, although those structural elements are orientated by a goal, they do not have the *intention* to do so, which means that “it does not imply design by a maker but merely the recognition that the kind of structure would not have perpetuated itself if it did not act in a manner likely to produce certain effects, and that it has evolved through those prevailing at each stage who did” (Hayek, 1967b, p.288). Therefore, as long as it does not mean that there is a conscious mind that designs the final results, Hayek accepts and welcomes a return to explanations of *final causes* through teleological reasoning (ibidem). The paradoxical character in Hayek’s considerations is that one must accept purposive action, insofar as the results are not previously part of the motivation of the acting individuals (Hayek, 1967b, p.289). This idea of a purposive behaviour deprived of intentionality is, according to Hayek, present in the Scottish Enlightenment in its formulations with respect to *unintended conse-*

quences.

The immediate cause, the impulse which drives them to act, will be something affecting them only; and it is merely because in doing so they are restrained by rules that an overall order results, while this consequence of observing these rules is wholly beyond their knowledge or intentions. In Adam Smith's classical phrase, man "is led to promote an end which was no part of his intention", just as the animal defending its territory has no idea that it thereby contributes to regulate the numbers of its species (Hayek, 1967b, p.289)

The quest for the meaning of purposeful behaviour in Hayek's work is present since *The Sensory Order*, 1952. For Hayek, the purposefulness of human and machine was only different in degree, but not in kind. Both rely on the guidance by a model, that is, some representation and identification of the characteristics of the environment that determine what class of actions they will ignite, which in its turn will be selected through the superposition of one course of action over the others of the same class (Hayek, 1968). In this regard, humans and machines act under the presence of negative feedbacks that orient and correct divergences between what the model of the environment has predicted and what objective reality has imposed.

The selection of the particular behavior pattern from the class of such patterns appropriate to the result aimed at must not be conceived as taking place in one act. The choice of a kind of behavior pattern and its continued control, modification, and adjustment while it takes place, will be a process in which the various factors act successively to produce the final outcome. It is not as if the whole behavior pattern were determined upon before any movement takes place, but rather that during the process of execution further adjustments are constantly made to secure the result [...] The current sensory reports about what is happening will be checked against expectations, and the difference between the two will act as a further stimulus indicating the required corrections. The result of every step in the course of the actions will, as it were, be evaluated against the expected results, and any difference will serve as an indicator of the corrections required (Hayek, 1952a, p.217-18)

If machines and humans are capable of this kind of behaviour, purposefulness does not imply consciousness. Once again, Hayek twists the usual meaning of words that are commonly related to intelligent design by using the term in a paradoxical way, since "'purpose'[in its original meaning] indeed presupposes an acting person deliberately aiming at a result" (Hayek, 1955a, p.81). In order to explain how purposeful behaviour can emerge out of unconscious actions, Hayek resorts to an analogy with the organism as a system whose "end" or 'purpose' they are said to serve is always the

preservation of a ‘whole’, of a persistent structure of relationships” (Hayek, 1955a, p.81). In this sense, functional teleological reasoning becomes for biology, as well as for social theory, a tool “of the greatest heuristic value” (Hayek, 1955a, p.82).

As in the biological organisms we often observe in spontaneous social formations that the parts move as if their purpose were the preservation of the wholes. We find again and again that *if* it were somebody’s deliberate aim to preserve the structure of those wholes, and *if* he had knowledge and the power to do so, he would have to do it by causing precisely those movements which in fact are taking place without any such conscious direction (Hayek, 1955a, p.82)

Teleology is a useful tool for describing spontaneous social formations from the point of view of Hayek, insofar as it is used to explain the persistence of an order whose maintenance is given by the unconscious actions of individuals. Their actions are purposive since they act, although not intentionally, toward the achievement of goals, which means that they act *as if* they wanted to *preserve* the social whole. This happens because “the social wholes which are thus maintained are the condition for the achievement of many of the things at which we as individuals aim, the environment which makes it possible even to conceive of most of our individual desires and which gives us the power to achieve them” (Hayek, 1955a, p.82).

Now that we saw how functional teleological reasoning is an important heuristic tool for understanding spontaneous social formations, we shall see how this concept is related to evolution. We argue that spontaneous orders and evolution, which Hayek denotes by the “twin ideas”, become intertwined by teleology, since they both resort to this kind of argument to explain the rise, which has to do with its causal-genetic origin, and the maintenance of the order.

2.2.5 Twin Ideas: Spontaneous Orders and Evolution

In this context, Hayek presents the concept of *the twin ideas of evolution and spontaneous order* to highlight the pioneering contributions of “Bernard Mandeville and David Hume, of Adam Ferguson and Adam Smith, which have opened the way for an understanding, both in biological and social theory, of that interaction between the regularity of the conduct of the elements and the regularity of the resulting structure”(Hayek, 1967b, p.289) .

It is in this precise sense of purposive actions without intention that Hayek understands the spontaneous element in the Scottish Enlightenment’s spontaneous order theory. Regularities in agents’ behaviour convert themselves into regularities in the order as individuals behave *as if* they intended

to preserve the social order. Thus far we have seen in what sense Hayek conceives of the spontaneous character of individual action; now, we may focus on what Hayek understands to be an order, in order for us to understand better the concept of the *twin ideas* .

Since the concept of order was mentioned it is interesting to see how Hayek defines it and he does so in two different works, namely, *Law, Legislation and Liberty* and *The Fatal Conceit*. In the first one, an order is

a state of affairs in which a multiplicity of elements of various kinds are so related to each other that we may learn from our acquaintance with some spatial or temporal part of the whole to form correct expectations concerning the rest, or at least expectations which have a good chance of proving correct (Hayek, 1973a, p.36)

The main character of an order is its *predictability*. As long as the elements of an order preserve their structural relations, the order will persist, and thus, it will be possible for the agents to predict future events or the other's behaviour. This relation between order and expectation resonates with Hayek's discussion of equilibrium. Order is manifested precisely through the correspondence of people's expectations regarding other's conducts, on which their plans are based, and what others actually do (Hayek, 1973a, p.36).

In his latest work, *The Fatal Conceit*, 1988, Hayek comes with another, yet more cryptic, definition of order. At first, he states that order may be used to describe the mental activity of rearranging sensory data just as a scientist would look at physical or social phenomena. However, there is another connotation that has to do with regularity. Hayek claims that “[r]egularity, derived from the Latin *regula* for rule, and order are of course simply the temporal and the spatial aspects of the same sort of relation between elements“ (Hayek, 1988, p.11). In this sense, rules become the temporal aspect, which means that it imposes some repetition that gets perpetuated in time, and order, as the spatial aspect, would have to do with an ‘architectonic’ – although without an architect – disposition of the elements, their particular arrangement, and structure. This is not much distant from the previous definition since both indicate that orders show predictability.

Hayek (1937) had not found a clear answer to why these expectations did not contradict each other because he did not yet have an answer to the problem of how knowledge is acquired and transmitted in society. Now, with the concept of order replacing equilibrium (Vaughn, 1999), Hayek is able to respond appropriately. Since individuals follow rules of conduct, their behaviour can be more

easily predicted and, thus, the system manifests a regularity in their properties. This kind of regularity provided by the rules of conduct guarantees that the individual will engage in market relations bringing all of his particular knowledge of “time and place” (Hayek, 1945) as well as he can expect others to do the same, thereby, all dispersed knowledge is transmitted throughout the system¹⁹, not only because of prices, but also because of the regularity in people’s behaviour (Fleetwood, 1995). When there is a change in the environment of the individual, it forces him to adapt, as Hayek (1945) had already noticed, but now the individual follows rules of conduct, and consequently, her response is constricted and therefore every one will react in a similar way, thus restoring the disturbed order through a process of adaptation (Hayek, 1973a, p.44).

We understand now that all enduring structures above the level of the simplest atoms, and up to the brain and society, are the results of, and can be explained only in terms of, processes of selective evolution, and that the more complex ones maintain themselves by constant adaptation of their internal states to changes in the environment [...] These changes in structure are brought about by their elements possessing such regularities of conduct, or such capacities to follow rules, that the result of their individual actions will be to restore the order of the whole if it is disturbed by external influences. (Hayek, 1979, p.158)

The order is restored, according to Hayek, because agents acquire “regularities of conduct conducive to the maintenance of the order” (Hayek, 1973a, p.39). Hayek employs here another functionalist argument and states that this is a “teleological shorthand” that is valid as long as it does not imply that agents consciously act to preserve the order (ibidem). In Hayek’s words

The evolutionary selection of different rules of individual conduct operates through the viability of the order it will produce, and any given rules of individual conduct may prove beneficial as part of one set of such rules, or in one set of external circumstances, and harmful as part of another set of rules or in another set of external circumstances. (Hayek, 1967b, p.280)

The spontaneous order that arises from individuals unconsciously following rules of conduct is considered to be a *self-organising* system, that is, a system in which its components mutually adjust to any change in their environment operating through “responses to the differences between the expected and the actual results of actions so that these differences will be reduced” and the system will “produce an increased correspondence of expectations of the different persons” (Hayek, 1973b,

¹⁹Hayek argues that non-hierarchical orders are able to process and transmit knowledge in a more efficient way. In his words “Such a non- hierarchic order dispenses with the necessity of first communicating all the information on which its several elements act to a common centre and conceivably may make the use of more information possible than could be transmitted to, and digested by, a centre.” (Hayek, 1967b, p.285)

p.125). Changes spread through the system, and as long as they are not impeded to get diffused, and therefore to make agents adapt to them altering the prices, knowledge will flow and be transmitted in the most efficient way through competition. Knowledge is mostly “precipitated in the prices” and “it is by this conveying of information in coded form that the competitive efforts of the market game secure the utilization of widely dispersed knowledge” (Hayek, 1967c, p.117).

What Hayek does here is to conflate two social concepts, namely *spontaneous orders* and *cultural evolution*. To Hayek it actually is more than a conflation; he claims that they are born from the same principle, calling them “the twin ideas of evolution and of the spontaneous formation of an order” (Hayek, 1966, p.81). The first mention on the twin ideas is made in a lecture on Bernard Mandeville, in which he maintains that the late physician was the first to have marked this inherently connection “which had often been closely approached, but which just then needed emphatic statement because seventeenth-century rationalism had largely submerged earlier progress in this direction” (ibidem). Nevertheless, Hayek also attributes the continuity and improvement of this tradition to the Scottish thinkers of the eighteenth-century.

Throughout Hayek’s works, we could see that he appropriates several ideas from the Scottish Enlightenment tradition, especially from Adam Smith. First, he established the division between the false and the true individualism, claiming that the Scots had the correct approach by not subscribing to the Cartesian idea that, since institutions serve human purposes, then they must have been deliberately designed. The Scots understood that social formations came about spontaneously, without the need of a directing mind. This vision on individualism was a consequence of a much deeper divergence between Scottish Enlightenment and Cartesianism; they had different conceptions of rationality. Hayek endorsed the former’s conception regarding the limitation of human knowledge. As we have seen, both the dispersion of knowledge and the very capacity of the human mind to interpret the rules that governed it were topics very dear to Hayek.

Hayek also praised the Scottish Enlightenment for their methodological techniques idealised in order to circumvent knowledge limitations. It is the case of the conjectural history, which Hayek also implemented, and, in a wider sense, the *compositive* method, which showed Hayek that social sciences have to mentally reconstruct their totalities, something he applied when dealing with complex systems.

In a second moment, when Hayek had his so-called evolutionary turn, he did not abdicate from

those previous contributions of the Scottish Enlightenment but converted them into useful tools to interpret another theoretical framework. He understood by resorting to analogies in the biological realm that the elements, and the very order itself, undergo a process of evolution, in the sense that the parts are selected in view of their function in the whole. In this sense, in order to keep his conceptions on knowledge limitation and the spontaneity of human agency, compatible with the notion of a self-organising order, deprived of a designing intelligence, he resorts to teleology so he can explain, in a paradoxical fashion, purposive behaviour without intentionality.

This would already have been anticipated by the Scots in the form of the invisible hand metaphor, which connected individual behaviour to the overall pattern it gives rise, showing that regularities in the individual behaviour would lead, through the observance of rules, as Hayek insisted, in the regularity of an order, *as if* individuals intended to produce that result. The notion of unintended consequences also helped Hayek in the matters of conceiving purposefulness without intention.

Hayek is very much indebted to the Scottish Enlightenment, as he himself has stated on many different occasions. Their antirationalistic approach gives rise to the notion of individuals who unconsciously follow rules that produce behaviour regularity, and thus an unintended and self-maintaining order arises. Hayek blends the spontaneous order tradition with evolutionism by claiming that both are twin conceptions and that both would have been anticipated by the Scots. As we could see, Hayek's closeness to the Scots has rendered him the insights necessary to deal with an intrinsic limitation, since human mind is incapable of intellectually apprehending itself as a totality; and an extrinsic limitation due to the fact that there is no historical record on the origin of social institutions, which forces him towards conjectural history, invisible-hand explanations, and functional arguments. However, many intellectuals contested this view, claiming that Hayek's conflation of spontaneous orders and evolution would be wrong due to his misapprehension regarding Adam Smith and the Scots. In this fashion, it would be interesting to bring to light these criticisms in order to ascertain what in Hayek's theory these authors claim to be inconsistent with Adam Smith.

2.3 Critical approaches to Hayek

Notwithstanding the integrated character Hayek's theory reached with the evolutionary framework, this did not exempt him from several criticisms. Contends arise regarding several arguments undertaken by Hayek in his late social theory. The viability of group selection and the possible rup-

ture with methodological individualism, the unavailability of unconscious adherence to rules in face of rational inconsistencies, possible commitment of natural fallacy, absence of causal explanations when certain rules of conduct lead to a beneficial order; all seems to converge to the coupling of spontaneous order and evolution that Hayek employed, especially from the 1960s onward. In several occasions, Hayek claims that spontaneous orders and evolution are *twin ideas*, and that the intellectual heritage of this imbrication would descend from the Scottish Enlightenment.

Vanberg (1986) focuses his contends with Hayek on two elements, namely, group selection and the character of the rules upon which spontaneous market orders is based. Vanberg maintains that spontaneous market order is not beneficial *per se*, but depends on the rules and institutions that govern individual behaviour (1986, p.78). In his vision, Hayek failed to provide an adequate *invisible-hand* causal explanation for the adoption of rules that are conducive to the formation and maintenance of an order. That is, Hayek would have failed to explain how individuals “who are separately pursuing their own ends” could produce an unintended systematic process through which a social beneficial pattern emerges (Vanberg, 1986, p.78). In Vanberg’s words:

one would have to show why and under what conditions the process of individual innovation and individual imitation can be expected to generate socially beneficial rules-just as the theory of spontaneous social order does not simply postulate that all spontaneously generated social outcomes are necessarily beneficial, but explains why this can be expected, given certain “appropriate” conditions (Vanberg, 1986, p.82)

As Hayek defends group selection, he appeals to a *functionalist*²⁰ argument regarding the adoption of rules of conduct. In his functional reasoning, the “contribution [of a rule that is adopted] to the ‘maintenance’ of a social system explains its own existence, a type of argument that for “some time has been popular in sociology and social anthropology” (1986, p.83). Nevertheless, Hayek would have had to show how the observance of a certain body of rules would be advantageous to a group and to the individuals that are part of it in order to justify the persistence of the social pattern it carries. In other words, “[w]hat would have to be explained is how the individuals whose behaviour is concerned are induced to adopt and adhere to those rules especially where individual self-interest may be opposed to their adoption and adherence.” (Witt, 2002, p.185). In this regard, Whitman (1998,

²⁰Gray (2013) argues that functional explanations are rather problematic, since they rarely can be tested (or falsified). Besides, “Perhaps the most obscure area in functionalist sociology is, however, an unclarity as to the mechanism of functional adaptation. By what process does society tend towards equilibrium (however identified)?” (Gray, 2013, p.43-44)

p.68) agrees with Vanberg and Witt on Hayek giving “little detail about how the individuals in those groups might “happen” to adopt such rules”.

To establish a class of behaviour that is beneficial to the group but not to the individual, a self-sacrificial attitude²¹. This encourages free-riding, that is, whilst some individuals bear the social costs of adopting certain rules, others do not engage in such practices, benefiting from the sacrifice of others. If this were the case, Vanberg (1986) argues, the number of freeriders would increase, since it is individually more attractive to be so, thus disrupting the group from within.

This comprehends a classic situation in game theory, namely the Prisoners’ Dilemma. This is a situation in which rational individuals have the option of cooperating with each other, but it is only advantageous to do so if all others also cooperate. Without knowing whether others will comply, the rational decision is not to comply. However, every individual would be better off if all of them cooperated with each other. This problem of coordination configures a collective action problem, that is, it assumes the form of “the pay-off structure of an n-person Prisoners’ Dilemma (PD). As in two-person PD, the unilateral defector or free-rider gets the largest benefit, whereas the unilateral cooperator ends up with the worst outcome” (Petsoulas, 2013, p.66) and thus “self-sacrificial behaviour cannot be expected to emerge spontaneously, for it will always be to the individual’s advantage to free-ride, that is, to enjoy group benefits without contributing to the costs of their procurement” (Petsoulas, 2013, p.64). However, Kulesa (1997), while admitting that free-riding is a behavioural problem, this is only so if “a critical mass of cooperating persons is not reached” (1997, p.278) and thus “a mechanism must ensure that ‘free riders’ do not become dominant in the groups that exhibit socially altruistic behaviours” (Hodgson, 1996, p.171). Nonetheless, “in the absence of any compensating mechanism, it is likely that free riders within the group will expand in numbers, crowd out the others, and alter the typical behaviour of the group as a whole” (ibidem).

However, if we accept the argument of free-riding one can solve this conundrum if one admits *deliberate* intervention to enforce individuals to follow self-sacrificial behaviours. Petsoulas (2013) claims that Hayek recognises the necessity of state’s enforcement of the rule of law²². In this sense,

²¹Vaughn (1999) is demanded. An individual can decide to follow a certain rule of conduct that is beneficial to him in the short run, although it may not be so in the long run. This relates to Hayek’s conception of limited knowledge. “The problem arises because of the imperfections in judging from the “outside” what has led to individual success and partly because in a complex reality, individual experimentation is never controlled. It might be that the short run success of an individual will give way to long run failure after all factors have had time to operate. In short, even an apparently successful practise may or may not foster the flourishing of the group that adopts it” (Vaughn, 1999, p.137-138).

²²“*Organized enforcement* will be required in order to make cooperative behavioral regularities viable, whether such organized enforcement is based on some deliberate social contract entered into by the relevant group, or whether it is imposed by some sufficiently powerful (internal or external) party” (Vanberg, 1986, p.96).

in order for individuals to contrive the adequate institutional framework, they would need “rational foresight and intentionality in first identifying and subsequently implementing the appropriate group beneficial rules” (Petsoulas, 2013, p.68). Accordingly, it would violate the premise of unconscious following of rules and practices defended by Hayek.

Furthermore, “if evolved rules of just conduct have to be enforced by an external agent, such as the state, it can hardly be claimed that the spontaneous order is self-maintaining” (ibidem). According to Petsoulas (2013), the origin of Hayek’s mistaken arguments comes from a misapprehension of the Scottish thinkers, especially Hume and Smith, since “they all assign a greater role to reason in the development of rules and institutions”, whereas Hayek would have confined his reasoning only in non-rational processes, “which renders his theory of spontaneous order inconsistent” (Petsoulas (2013, p.190)

Moreover, “an order whose mechanism of coordination has to be deliberately enforced cannot be called entirely spontaneous. If, on the other hand, the function of such rules is recognised, then they are not followed unconsciously” (2013, p.68). In addition, when “a coordination rule is established in a group, it cannot be assumed that a shift to a more beneficial rule can, in general, be brought about by a spontaneous, invisible-hand process” (Vanberg, 1986, p.93). It is too costly to unilaterally deviate from an established rule or practice, and thus it may not be realistic to expect that all individuals spontaneously change their behaviour to a more fit one, except by “deliberate, concerted action: by an organized simultaneous switch of all individuals concerned from one practice to another” (ibidem). Although Hayek recognises the importance of enforcement, he would not have articulated it properly with his evolutionary theory and to do so would imply giving an important role to political deliberation and rational intervention (Vanberg, 1986, p.96) as the Scottish Enlightenment did (Petsoulas, 2013).

On the same subject, Craig Smith (2014) claims that it is “perfectly plausible that rationally designed rules may prove more efficient at facilitating the formation of spontaneous orders than those that have evolved through cultural evolution” (2014, p.241) and this would pose a problem to Hayek’s notion of the “twin ideas”.

Another aspect of Hayek’s late social theory targeted by critics is the functionalist argument. According to De Vlieghe (1994), in addition to being allegedly inadequate to “describe a feedback mechanism that causally favors the selection of the better adapted elements, breaks down on an untenable notion of progress” (1994, p.294). In this sense, Hayek would have fallen into the misgiving

conception, called *naturalistic fallacy*, whereby evolutionary processes bring the best possible results, working as an optimising device. In the same vein, Miller (1989) argues that Hayek wanted to make a final argument for market economies against socialist ones. In order to do so, he developed an evolutionary explanation that the market order was the one selected through evolution, since it would be capable of sustaining a larger number of people, and precisely because it was *selected*, capitalist societies would be necessarily superior to any other system.

Capitalism, in other words, is no longer defended on grounds of principle—say in terms of its essential contribution to human freedom—but as an evolutionary necessity. Those who would wish to see Hayek as a major contemporary philosopher of liberty may be disappointed to discover that freedom is here regarded simply as instrumental to the multiplication of the human species (Miller, 1989, p.312-313)

Under this reasoning, Hayek seems to be implying that the evolutionary process would necessarily select the most appropriate rules for the functioning of the market order Vanberg (1986)²³. Therefore, “[t]his means, when addressing the issue of what ‘appropriate’ rules for a spontaneous market order are, that there is no justification for appealing to the simple answer that, if only let alone, spontaneous forces would automatically generate ‘appropriate’ rules” (Vanberg, 1986, p.97). All in all, there is no guarantee that the unintended consequences of agents left unimpeded will produce a beneficial order (Gissurason, 1987, p.61). Accordingly, Hayek seems to rely too much on a “universal selective force, emanating from the ‘free’ market”, resorting to “some unclear notion of ‘competition’ as the agent of selection” (Hodgson, 1991, p.78), thus incurring in theoretical vagueness²⁴ regarding his notion of evolution (Shearmur, 1996). Hence Hayek would have put too much faith²⁵ in the byproducts of evolution, thereby “this enthusiasm at times seems to verge on a Panglossian conservatism to the effect that, whatever is, is good—provided it was not designed” (1996, p.108).

Hayek certainly seems to carry his evolutionism too far. He sometimes suggests that traditions and social institutions which are very beneficial because they produce spontaneous coordination and enable people to draw on knowledge which they do not have, will necessarily replace traditions and social institutions which are less beneficial (Gissurason, 1987, p.64).

²³Paul (1988, p.260) claims that there is a sort of relativism in evolutionism, insofar as there is nothing that could guarantee a particular development of society.

²⁴There is an ambiguity in Hayek’s thought “concerning what Hayek means by ‘evolved’”. Sometimes he means the product of some specific (evolutionary) process. In this connection, he uses the term to refer both to the products of his own theory of cultural evolution and to law when it has developed in accordance with the ideas he has generalized from common-law procedures. Sometimes, however, he uses the term simply as an antithesis of ‘deliberately’ designed” (Shearmur, 1996, p.108).

²⁵In this context, Gray (2013)’s following question seems legitimate: “What is it that determines whether internalized normative conflict engenders dynamic growth rather than paralysed fixity?” (2013, p.42).

By considering implicitly that everything that comes out of an evolutionary process must be beneficial, Hayek would have lost the normative dimension of his theory, that is, the defence of liberal ideals, for the latter becomes now the natural outcome of evolution (Paul, 1988; Barry, 1982; Shearmur, 1996; Smith, 2014). In this sense, in “Hayek’s analysis it looks as if rules and practices are functional merely because they have survived rather than because they adequately service a liberal order” (Barry, 1982). Moreover, if different models of society or rules of conduct are not subject to individual scrutiny and there is no determinism in the course of history (Gissurarson, 1987, p.65), then people are completely in the hands of a blind evolutionary process. As Barry puts it:

The period of the dominance of the open society, the market economy and minimal government may then be regarded as perhaps a chance mutation in a course of evolution which is proceeding in quite another direction, an evanescent torch in an inexorably darkening world. Yet if we are intellectually tied to tradition, and if our ‘reason’ is too fragile an instrument to recommend satisfactory alternatives, how are we to evaluate critically that statist and anti-individualist order of society which seems to have as much claim to be a product of evolution as any other social structure? (Barry, 1982)

Another important element in Hayekian theory which is widely debated is the relation between group selection and *methodological individualism*²⁶. Hayek would have incurred in some sort of “mild, non-organic form of holism” (Paul, 1988, p.259), by employing different levels of explanation regarding the unity of selection in his evolutionary theory. Fleetwood (1995, p.140) agrees with this when he argues that there is an epistemological and methodological turn-point in Hayek’s work in the 1960’s, favouring an objective existence for social structures which influence individual behaviour. Acceptance of different layers of social analysis alongside the individual generates interdependence between the collective level, as expressed by the order of actions, and the individual level, wherein rules of conduct act (Kulesa, 1997). In this sense, not only must the rules of conduct be selected based on their ability to guide individual behaviour in adapting to the environment (1997, p.277), but also they “only survive in the selection process if they belong to an efficient order of actions adapted to the given environment” (1997, p.278). In Gray (2013)’s vision the adoption of natural selection to explain traditions, Hayek would have opted to displace “fundamental explanation in social life from individual choices to genetic fitness on the one hand and spontaneous orders on the other hand” (2013, p.52).

²⁶A possible definition for methodological individualism could be “the doctrine that all social phenomena (their structure and their change) are in principle explicable only in terms of individuals - their properties, goals, and beliefs.” (Elster, 2003, p.453)

This connection between the two different levels justifies the existence of a supra-individual explanation of social phenomena, such as group selection, although it does not invalidate the importance of individual action, according to Kulesa (1997, p.279). It is as though there is an endogeneity, or rather, a mutual causation between what Craig Smith (2014, p.225) denotes by “macro” and “micro-level structures” in Kulesa’s argument. Hence, following this reasoning, there would still be a place for individual initiative in the process of adaptation, as individuals have to come up with ideas to solve social problems (Gissurarson, 1987, p.63). Whether it be in opposition to methodological individualism or an addition of another level of explanation, such a holistic approach carried out by Hayek is, according to Gray, inherited from the Scottish thinkers’ appraisal for the analysis of social institutions (Gray, 2013, p.69).

Moreover, some authors claim that group selection would have been faulty on its own biological grounds, since it would go against the “individualistic” Darwinian approach that explains the evolution of features of a species in terms of the genetic reproductive advantage to the individual organisms which happen to acquire these features” (Vanberg, 1986, p.80). Nozick (1974) states that invisible-hand explanations that resort to a filtering device, such as the Hayekian cultural selection process, would go against methodological individualism, since the explanation would always refer to the filter and not to the individual, thus the “methodological individualist position requires there be no basic (unreduced) social filtering process” (1974, p.22). Accordingly, “the elements going through the ‘filter’ are chosen rather than choosing. Hence, an explanation in terms of a selection process is hardly an individualistic explanation.” (Gissurarson, 1987, p.63). This conflict between individualism and group selection would be ascribed to Hayek’s estrangement from the Scottish thinkers – as opposed to Gray who considers the approach of the latter a holistic one — since they would not have resorted to cultural group selection explanations in their works (Steele, 1987, p.192). In this sense, the Austrian would have violated the “individualistic theory of the spontaneous order”, and since the methodological individualism is the “central feature of the social theory of the Scottish moral philosophers” (Vanberg, 1986, p.80-81), Hayek would have violated the very thought from which he claims to be an heir.

Nevertheless, in a distinct view, Hodgson (1991, 1996) asserts that the mechanism of selection may operate at several hierarchic levels, ranging from genes to groups of individuals and there would be no reason to arbitrarily stop reduction at the individual level, since, in biology, the unit of selection

could be the gene, instead of the individual (Dawkins, 1982). Therefore, “[t]o avoid this double standard, one must either accept multiple levels of selection, or reduce everything to the lowest possible level” (Hodgson, 1991, p.71). The main point of Hodgson is that Hayek could have explored much more different layers on which selection operates than the ones he did. This plural approach would have endowed Hayek’s theory with more dynamism; methodological individualism apprehends individuals as static by treating their preferences as given, according to the latter author. In this sense, the Scottish School, aligned to this individualistic tradition, would have transposed to society this immobility that comes from the fixed nature of individuals (Hodgson, 1996). This view of society as the product of and maintained by such stable regularities would be incompatible with the dynamic essence of evolutionary processes (Hodgson, 1996). Hence, clinging to the Scottish tradition would have, according to this same view, impaired Hayek’s late social theory.

This far, we are able to identify a common pattern in all these criticisms directed to Hayek’s evolutionary theory. They usually are “an attempt to separate the ‘twin’ ideas of spontaneous order and evolution coupled with a critique of the latter.” (2006b, p.145). These inconsistencies may have arisen because Hayek would have not been sufficiently clear in distinguishing spontaneous formation of an order and evolution and by doing so, he would have juxtaposed two different and decoupled types of explanation.

This is largely because he blends two subtly different types of explanation: one concerned with the formation of spontaneous orders, and one concerned with the evolution of rules and institutions by natural selection. Hayek himself speaks of the ‘twin ideas’ of evolution and of the spontaneous formation of an order without indicating that there might be an important difference between the two. (Barry, 1982)

In this fashion, Hayek’s account of the “twin ideas” is controversial, and many authors mentioned above criticise him for coupling two elements that perhaps may not come hand in hand. The root of this possible misconception, as appointed by several critics, might be Hayek’s misapprehension of the Scottish Enlightenment theories regarding spontaneous orders and invisible-hand mechanisms.

In this sense, we suggest that one way to approach this is to recover Adam Smith’s writings in order to ascertain whether his theory falls in some kind of contradiction with evolutionism, as most of Hayek’s critics maintain, or whether, in some sense, we could bestow a Hayekian interpretation on Smith and claim that both ideas may actually be twins. In order to do so, we claim that it is important to make an epistemological digression so that we are able to make an interpretation about some key concepts that lie at the root of the disagreement of most of the authors presented above

with Hayek, such as invisible hand, unintended consequences, and functionalism. As we saw, Hayek needs to employ functional-teleological arguments in order to explain the paradoxical presumption of purposeful behaviour without intention, which is depicted by the fiction that people act *as if* orientated towards some goal. Our hypothesis is that it is possible to employ a secular teleological reading of Smith and, although it may not imply, as Hayek would like it, that Smith anticipated evolutionism, he may as well have anticipated modern functional reasoning, which was also employed by biological evolutionary theory.

3 Spontaneous Orders and Evolutionary Theory

In this section, we shall make an epistemological digression so we are able to understand some of the concepts that were brought forward by Hayek's critics. They claim that Hayek did not properly establish a causal mechanism that would explain the social phenomena which were the object of his analysis. In their view, he would not have employed proper invisible-hand explanations and would have used functionalism as a way to evade describing the chains of causality that would prove the connections he employed. In this sense, we divide this section into two subsections, that is, one dealing with the invisible hand and another dealing with functionalism.

In the first subsection, we show that invisible-hand arguments are used to describe a phenomenon through an extrinsic element, which provides a much simpler rationalisation, thus promoting an economy of principles and concepts mobilised. Without having to regard endogenous elements, invisible-hand arguments are useful to explain the kind of social phenomenon that is not the product of the intentionality of the agents, thus making it unnecessary to resort to an intelligent designing mind. Moreover, invisible-hand explanations may also be used to describe filtering processes, that is, those that account for a selection mechanism. As selection is a mechanism that operates independently of men's volition, thus representing an external agent, invisible-hand explanations are welcome in evolutionary reasoning.

In the second subsection, we turn to the philosophy of biology to define what functionalism means and how it is related to teleology. We shall see that the evolutionary biologist is concerned with 'why' questions, as in why some specific morphological characteristic came about. For that, she has to search for the function that a certain trait performs on the organism, thus providing a retrospective historical conjecture on how the origin of that trait took place. Functional arguments are intertwined with teleology, since the latter is used to explain certain phenomena by referring to the future goal it will achieve, thus suggesting a sort of backward causation. This temporal problem is solved if one ascribes to a previous designing mind the phenomena to be explained. However, this is not what evolutionary Darwinism does, neither what Hayek nor, as we will argue, Smith do. We argue for another way of solving this conundrum, that is, if one ascribes to a previous programme the rise and persistence, under different circumstances, of a social order, then teleology is welcome as an explanatory device in social sciences.

3.1 Invisible-Hand Arguments

3.1.1 Unintended Orders and Beneficial Results

Adam Smith explicitly mentions the word, “*invisible hand*”, only three times in three different works, the *History of Astronomy*, *The Theory of Moral Sentiments* and the *Wealth of Nations*. Nonetheless, despite the reduced number of times in which the term is used, one can argue that unintended consequences represent “the pervasiveness in Smith’s thought of the idea that certain complex results are the unanticipated product of numerous discrete actions” (Hamowy, 1987, p.21) and “the image of the invisible hand appears central to his thinking”, spanning through “all of his work, especially the *Wealth of Nations*” (Berry, 2020, p.44), even telescoping “decades of European reflection on order and organization” (Sheehan e Wahrman, 2015, p.264-265).

As already seen, part of the criticisms of Hayek’s late social theory lies in his relationship with the Scottish Enlightenment, be it due to his alleged detachment from this tradition (Barry, 1982; Vanberg, 1986; Steele, 1987; Petsoulas, 2013) or his proximity to it (Hodgson, 1996; Gray, 2013). In this sense, we will investigate this connection between Scottish tradition and Hayek’s thinking, and more specifically to invoke Adam Smith, argued by some to be the most important exponent of this school²⁷ – and his social theory, to which Hayek claims himself to be a legitimate heir.

Those criticisms focused on the argument that Hayek had mistakenly conflated two different concepts as though they were one and the same, that is, the spontaneous formation of orders and the evolution of institutions. Notwithstanding, Craig Smith, although recognising that the core of the criticisms that were thrown at Hayek lies in a conceptual separation between spontaneous orders and evolution (Smith, 2006b, p.145), argues that these two concepts are linked by the fact that orders are maintained not by contrivance or deliberate design, but through an evolutionary process, not much like Darwinian evolution, but as a gradual and cumulative process of change through “the unintended consequences of social action: to this extent spontaneous orders are said to have evolved”. In his view, ‘Evolution is a descriptive term, it accounts for what exists and explains it in terms of the gradual development of social phenomena’ (Smith, 2006b, p.12).

²⁷“It was the thinkers of the eighteenth-century Scottish Enlightenment - Smith, Hume, Ferguson, Dugald Stewart, and Thomas Reid - who were largely successful in integrating all these significant hints at a doctrine of spontaneous order into a general social philosophy. The most striking thing about this remarkable group of thinkers is the breadth of their interests, and Adam Smith, indeed, can be looked upon, not inaccurately, as the ‘Newton of the social sciences’ in his attempt to explain the natural processes of a social order in terms of universal principles” (Barry, 1982).

Craig Smith brings up two rather important elements that should be carefully dissected if we are to enter the debate over the *twin ideas*, which are *unintended consequences* in the social realm and *invisible hand explanations*. To understand this approximation, let us recall, as Nozick (1974, p.18) does, what is perhaps the most important example of the emergence of economic institutions within the Austrian tradition: the origin of money. The connection between the elements enunciated by Craig Smith becomes clearer as Nozick (1974) strives to ascribe the origin of money as a medium of exchange as a self-reinforced, unintended process of convergence on a single commodity that is more generally wanted than the others²⁸.

There is a certain lovely quality to explanations of this sort [the unintended origin of money as a mean of exchange]. They show how some overall pattern or design, which one would have thought had to be produced by an individual's or group's successful attempt to realize the pattern, instead was produced and maintained by a process that in no way had the overall pattern or design 'in mind'. After Adam Smith, we shall call such explanations *invisible-hand explanations* (1974, p.18).

The advantage of invisible-hand arguments is that they do not rely on endogenous elements to explain social phenomena, such as the individual's plan or volition to bring something forth. An external element enters and unfolds the overall social pattern. In other words, "fundamental explanations of a realm are explanations of the realm in other terms; they make no use of any of the notions of the realm" (Nozick, 1974, p.19). Moreover, without having to recur to internal elements of social phenomenon in order to analyse it, invisible-hand arguments, accordingly, provide a much simpler rationalisation of social processes by economising on the mobilisation of different concepts and notions. As Nozick puts it:

Invisible-hand explanations minimize the use of notions constituting the phenomena to be explained; in contrast to the straightforward explanations, they don't explain complicated patterns by including the full-blown pattern-notions as objects of people's desires or beliefs. Invisible-hand explanations of phenomena thus yield greater understanding than do explanations of them as brought about by design as the object of people's intentions. (Nozick, 1974, p.19)

²⁸ "[P]eople will tend to hold, trade for, and be willing to accept in exchange those goods they know others are (more) likely to accept in exchange; the more this is known, the more will such goods be traded for, and so there will be convergence upon a small number of goods which will, for obvious reasons, be initially valuable, portable, easily divisible in varying quantities, and homogeneous. Thus a medium of exchange precipitates out of the exchanges of individuals in a barter situation, each attempting to improve his own situation while taking account of the likely actions of others" (Nozick, 1977, p.357). The process just described by Nozick cross-refers to Chapter VIII of Menger's *Principles of Economics*, in which he describes the origin of money. Although Menger does not mention Adam Smith in it, we can trace his influence on the former through *invisible hand explanations*. That is what Caldwell (2008) does by selecting three aspects of Menger's economic theory that employ invisible hand arguments, *trade, money, and monopoly and competition* (2008, p.23-25).

Accordingly, we could say that there is a straight connection between rationality and invisible-hand arguments, in the sense that a pattern emerges from the unintended consequences of individual action as people engage in social relations, and thereby not as the design of a rational mind that brings forward its own plans. All takes place *as if* the agents intended to deliberately produce the overall pattern, although, as Hayek and Smith are adamant about, they are inherently constrained to do so. However,

The role of 'reason' is crucially important here because the theorists of spontaneous order are commonly associated with the anti-rationalist tradition in social thought. However, this does not mean that the doctrine turns upon any kind of irrationalism, or that the persistence and continuity of social systems is a product of divine intervention or some other extraterrestrial force which is invulnerable to rational explanation (Barry, 1982)

This means that the pattern brought about by individual decisions cannot be predicted, and this is due to an intellectual constraint in ascertaining all the outcomes that follow the multiple actions of interconnected social agents in a complex environment. However, this does not mean that the emergent order cannot be rationally comprehended. Actually, Barry (1979, p.195), speaking of Hayek's conceptions about the limitations of knowledge – although we could transpose the same reasoning to Adam Smith, as we will see later — argues that the very realisation of this limitation is an intellectual argument, rather than an anti-intellectual statement, since one is capable of perceiving the overall social pattern. The fundamental aspect here, as we saw with Hayek, is that one follows rules unconsciously, or at least without knowing in advance the beneficial results they will engender, that is, one cannot anticipate the resulting order. However, one may rationally apprehend social order by “mentally reconstruct[ing] it by tracing the relations that exist between the elements” (Hayek, 1973a, p.38)²⁹.

As we saw, invisible-hand arguments are those that attempt to explain a social phenomenon as the unintended result of human actions, that is, arguments that replace explanations of human intentional design by “human accident” (Ullmann-Margalit, 1978, p.266). However, “accidental by-products of many of our actions, even of several individuals' actions taken together, hardly constitute a promising recruiting ground for invisible-hand explanations.” (ibidem). In Craig Smith's view,

²⁹As we will be able to see later, Smith has also an anti-rationalistic vision of the origin of institutions, since “[t]he Scots do not deny that humans are rational but it is not their reason that explains their sociality” (Berry, 2020). However, one may grasp social phenomena through scientific investigation, which is initially driven by an emotional response, the *wonder*, and consolidates through human experience, that is, through “habituated thought patterns” and the observance of empirical regularities (Smith, 2006b, p.19). We will develop these notions in more detail.

“[t]he mechanism of the invisible hand is that which creates benign spontaneous orders as the result of the co-ordination of the unintended consequences of human action” (Smith, 2006b, p.12) and thus “[v]iewing the invisible hand as a metaphor for a particular mechanism of reconciling the unintended consequences of differently motivated actions allows us to use it as a technical term for the systems which produce socially beneficial spontaneous orders³⁰” (ibidem). Therefore, it is more likely that one is dealing with an invisible-hand argument the larger “the extent to which there is a difference in type between the overall pattern to be explained and the individual actions which are supposed to bring it about, as well as with the complexity of the intermediary process” (Ullmann-Margalit, 1978, p.267). We can thus summarise invisible-hand explanation as the one that

explains a well-structured social pattern or institution. It typically replaces an easily forthcoming and initially plausible explanation according to which the *explanandum* phenomenon is the product of intentional design with a rival account according to which it is brought about through a process involving the separate actions of many individuals who are supposed to be minding their own business unaware of and *a fortiori* not intending to produce the ultimate overall outcome. (ibidem)

Up to this point it can be said that invisible-hand arguments are intimately connected with spontaneous orders and agent’s limited rationality, since the former arise as an unintended consequence of individual actions, and the latter guarantees that the resulting pattern cannot be predicted, and thereby it cannot be intentionally produced. However, to state that some order is produced by an invisible hand process, one has to be able to identify beneficial social outcomes that are brought about by the overall order (Smith, 2006b).

Nevertheless, we have yet to show the relation between invisible-hand mechanisms and the evolutionary process.

3.1.2 Invisible-Hand and Evolutionary Functionalism

According to Barry (1982), the evolutionary aspect regards the difference between the rise and the maintenance of the social order. In other words, “we speak of a spontaneous order to refer to a complex aggregate structure which is formed out of the uncoerced actions of individuals, while in another sense we speak of the evolutionary growth of laws and institutions through a kind of Darwinian ‘survival of the fittest’ process (and the biological analogy is not inappropriate)” (idem).

³⁰We will see later that orders that emerge through the process of unintended consequences can also produce malefic social outcomes. Yet, Craig Smith (2006b) argues that an invisible-hand argument comprehends only those orders that produce socially beneficial outcomes.

Accordingly, spontaneity is related to the coordinating activity that brings about the overall pattern of the order, whereas the evolutionary aspect accounts for its survival or persistence insofar as it selects those orders that are fitter to the social environment. As Nozick (1974) puts it,

Through filtering processes can pass only things fitting *P* [pattern], because processes or structures filter out all non-*P*'s; in equilibrium processes each component part responds or adjusts to 'local' conditions, with each adjustment changing the local environment of others close by, so that the sum of the ripples of the local adjustments constitutes or realizes *P* (Nozick, 1974, p.21).

However, what underlies the evolutionary interpretation of the invisible hand is a *functionalist* argument. This sort of argument seems to be recurrent in Biology, as we will see later, especially when explaining the persistence of an organ by its function in the organism. A good example is provided by Ullmann-Margalit (1978):

in vertebrates whose genetic plan specifies, due to successive mutations, a kidney-like organ, wastes are efficiently removed. Hence, by the very performance of their function, the kidneys help vertebrates incorporating them to 'succeed', i.e. to survive and be selected for, and thereby they contribute to their own *continued presence* in them. (1978, p.280)

The biological analogy would be appropriate to deal with human institutions since there is a lost causal link³¹ between the elements that gave rise to the social order and the institution itself, as well as one cannot state which elements generated a specific organ in an organism. As with the human body, "when a social pattern or institution is to be explained within the framework of this approach, then first of all its function within the relevant social unit has to be ascertained", and this very function that contributes to "the equilibrial and frictionless survival of the society in question" is selected by its capacity to "reinforce" and successfully help the social unity survive (Ullmann-Margalit, 1978, p.282). Therefore, the functionalist argument explains "what came first by what will come later" as if "the future is the agent of its own fulfilment", and thus it develops a teleological character (Paulani, 2010, p.36).

Now this process of selection is supposed to be a non-man-made one: it is visualized as a large scale evolutionary mechanism that as it were scans the inventory of social patterns and institutions at any given

³¹Since the origin of the social phenomenon cannot be assessed a functionalist argument is necessary to bypass this kind of problem. That is why Scottish thinkers, as well as Hayek, employed the method of conjectural history (Smith, 2006b, p.117). Conjectural history was "a way of conducting social science" in such a way that starting from a "basic fixity or constancy in human nature" universal statements can be derived about how certain social phenomena came into being and thus can be compared between different countries (Berry, 2020, p.67-68). We will approach conjectural history in Smith's theory later on.

period of time and screens through to the next those of them that are best adapted to their (respective) roles.

Whence the designation of 'invisible-hand' to this mode of explanation. (Ullmann-Margalit, 1978, p.282)

Accordingly, invisible-hand arguments may be employed in two dimensions, causal genetic and functionalist, the former being related to the spontaneous formation of social orders, whereas the latter refers to the evolution of social institutions and norms. The causal-genetic element is related to how an order came to be, is related to its origin, and thus responds to an etiological demand. The evolutionary invisible-hand has to do with functionalist arguments, which explain an overall pattern such as an organism or a social institution by the role their parts perform on the whole. In this sense, invisible-hand arguments, in both the connotations above, are used in the context of a lost causal link between a phenomenon and the element whose regularity in its properties produced the overall pattern. Therefore, invisible-hand explanations provide an external (exogenous) causal link between the whole and its parts, which, in the social realm, means between individuals and the social order.

Now, we shall dissect functional teleological reasoning, so we may understand how and why Hayek and, as we shall see, Smith employ this as a heuristic device to apprehend social formations. We argue that teleology is a way to deal with purposive structures deprived of intentionality and design. Social orders are persistent structures even when subjected to different environmental circumstances, suggesting that individuals act *as if* they intended to preserve it. We argue that one way to make sense of this is through the notion of *teleonomy*, which ascribes the purposive behaviour to a previously inscribed programme.

3.2 Functionalism

Under the interpretation that was developed before, it seems that functionalism is a frequent argument that Smith and Hayek resorted to in order to develop their social theory. In this regard, it may be fertile to explore evolutionary biological literature, since it deals with and carefully examines the conceptual differences that may be useful to apprehend, not only Smith's, but also Hayek's explanations of social phenomena.

As in conjectural history, evolutionary questions deal with the inaccessibility of the past; that is, a biologist "usually proceeds by observing just how the trait interacts with the rest of the phenotype and elements of the environment, with a view to uncovering how it contributes to the adaptedness of its possessor." (Brandon, 1981, p.102). In this sense, the biologist searches for the *function* this

trait performs in the organism relative to the environment by which it is surrounded, and “ [i]f he succeeds in uncovering this he then extrapolates into the past, and presents a plausible scenario of how the trait evolved due to its effect on the adaptedness of its possessors.” (ibidem). The argument is made by extending into the past and *conjecturing* about how past instances of the adaptive trait progressed in order to become as they are in their contemporaneous stage , performing a specific function, and thereby reconstructing an historical scenario. That is why Wright claims that functional arguments provide a “consequence etiological account of the existence or form of the thing with the function” (Wright, 1976, p.91), since they enquire into the origins of that specific form. In this sense, the “central element of the etiological approach should be seen as the simple idea that a function of a trait is the effect for which that trait was selected” (Neander, 1991, p.459).

We are able here not only to make a parallel with conjectural history but also with spontaneous orders, and, more specifically, with the above-mentioned causal-genetic concept. When Hayek or rather Smith enquire about the rise of an order spontaneously generated through regularities in agent’s behaviour, they are in search of a causal-genetic argument for that social pattern, and accordingly they ask themselves *why* such pattern has been brought about.

In this sense, there are two divisions that Mayr (1988) draws that are worth mentioning. The first one regards the division in the different fields of biology, namely, evolutionary biology and functional biology, the latter associated with what function certain trait performs and the former with the historical motives that led some trait to have the form it has. For what concerns us here, an evolutionary biologist should answer to “ ‘*why*’ questions, and provide the historical explanation for the occurrence of these sort of phenomena” (1988, p.2). We can see that the historical aspect is rather important for evolutionary arguments, as well as the inquiry into the genetic, or rather the etiology, of the phenomenon, which makes Mayr claim that “[t]here is hardly any structure or function in an organism that can be fully understood unless it is studied against this historical background” (1988, p.26). Nevertheless, Mayr works with yet another cleavage, that is, evolutionary biologists are concerned with final causes³², that is, they are concerned with “the cause responsible for the orderly reaching of a preconceived ultimate goal” (1988, p.29), whereas functional biologists are concerned with the proximal causes that explain the operation of the trait. Proximal causes are different from the final ones, since the former broadly refer to physical-chemical forms of causation. Nevertheless

³²The term *final cause* was firstly introduced by Aristotle as one of the four kinds of causes that an object or phenomenon may be subjected to. In the Greek philosopher’s own words, “the final cause is (a) some being for whose good an action is done, and (b) something at which the action aims” (Ross et al., 1924, p.210).

the explanation of a biological phenomenon is only complete when both proximal and final causes are mobilised (1988, p.28).

So far we saw that evolutionary theory is concerned with “why” questions, as well as mobilises final cause explanations to enquire what specific function certain trait is performing in the whole organism, and it also reconstructs the history of that trait in a causal-genetic fashion. However, if “[t]his type of explanation is that in which the ‘ Why ? ’ question about a particular event or activity is answered by specifying a goal or end towards the attainment of which the event or activity is a means”, then these explanations may be considered as *teleological explanations* (Braithwaite, 1953, p.323). In other words, “[t]eleological explanations explain the means by the ends; a development or trait is explained by reference to goals, purposes or functions” (Neander, 1991, p.455).

This kind of explanation that defines phenomena by referring to the ends towards which the event tends to, that is, an explanation that justifies the existence of certain feature or event by the future attainment of a certain goal may imply, *prima facie*, that they are ‘forward-looking’ “and so the explanans refers to something that is an effect of the explanandum, something that is forward in time relative to the thing explained” which may seem to resonate a sort of backward causation (Neander, 1991, p.455-456). This temporal paradox has been a major philosophical problem (Braithwaite, 1953, p.324).

One can solve this apparent conundrum if one is dealing with intentional behaviour, since the purpose or intention involved in agency necessarily precedes the attainment of the goal, since “purpose is both a future desired effect, and a certain more or less resolute attitude to bringing about that future desired effect” (Neander, 1991, p.456) and thus, in spite of attaining or not the desired goal, “purposeful attitude to this state of affairs occurs before the action and so is not disqualified, for reasons of timing at least, from being its cause” (ibidem). Accordingly, in this case, the teleological argument is reduced “to causal explanations with intentions as causes” and hence, “to use the Aristotelian terms, the idea of the ‘final cause’ functions as ‘efficient cause’; the goal-directed behaviour is explained as goal-intended behaviour” (Braithwaite, 1953, p.325).

However, when dealing with evolutionary biological phenomena, one cannot ascribe natural selection or adaptation to the agency and intention of a sort of entity that creates and attains preconceived goals, and so do historical processes, insofar as we cannot ascribe purpose to them (Mayr, 1988, p.30). That is why Popper claims that what “Darwin showed us was that the mechanism of natural selection

can, in principle, simulate the actions of the Creator, and His purpose and design, and that it can also simulate rational human action directed towards a purpose or aim” (Popper, 1979, p.267). Likewise, in Hayek and Smith’s notions of social patterns, the latter are considered to be spontaneously generated and are generally originated as unintended results of human action, thus the order cannot be preconceived by any human or otherwise mind. In this sense, one is dealing here with two sorts of phenomena, either social or biological, that are end-directed, although they have no director. In the case of evolutionary biology,

evolution has been random in the sense of lacking adaptive orientation. As a rule, however, it has been oriented or directed toward achieving and maintaining adaptive relationships between populations of organisms and their whole environments. [...] The mechanism of orientation, the nonrandom element in this extraordinarily complex history, has been natural selection, which is now understood as differential reproduction. (Simpson, 1960, p.973)

What Simpson means by stating that evolution lacks an adaptive orientation is that it has no pre-determined path to be followed, that is, evolution does not have a specific form at which a trait has necessarily to arrive through successive adaptive transmutations. However, it is a process directed, through natural selection, towards maintaining certain specific kinds of relationships between individuals and their environment. Natural selection, for instance, is “strictly *a posteriori* process” , in the sense that we cannot anticipate its results, but we can look back and infer why an organism got selected; thus adaptation is “a result of the past and not an anticipation of the future” (Mayr, 1988, p.20) .

Accordingly, to account for phenomena that are end-directed but do not have a designing mind behind it, Mayr (2004) introduces a new concept called *teleonomy*. In his own words, “a teleonomic process or behavior is one that owes its goal-directedness to the influence of an evolved program. The term teleonomic thus implies goal direction of a process or activity. It deals strictly with ultimate causations” (2004, p.51). Instead of having a designing mind, there is a programme embedded in the animal, or rather the human, which exists before the teleonomic process and guides their behaviour towards certain goals (2004, p.52). Therefore, “[a] system is capable of performing teleonomic processes because it was programmed to function in this manner” (Mayr, 1974, p.150). In his own words,

A program might be defined as *coded or prearranged information that controls a process (or behavior) leading it toward a goal*. The program contains not only the blueprint of the goal *but also the instructions*

for how to use the information of the blueprint. A program is not a description of a given situation but a set of instructions. (Mayr, 2004, p.53)

If we transpose this notion of an evolutionary programme into Hayek's social theory, we may state that the rules of conduct are the coded information that are transmitted through the social body³³ which are submitted to an evolutionary process that selects only those rules that are conducive to the maintenance of the social order. The order is preserved precisely because these rules contain stored information regarding how to behave (or how not to behave, since Hayek ascribes mainly a negative role for rules of conduct), insofar as this very behaviour will guarantee the order's self-reproduction and self-regulation. When Hayek speaks of rule-following behaviour that entails a disposition towards a certain class of behaviour, he might have had in mind the same reasoning as Mayr's.

Though Hayek does not use the term 'program' his thoughts on 'the causal determination of purpose action' are perfectly compatible with Mayr's account, and could be easily translated into Mayr's language. The notion of 'coded information that controls behavior' that Mayr captures with the term 'program' is implied when Hayek speaks of 'maps', 'models', or 'dispositions' that can guide behavior (Vanberg, 2017, p.61)

Since human beings are capable of learning and incorporating additional information *throughout their lives*, Mayr calls this coded instruction an open programme, which replaced "closed programs" in a way that "behavior phenotype is no longer absolutely determined genetically, but to a greater or lesser extent is the result of learning and education" (Mayr, 2013, p.636), thus equalising cultural evolution with biological evolution. Culture arises from "the convergence of many rule-following creatures on a single system of rules" which creates social objects such as language, money, markets and law (Gray, 2013, p.33). Accordingly, man is

the only animal who can store knowledge beyond individual capacity and pass it on beyond individual memory. He is by far the most adaptable of all organisms because he has developed culture as a biological adaptation. Now his culture evolves not distinct from and not in replacement of but in addition to biological evolution, which also continues. (Simpson, 1960, p.273)

If we were to employ a Hayekian view on Adam Smith, we may say that there is also a sort of programme in Smith's theory that contains information on human behaviour which induces the formation of an order, namely, commercial society. As we shall see later, human nature, in Smith's

³³Dawkins (1982) came up with the concept of *memes*, which are cultural replicators for which humans are vehicles for their transmission. Memes are subject to variability, transmission and selection as in biological evolution.

thought, contains information on how men should behave, thus guaranteeing not only the formation of social order, but its stability.

Accordingly, we just saw that either Hayek's or Smith's social theory could be seen as thoughts that employ teleonomic arguments through the notion of a programme, which is the result of the accumulation of proximal causes that have acted during the history of organisms (Mayr, 2004, p.54). The instructions ingrained in these evolutionary programmes replace intentional design as the element that precedes and commands the attainment of a goal. However, this sort of reasoning reduces teleology to a regular causal explanation or, in other words, reduces final causes to efficient causes. In this sense, we still have to determine the explanatory value of a teleological argument.

Neander (1991, p.463) argues that the explanatory power of teleological arguments, and also its differential characteristic as opposed to ordinary causal explanations, consists in, not only its explicit reference to forward-looking features since it always refers to the future effect of a function or trait on the whole, but also in its implicit backward-looking for, especially in functional explanations, it goes back in time to reconstruct the past (Brandon, 1981, p.102) and employ a causal-genetic analysis.

Braithwaite (1953) claims that in teleological explanations there are always hidden causal chains that have to be revealed. However, if we trace the causal chains back to previously known causal laws, then the teleological argument loses explanatory validity since, as we saw, it is reduced to an efficient-cause explanation. We have, on the contrary, to extract our knowledge *inductively*, which means that we have to infer future behaviour through a previous observed class of phenomena (1953, p.334). An example mobilised by the same author is that we know of a bird's migration in the winter since we have previously observed that same behaviour in this same period of the year, thus we are able to infer that it will do so again in the future (1953, p.334). Hence, as for the question *why* the bird migrates, we may answer that he does so in order to flee harsh environmental conditions. However, when we are dealing with a goal-directed activity of a part of an organism, for instance an organ, the analogous of intention is not attributed to the organ but to the organism and its "urge towards self preservation" (Braithwaite, 1953, p.326). In this case, that is, when "the explanation is in terms of another part of a whole of which the explicandum is a part" we have a *functional explanation* (1953, p.335). Either way, we have "first to see the machine functioning so as then to appear able to deduce the function from the structure" (Canguilhem, 2022, p.88).

Another important differentiation worth mentioning is that in relation to intentional goal-directedness.

Braithwaite claims that teleological phenomena have a distinctive feature, that is, “persistence towards the goal under varying conditions” (Braithwaite, 1953, p.329). In this sense, there is a certain “plasticity” in the behaviour of the organism, which means that, under different environmental occasions “by alternative forms of activity making use frequently of different causal chains” the organism achieves its goals (1953, p.329). Braithwaite also states that the greater the variability of environmental conditions that the organism is able to stand in order to bring about a chain of causality, “and hence the greater the plasticity of behaviour”, the more valuable a teleological explanation is (Braithwaite, 1953, p.334).

This permanent search for the attainment of a goal, typical of biological ends (1953, p.336) , in addition to the notion of plasticity of behaviour, resembles *homeostatic* systems. The latter are those that have feedback mechanisms to restore the system to an equilibrium point when it is destabilised by an exogenous shock³⁴. Humans, for instance, have bodily mechanisms of temperature control, that is, when body temperature increases “[it] sweats more. Increased sweat leads to increased loss of heat by evaporation, which presently brings the temperature down to normal again” (Hardin, 1959, p.51).

It is interesting to add that Hardin claims that before Biology came to recognise and study homeostatic systems, social theory had already dealt with such phenomena. Smith, in his treatment of the price system, introduced the concept of a natural price which would function as a reference, or normal value, around which market prices would fluctuate. When, for instance, market prices are above natural prices, there is a capital flow towards this specific market as profit increases, leading to a greater supply of goods, thus reducing market prices to the level of natural prices (Hardin, 1959, p.54). Therefore, since we have a system that is in perpetual activity towards a goal, which as soon as the latter is reached the former may be disturbed again, the end to which this system is directed is “as much present as future” (Braithwaite, 1953, p.335) thus eliminating the weakest point in teleological explanations, its reference to the future as a cause to a present event.

Hence, bearing in mind homeostasis, we may say that both Smith’s and Hayek’s social theory state that if agents are left unimpeded – having their own principles of motion as players in “the social game of human chess ³⁵” (Sheehan e Wahrman, 2015, p.266) – to take their own courses of action according

³⁴“In general, self-maintaining systems (like life) are self-adjusting only within limits. To keep them going, we must see to it that they are held within the limits in which negative feedback is operative” (Hardin, 1959, p.53).

³⁵This expression has to do with another celebrated passage in *TMS* when Smith uses the metaphor of social organisation as a chess game commanded by a player, “the man of system”, which is a social figure Smith uses to designate those that think society might as well be organised rationally. However, he claims that, in actuality, every piece has a purpose, and thus is capable of making its own movement, which would only create harmony unless an external mover impressed the same movement as the one the individual intended to make. In his own words “The man of system, on the contrary,

to their own knowledge about their private spheres of action, social interaction will tend to produce the situation just described of a self-regulating system whose motions “cannot simply follow an external hand that directs them” (ibidem), although the resulting order may appear *as if* it were purposefully constructed, *as if* guided by an invisible hand. Since Smith and Hayek deal with spontaneously generated orders that end up exhibiting self-organised patterns, it seems *as though* an *invisible hand* is guiding every agent towards a beneficial outcome. Here, we can recall Ullman-Margalit’s assertion that invisible hand “typically replaces an easily forthcoming and initially plausible explanation according to which the explanandum phenomenon is the product of intentional design with a rival account according to which it is brought about through a process involving the separate actions of many individuals” (Ullmann-Margalit, 1978, p.267). Accordingly, “[t]he economic system is likened to a human body which is normally able to recover from sickness and return to its usual healthy state of its own accord” (Campbell, 2014, p.78).

[A]ll this is described and explained by showing how the functional inter-relations of prices, wages, rents, profits, interest rates and so on are maintained by the persistence of men’s economic motivations which prompt them to employ their labour and capital where they offer the greatest reward for the least effort. (ibidem)

This capacity of the economic system to restore a normal state of affairs, that is, a state in which all economic relations reproduce themselves without the need of intervention of any sort, is a point of divergence between Smith and one of the most important exponents of the Physiocracy, François Quesnay. The french physician contended that the economic system would only prosper under specific, and imposed, institutional framework. If social order were to be disturbed by any external element, the political body – one of the many analogies Smith employs between the biological and the social realms – would not be able to recover and return to its previous and stable, albeit imposed, state. In Smith’s words,

Some speculative physicians seem to have imagined that the health of the human body could be preserved only by a certain precise regimen of diet and exercise, of which every, the smallest, violation nec-

is apt to be very wise in his own conceit; and is often so enamoured with the supposed beauty of his own ideal plan of government that he cannot suffer the smallest deviation from any part of it. He seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon a chess-board. He does not consider that the pieces upon the chess-board have no other principle of motion besides that which the hand impresses upon them; but that, in the great chess-board of human society, every single piece has a principle of motion of its own, altogether different from that which the legislature might chuse to impress upon it. If those two principles coincide and act in the same direction, the game of human society will go on easily and harmoniously, and is very likely to be happy and successful. If they are opposite or different, the game will go on miserably, and the society must be at all times in the highest degree of disorder” (Smith, 1790, p.234)

essarily occasioned some degree of disease or disorder proportioned to the degree of the violation. Experience, however, would seem to show that the human body frequently preserves, to all appearance at least, the most perfect state of health under a vast variety of different regimens [...] But the healthful state of the human body, it would seem, contains in itself some unknown principle of preservation either of preventing or of correcting, in many respects, the bad effects even of a faulty regimen. (Smith, 1776, p.675)

One thing that is dear to Smith, and that we shall cover in more detail later, is that the individuals have inscribed in themselves a tendency towards bettering their own conditions. This principle is strong enough, according to Smith, to keep in balance, or in biological terms, in health, the economic system, within certain boundaries, when it is disturbed. This natural propensity would have been overlooked by Quesnay, and that is why, without this mechanism of compensation, he thought that only under specific conditions the economic system could prosper.

[Quesnay] seems not to have considered that in the political body, the natural effort which every man is continually making to better his own condition, is a principle of preservation capable of preventing and correcting, in many respects, the bad effects of a political oeconomy, in some degree, both partial and oppressive. Such a political oeconomy, though it no doubt retard more or less, is not always capable of stopping altogether the natural progress of a nation towards wealth and prosperity, and still less of making it go backwards (ibidem).

One may say that the goal of the spontaneously generated economic order, generated through the unintended consequences of individual action, is its self-maintenance and organisation, which means that through negative feedbacks that compensate for random deviations, the system returns to and gravitates around its normal, or natural, state. Hence, when one enquires herself as to why prices increase (decrease) or why profitability and wages vary or even why capital flows from one sector to the other, we are able to answer that it takes place in order that the system attains its own goal, namely, to operate in its natural state. One may also question, inspired by Hayekian theory, why certain rules of conduct have been adopted while others were not, and we might answer that they were so because they are conducive to the maintenance of the order. Likewise, if one questions, in a Smithean fashion, why some natural propensities and not others are inscribed in men, one would also answer that if it were not for them, the social order could not arise or be maintained.

Following Wright (1976)'s formulation that "the function of X is Z iff: i) Z is a consequence (result) of X's being there, ii) X is there because it does (results in) Z" (1976, p.81), we may say that in the paragraph above we employed a functional argument. In our case, the rules of conduct are a

function of the economic system if the order is generated because of the presence of those rules and those rules exist in order to produce the same order. The argument is also valid in the other direction. With respect to human natural propensities, we could employ the same reasoning; they are a function of the economic system if the order is generated *because* of the presence of these characteristics and, inversely, these features exist in order to produce the social order.

Popper (1979) also emphasises the plastic character of the evolutionary system, as does Braithwaite (1953), since he understands that natural selection is a process of trial and error, considering that individuals are problem-solving agents submitted to a “system of plastic controls” that eliminates error (Popper, 1979, p.242). Canguilhem (2022, p.90) also admits plasticity and, regarding the genesis of life forms, he states that, in embryology, there has been shown that there is a vast set of conditions under which life could still be formed, and, in this sense, he claims that the more one works with the notion of machine, the more one understands about function, but likewise she gets pushed away from genesis; since machines have a low degree of plasticity, they are chains of causations that need a specific environmental condition to arise, whereas life could mould itself to different environmental constraints.

Another interesting concept that may help us think about purposive structures deprived of intentionality that exhibits plastic behaviour is Bertalanffy (1950a)’s *equifinality*. Ludwig von Bertalanffy was an Austrian biologist who had important intellectual exchange with Hayek and is regarded as one of the founders of *General Systems Theory*³⁶. Bertalanffy has drawn an important difference between inanimate and living systems. While the former are mainly characterised by closed systems, that is, systems that do not exchange materials with the environment, which are typically approached by physics and chemistry (Bertalanffy, 1950b, p.23), the latter figure as open systems. In closed systems, we find that their final state is completely determined by the initial conditions, so if there is a change in these initial conditions, the final stage is necessarily changed (Bertalanffy, 1950b, p.25). However, open systems, typically living organisms, exhibit *equifinality*, that is, their “final state may be reached from different initial conditions and in different ways” (Bertalanffy, 1950a, p.157), ending

³⁶“‘Cybernetics’, popularized by Norbert Wiener, was a theory that attempted to analyze the dynamic properties of all manner of systems, both living and nonliving, using such notions as “homeostatis” (an equilibrium among the various parts of a system) and “negative feedback” (where adaptations to changes in the environment are made). ‘General systems theory,’ developed in part by the biologist Ludwig von Bertalanffy, who read *The Sensory Order* when it was in manuscript form, took these trends to their logical conclusion, seeking (as the term implies) a general theory of systems. By the mid-1950s, Hayek was increasingly citing those who sought new tools for analyzing complex systems. His interest would only deepen with the passage of time.” (Caldwell, 2008, p.303)

up in a steady state³⁷ that could be achieved under different circumstances.

Organic systems show *dynamic teleology*, which means that there is a “directiveness of processes” (Bertalanffy, 1950a, p.159). This is typical of systems that exhibit steady states as their final state, so we may say that the direction of events towards this state of affairs is attained *as if* the present behaviour were determined by that final state (ibidem). This happens because there is a persistence towards the steady state under different environmental conditions, and it is precisely this independence relative to the initial conditions that characterises an equifinal system (Bertalanffy, 1950b, p.25).

Beyond equifinality, organic systems also show, as we have seen before, *homeostasis* through negative feedback. However, homeostasis is not sufficient to describe systems that evolve; it is “inadequate for phenomena of change, differentiation, evolution, negentropy, production of improbable states, creativity, building-up of tensions, self-realization, emergence, etc” (Bertalanffy, 1968, p.23). Homeostasis appropriately describes machines, mechanisms well known in technology, but it lacks equifinality to appropriately describe organisms (Bertalanffy, 1950a, p.160). Accordingly, organic systems have two different regimes of regulation:

the primary regulations in organic systems, i.e., those which are most fundamental and primitive in embryonic development as well as in evolution, are of the nature of dynamic interaction. They are based upon the fact that the living organism is an open system, maintaining itself in, or approaching a steady state. Superposed are those regulations which we may call secondary, and which are controlled by fixed arrangements, especially of the feedback type. (Bertalanffy, 1968, p.44)

In this sense, Canguilhem (2022, p.87), exploring the tension between machine and organism which we translated into a tension between efficient and final causes, claims that a mechanism can explain everything but its own construction, since “no machine builds machines – and one could even say that, in a certain sense, to explain organs or organisms through mechanical models is to explain the organ using the organ”. In a machine, there is a strict order of causation in operation with a reduced margin of tolerance, “because the purpose of the machine is rigid, univocal, univalent” (Canguilhem, 2022, p.89), whereas an organism is characterised by its plasticity, its organs are polyvalent, they can serve different functions in order for the body to survive, thus “a plurality of functions can adapt to the singularity of an organ” (Canguilhem, 2022, p.90). Canguilhem gives us an example of this “vicariousness of functions” of the organs.

³⁷“An open system may attain (certain conditions presupposed) a time-independent state where the system remains constant as a whole and in its phases, though there is a continuous flow of the component materials. This is called a steady state” (Bertalanffy, 1950b, p.23)

As an example of the vicariousness of functions, one may cite a simple, well-known case: childhood aphasia. Hemiplegia on the right side is almost never accompanied by aphasia, because other regions of the brain ensure the language function. And when aphasia appears in a child under nine years old, it dissipates rapidly. As for the matter of the polyvalence of organs, one may simply cite the fact that, although we believe that for most organs there is some defined function, in reality we are ignorant of other functions they may serve (Canguilhem, 2022, p.89)

Hence, the degree of purposefulness of an organism is reduced compared to that of a machine, since it can display different behaviour when it becomes necessary. Organs have functions that are contingent on environmental conditions in order to maintain a healthy body and ensure its survival, whereas machines present static functions, their parts were deliberately designed to achieve some goal that could only be attained under a small set of conditions, even in the presence of negative feedback.

Accordingly, one could say that there is a tension between efficient causes, which handle and describe mechanical causations and processes, and final causes, which seem to account for the origin of phenomena and for persistent structures that exhibit plastic behaviour. That is why Wright (1976) speaks of teleology as the reasoning that responds to etiological demands. Also, one could say, following Braithwaite (1953), that since life presents this kind of plasticity, it does not seem inadequate to use teleological explanations. In the same vein, Popper (1979, p.257) claims that “Darwin showed that we are all completely free to use teleological explanation in biology – even those of us who happen to believe that all explanation ought to be causal”, once the presence of an intelligent designing mind has been eliminated.

Therefore, we could ascertain how entangled spontaneous orders, conjectural history, and evolutionary arguments are, especially regarding functional/teleological and causal-genetic explanations. Spontaneous orders are end-directed phenomena but they were not designed by any mind in the same sense as Darwinism which can “simulate the actions of the Creator, and His purpose and design, and that it can also simulate rational human action directed towards a purpose or aim” (Popper, 1979, p.267). In this sense, to explain the rise of spontaneous orders, such as the market, whose origin is “cloaked in the mists of time” (Hayek, 1988, p.38), one has to, as it also occurs to adaptation, *a posteriori* infer their historical development establishing causal-genetic and functional arguments, in a word, one has to employ teleology. Another evolutionary aspect is functionalism, which, as in modern biology, explains the existence of a feature by its role in the whole within a surrounding environment. As we saw, the more plastic the behaviour of the organism/agent regarding the attainment of the goal

the more powerful the teleological explanation (Braithwaite, 1953), and since we are dealing with homeostatic, equifinal systems such as an organism or the market order, the argument has explanatory power.³⁸.

Now that we dissected the theoretical elements that were put forward by Hayek's critics, let us see how functionalism, teleology, invisible hands and unintended consequences are woven together in Adam Smith's social theory. We argue that a Hayekian reading of Smith that conflates spontaneous orders and evolution through teleology is possible, but it has a cost. The consequence is that commercial society becomes inscribed in human nature and may emerge under different environments. In other words, commercial society is the goal to be achieved in plastic circumstances *as if* the goal itself were able to determine the behaviour of the agents in order to produce itself, *as if* agents intended to produce and maintain this social order.

³⁸“The most explicit and systematic development of the insight that order in society is a spontaneous formation is given by the economic theory of market exchanges, where the thesis that unhampered markets display a tendency to equilibrium is its most obvious application” (Gray, 2013, p.30)

4 Adam Smith: an Answer to the Twin Ideas Conundrum

In this chapter, we intend to show that it is possible to read Smith in a Hayekian fashion, that is, as a secular author who conflates spontaneous orders and evolutionism, and, as our interpretation of Hayek suggests, this is shown by revealing functional-teleological arguments in Adam Smith's work. In order to do so, we need to show, first, that functionalism and teleology are present in Adam Smith's work and that they figure as an important feature in his thought and not as a mere appendage. Functionalism is revealed through invisible-hand arguments and unintended consequences, as we saw above in Chapter 2; we will show this imbrication through three different examples. Then we will present Smith's theory of the Four Stages and show that, since conjectural history faces similar problems as evolutionary biological theory does, that is, the inaccessibility of the past in responding to etiological demands, it also resorts to the same kind of strategy as biology does to circumvent these limitations, namely, by using functional-teleological arguments. Finally, we maintain that, besides being an important feature in Smith's reasoning, as argued by the *New View on Adam Smith*, functional-teleological arguments may be read as secular explanations, in the sense that Smith's circumlocutions may be interpreted as metaphors for a mechanical representation of nature. The elements that corroborate the secular view are present in Smith's epistemological and methodological writings, as he reveals how philosophy and religion are related.

We begin with a brief introduction depicting two ways of reading Smith's employment of final causes: 1) a mainstream, secular interpretation, which reads teleology as a secondary tool, and 2) the *New View*, based on Jacob Viner's work, which takes these passages seriously, arguing that Smith conflates theology and teleology. Then, in the second section, we will explore three different examples in *Theory of Moral Sentiments*. In a third section, we deal with the Four Stages theory of Adam Smith and identify the use of functionalism to explain that the culmination of the historical process described by Smith is the commercial society, both if we explain it as a natural consequence of human propensities and if we follow a historical path. We argue that if we bestow a Hayekian reading upon Smith, we need to consider that both the rise and maintenance of social order are ingrained in human nature, in the sense that individuals are *programmed* to spontaneously behave in certain ways that sustain social stability, thus configuring a *teleonomic* process, as Mayr would like.

4.1 Final Causes: a tension between nature and reason

Adam Smith's teleological arguments have been intensely debated by scholars; they involve intricate, intertwined, and complex concepts as nature, providence, and religion. Many scholars went in the direction of secularising³⁹ Smith's statements in the sense that expressions such as "Author of nature" (Smith, 1790, p.77, 93, 105, 128, 166, 169, 273, 298), "all-wise Architect and Conductor" (1790, p.289), "Creator" (1790, p.98, 170), "Providence" (1790, p.166, 185, 276, 288, 326), among others, were nothing more than a rhetorical strategy (Raphael, 1985; Lindgren, 2012). In the same vein, it has been said that Smith's teleological arguments have to be understood "in connection with" an "aestheticized speculative outlook" (Griswold, 1999, p.333) and that they can be reduced to one single materialistic principle, self-preservation (Cropsey, 1957). Campbell (2014, p.69-73) contends that Smith uses final cause arguments only as a secondary procedure, that is, only after and subject to efficient cause statements. There are even those, more radically, who claim that both Smith's teleological and theological statements can be excised in favour of an analysis based solely on efficient causes (Macfie, 1967, p.107), since the latter are the "real" kind of explanation (Haakonssen, 1989, p.77). In this sense, final causes would figure as an appendage to Smith's scientific inquiries (Taylor, 1930, p.230), an unnecessary and otiose resource (Otteson, 2002, p.242). Accordingly, "[i]f we drop the teleological and theological vocabulary from all this, we are left with what many scholars have regarded as one of the most fundamental insights or perspectives in the social sciences [the notion of social phenomena as result of unintended consequences]" (Schneider, 1979, p.51).

However, in the opposite direction, there are scholars who consider Smith's religious statements not just a vocabulary deprived of a deeper meaning, or a disposable discourse, but an important and constitutive part of Smith's thought without which his theory cannot be correctly apprehended (Viner, 1972; Fitzgibbons, 1995; Kleer, 1995, 2000; Hill, 2001; Alvey, 2004). Be it for his stoic heritage (Fitzgibbons, 1995; Hill, 2001), the pervasiveness of the natural theology in Britain in the 18th century (Alvey, 2004, p.338), or the necessity of a Deity to be the intellectual designer of a benevolent plan to bring happiness to humankind (Kleer, 1995), teleology is brought forth as an indispensable element in Smith's reasoning. This relatively recent literature draws on Viner (1972)'s works, in the sense that

³⁹Hanley (2009) contends that the secularisation promoted by many of Smith's scholars encumbers his commitment to normativity and by doing so they end up downplaying "the traditional questions of how human beings might best live and best live together to a new question of how they might maximize profits, thereby substituting economics for politics as the central human concern"(Hanley, 2009, p.6)

they recover the importance of Providence and religion in Smith's thought. They came to be viewed as the *New View of Adam Smith*, bringing together authors who contend that "Smith was a strong supporter of natural theology" (Alvey, 2007, p.66).

As could be noted, there are two opposing views regarding Smith's use of final causes in his social theory. One rejects the idea that theology and teleology consist in an important element in Smith's moral theory by claiming their lack of scientific character; and another regards them as its touching stone by claiming the necessary link between theology and teleology. The conflict that arises from these divergent interpretations regards the

antagonism in current studies between the empirical interpretation of TMS (that the theological expressions of TMS may be eliminated because they have no necessary relation with his empirical moral theory) on the one hand, and the metaphysical or theological interpretation (which one-sidedly emphasizes the importance of the presupposition of final causes in Smith's theory without a sufficient explanation of their inner relations with his earthly ethics) on the other (Tanaka, 2003, p.137)

Tanaka (2003), rather than taking one of the sides presented above, he contends that either efficient causes, which render purely scientific analysis, and final causes, which render teleological explanations that often come from religious statements, are present in and an important part of Smith's works. In this sense, he identifies a tension⁴⁰ that, nonetheless, are not exclusive of Adam Smith's reasoning but rather reflects "the antinomy of Enlightenment ideology fallen into the tension between nature and reason" (2003, p.147).

Accordingly, one thing that can be concluded is that secular scholars generally do not ascribe much importance to teleology and much less to theology. For them Smith's social economic and moral theory can be plainly understood without resorting to final causes. Whereas *New View* authors see teleological arguments as essential but only insofar as they are embedded in a theological framework of reasoning.

⁴⁰Evensky (1989) calls attention for the same kind of tension that unfolds itself in a contradiction in Smith's thought. He realises that over time, as Smith implemented changes in the different versions of TMS, he showed his growing discontentment with the notion that the private actions guided by the invisible hand would be sufficient to render society harmony and order. "What failed him was his early optimistic confidence that the invisible hand could not only guide a well ordered society, but that it was also strong enough to guide society through stages toward an approximation of that ideal order. His confidence in this latter argument was undermined by his growing recognition of the dynamic degenerative impact of factions in commercial society. This recognition is clearly represented by the growing sense of frustration he expressed over the destructive factional influence generated by the mercantile interests. There is an identifiable, slow but inexorable, transformation of Smith's thought from the belief that the unintended result of human actions would be to move society toward the Deity's Design, to the belief that humans must be active agents in realizing that end"(Evensky, 1989, p.126)

Bearing in mind the division above mentioned amongst Smith's scholars, if one were to follow Tanaka (2003)'s reasoning, one may realise that both efficient and final causes are present in Smith's works and that both are important features in his thought. Accordingly, first, if we are to present a view of Adam Smith that would agree with our interpretation of Hayek as an author that employs teleological reasoning in his conflation of spontaneous orders and evolutionism, we should follow some steps.

First, we present how teleology and functionalism appear in Smith's work and how they are related to invisible-hand arguments and unintended consequences. In a first moment, we address three examples of TMS in which Smith employs teleological reasoning, then we proceed showing that conjectural history also hinges on the same kind of arguments. We argue that commercial society manifests itself both as the result of human natural proclivities and as the result of a historical process. Finally, we assess *New View's* account of Adam Smith's teleological reasoning and show their contention that final causes are an inextricable part of Smith's social theory. However, they conflate Smith's teleology with a supposed theological view defended by the Scottish. We argue that it is not necessary to ascribe Smith's mentions to Providence or an Architect of Nature to a religious vision that became manifest in his work. We support this view by mobilising Smith's methodological and epistemological works and conclude that these circumlocutions may be regarded as metaphors to the absence of design in commercial societies.

4.2 Human Nature and Unintended Consequences in Functional-Teleological Arguments

4.2.1 Resentment, Justice and Rules

Smith establishes a sentimental connection among all men, that is, he claims that every individual naturally nourishes towards one another what he calls a *fellow-feeling*, which is the general feeling that "we have with every man merely because he is our fellow-creature" (Smith, 1790, p.90). It comes from the fact that no matter "[h]ow selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it." (Smith, 1790, p.9). Accordingly, this concern with others commonly evoke sentiments as pity or compassion for the sorrow of others, but Smith has something broader in mind as he introduces the concept of *sympathy*,

that is, “our fellow-feeling⁴¹ with any passion whatever” (ibidem). However, “sympathy should not be identified with the feelings to which it gives rise” , it is “a peculiar form of agreement on which approval of sentiments is founded” (Campbell, 2014, p.94), yet “it is not to be equated with approval; that would destroy the possibility of ethical evaluation and entail that disapproval amounts to no more than the inability of a spectator to empathize with an actor” (Griswold, 1999, p.85).

Since one cannot entirely step out of his own situation or circumstance, the fellow-feeling that arises through the mechanism of sympathy is produced by the operation of the faculty of *imagination*.

It is the impressions of our own senses only, not those of his⁴², which our imaginations copy. By the imagination we place ourselves in his situation, we conceive ourselves enduring all the same torments, we enter as it were into his body, and become in some measure the same person with him, and thence form some idea of his sensations, and even feel something which, though weaker in degree, is not altogether unlike them. (Smith, 1790, p.9)

On this subject, Smith asserts that it is even possible to sympathise with someone dead as though we would have lodged “our own living souls in their inanimated bodies, and thence conceiving what would be our emotions in this case” (Smith, 1790, p.13). This illusion fabricated by imagination, although harmless to the individual, it inserts into him the fear of death, making “us miserable while we are alive” (ibidem). In Smith’s own words

And from thence arises one of the most important principles in human nature, the dread of death, the great poison to the happiness, but the great restraint upon the injustice of mankind, which, while it afflicts and mortifies the individual, guards and protects the society. (Smith, 1790, p.13)

From a principle in human nature, the dread of death, that is, something at the individual level, comes an *unintended* benefit in the social realm, for it refrains individuals from acting unjustly. Accordingly, “[t]his unintended result is a typically Smithean example of the ‘invisible hand’ at work” (Griswold, 1999, p.90). Griswold’s assertion seems to be in line with our previous discussion of invisible-hand arguments, since what comes as a byproduct from this principle of human nature is a benign social order (Smith, 2006b), rendering a great difference between the result promoted and the individual action (Ullmann-Margalit, 1978). However, for what is most important in our argument,

⁴¹“This fellow-feeling involves awareness, on the part of the person sympathizing, that he shares the feelings of another; ‘mutual’ sympathy exists when both persons are aware that their sentiments coincide” (Campbell, 2014, p.94)

⁴²The fact that the imagination copies, not the senses of the other person, but our own, introduces “a perplexing ambiguity into the whole idea of sympathy”, since the very process that intermediates both people, may seem “self-centered” (Griswold, 1999, p.91)

the idea mobilised by Smith comprehends a *functional-teleological* argument, for the fear of death clearly fulfils a social function helping the social unity survive (Ullmann-Margalit, 1978, p.282).

Since the dead cannot carry out their vengeance, nature inscribes in men a sympathy with them, thus inhibiting unjust acts. It is intimately related to *resentment*, which is another instinctive aspect of human nature that is rather important to Adam Smith. We are capable of sympathising with this passion when we see “one man oppressed or injured by another” and even rejoicing “to see him attack his adversary in his turn, and [we] are eager and ready to assist him whenever he exerts himself for defence” (Smith, 1790, p.70). This passion has two benign unintended outcomes, “rendering it dangerous to insult or injure” the individuals, and making them “the guardians of justice” (Smith, 1790, p.35). Accordingly, “[r]esentment seems to have been given us by nature for defence, and for defence only. It is the safeguard of justice and the security of innocence” (Smith, 1790, p.79), thereby “Nature, antecedent to all reflections upon the utility of punishment, has in this manner stamped upon the human heart, in the strongest and most indelible characters, an immediate and instinctive approbation of the sacred and necessary law of retaliation” (Smith, 1790, p.71).

Smith is clear when he states that it is not by reflection⁴³, or rather, it is not through the rational realisation of the individual and public⁴⁴ utility of justice that the individuals exert punishment; it is, rather, a prereflexive, instinctual reaction towards injustice. However, in order to derive rules of justice – as well as of morality – from their experience⁴⁵, one needs to produce an agreement or disagreement between our affections and those of the agent, so one needs to analyse concrete and particular examples (Smith, 1790, p.188) and from them, inductively, arrive at those rules.

Regarding the rules of justice in particular, Smith contends that justice is, in fact, a negative virtue⁴⁶, for it “upon most occasions [...] only hinders us from hurting our neighbour”, thereby “[w]e may often fulfil all the rules of justice by sitting still and doing nothing” (Smith, 1790, p.82). As Haakonssen (1989) claims, justice is an idiosyncratic virtue since it arises not from the “approval

⁴³Smith concedes that reason is the source of general rules of morality, but the perceptions of right and wrong upon which those very rules are founded do not come from reason. “These first perceptions, as well as all other experiments upon which any general rules are founded, cannot be the object of reason, but of immediate sense and feeling” (Smith, 1790, p.320)

⁴⁴“[I]t would be very odd if the application of justice were based upon a regard for the public, for the latter regard can only be made up of individual instances of regard for particular persons, since all moral judgement takes place through sympathy and sympathy can, of course, only be with concrete individuals” (Haakonssen, 1989, p.88)

⁴⁵“It is thus that the general rules of morality are formed. They are ultimately founded upon experience of what, in particular instances, our moral faculties, our natural sense of merit and propriety, approve, or disapprove of” (Smith, 1790, p.159)

⁴⁶As we saw, Hayek ascribes to the rules of conduct a negative feature, since it is consisted largely of instructions that preclude certain kinds of behaviour rather than enforce a specific course of action

of the practice of those virtues” but rather it arises “from spectator disapproval of injustice, of the non-performance of the virtue” whereas “all the positive virtues are an ‘extra’ which make society flourishing and happy, [but] social life is quite possible without them, but that there can be no society without justice”(1989, p.86-7). However, a society “cannot subsist among those who are at all times ready to hurt and injure one another”, thus, justice is “the main pillar that upholds the whole edifice”, and, without it, society would “crumble into atoms” (Smith, 1790, p.86).

In order to reach a socially stable order in which the most essential virtue is assured “Nature has implanted in the human breast that consciousness of ill-desert, those terrors of merited punishment which attend upon its [justice’s] violation” whereas those virtues that are not essential, they are not punished for their non observance, but they reward the individual as they please her consciousness without being “necessary to guard and enforce the practice of it by the terrors of merited punishment in case it should be neglected” (Smith, 1790, p.86). Nature impresses upon humans the necessity of punishment for the non-observance of those virtues without which society would not survive, whereas it does not impose the same procedure for those whose non-observance would not be destructive. It is as though nature has focused on preserving social stability with this economy of punishment by exerting it in accordance with the probability of social disruption.

One thing still remains a challenge to individuals, their partiality “with regard to the propriety of their own conduct” which renders them a “fatal weakness”, a “self-deceit” occasioned by the fact that they could never see themselves “in the light in which others see [them]” (Smith, 1790, p.158-9). Nevertheless,

Nature, however, has not left this weakness, which is of so much importance, altogether without a remedy; nor has she abandoned us entirely to the delusions of self-love. Our continual observations upon the conduct of others, insensibly lead us to form to ourselves certain general rules concerning what is fit and proper either to be done or to be avoided (Smith, 1790, p.159)

Smith highlights that approbation or condemnation of particular actions are not given or preconceived in accordance with some general rule, the latter, “on the contrary, is formed, by finding from experience, that all actions of a certain kind, or circumstanced in a certain manner, are approved or disapproved of” (ibidem). Haakonssen (1989) asserts that the very mechanism of mutual sympathy is consisted of “the operation” that “unintendedly creates common social standards” through the “selection of behaviour that is adequate to the situation” (1989, p.55), that is, by the “continual weeding out of behaviour which is incompatible with social life” (1989, p.58). Accordingly, this reveals that

selection of behaviour and rules of conduct – or rather the common social standards – are intertwined (1989, p.61).

Despite the fact that rules are formed through socialisation, there is a previous and precise adjustment which Nature has implanted on men regarding the sentiments of approbation and disapprobation (Smith, 1790, p.188), which, by their turn, are the substance of those rules. This accurate tuning which Nature employs, rather than being dependent upon human experience, it in fact makes sociability possible.

Nevertheless, it is not sufficient for society to have accurate rules if they are not universally observed. The mechanism which guarantees that, albeit the “strong motives [the individual has] to violate” them, is the “reverence for those important rules of conduct” (Smith, 1790, p.163), which is embedded in human nature, so that following these rules is to follow the very instructions Nature codified in us. In Smith’s words

This reverence is still further enhanced by an opinion which is first impressed by nature, and afterwards confirmed by reasoning and philosophy, that those important rules of morality are the commands and laws of the Deity, who will finally reward the obedient, and punish the transgressors of their duty. (Smith, 1790, p.163)

Even in the case where partiality is eliminated and rules of justice and morality are revered and thus observed, there still remains a problem, namely, *fortune*. Smith identifies this as the element “which governs the world”, and which may disrupt and influence the “sentiments of mankind, with regard to the character and conduct both of themselves and others” (Smith, 1790, p.104). Following Griswold’s (1999, p.240) interpretation of what Smith means by “fortune”, it regards – and again we reinstate here the importance of this topic – the unforeseen or unintended consequences of individual action. Fortune stands in the way of an accurate moral judgement because it detaches intention from the consequences of the individual’s actions – or rather, it decouples what happens in the internal realm of men and the external realm of sociality. Smith calls this distortion an “irregularity in the human breast”(Smith, 1790, p.105), once it makes people judge actions by its consequences rather than by the agents’ intentions⁴⁷ “in spite of the small degree of responsibility they may really bear for

⁴⁷Haakonsen asserts that the discussion of this irregularity in the moral sentiments serves as an explanatory device for Smith, since it shows why the world does not function in an ideal way (judging in accordance with intention). “This is a most extraordinary combination of an ideal ethics of intentions with an actual ethics of consequences. Moreover, it serves Smith to good explanatory purpose, for it is precisely this combination which enables him to interpret morality as a guide to external action in a world of fortune and yet at the same time to see this morality as ultimately concerned with ideal and absolute propriety” (Haakonsen, 1989, p.65)

the effects of their actions” (Griswold, 1999, p.241-2). Judging by the consequences is necessary since “we can never know the intention so well as the observed consequences of an action, the observed facts” (Evensky, 2005, p.70) . In this sense,

although this ‘irregularity’ provides useful guidance in the *forum externum* of social life, it by no means excludes a *forum internum* where the spectator tries to rid himself of all distortion in the search for a judgement based upon a standard of absolute propriety, the standard of the impartial spectator. The person whose merit or lack of demerit is being belied by the influence of fortune on his actions (Haakonssen, 1989, p.66)

According to Smith it is not rational to judge individuals according to the effects of their actions rather than by their intention, since they cannot control every aspect of reality regarding the consequences that stems from their behaviour⁴⁸. However, what may seem as a moral disaster gets mechanically converted into social utility, since Nature itself “implanted the seeds of this irregularity” intending “the happiness and perfection of the species” (Smith, 1790, p.105). Were it not for this irregularity,

Sentiments, thoughts, intentions, would become the objects of punishment; and if the indignation of mankind run as high against them as against actions; if the baseness of the thought which had given birth to no action, seemed in the eyes of the world as much to call aloud for vengeance as the baseness of the action, every court of judicature would become a real inquisition. (ibidem)

This arbitrary and persecutory situation in which intentions are the object of judgement not only prepares the stage for an inquisition, restraint on liberty, and social instability, but also makes the distinction between private self and the public realm be erased (Griswold, 1999, p.242). Besides avoiding judicial arbitrariness, Craig Smith claims: “[t]he utility of the irregularity comes from the fact that it prompts us to moral action in order to realize the sentiments” (Smith, 2019, p.75), that is, “Nature has taught him [us], that neither himself [ourselves] nor mankind can be fully satisfied with his conduct, nor bestow upon it the full measure of applause, unless he has actually produced them” (Smith, 1790, p.106), thereby “[w]hen men judge by the consequences rather than the intentions of actions they prevent unfulfilled evil intentions from provoking hostile reactions and they are encouraged to put their good intentions into deeds” (Campbell, 2014, p.73). Smith, instead of being trapped in an ideal moral normativity, contends that “[m]an was made for action” (ibidem) and, in

⁴⁸ “[T]he irregularity teaches us a more general lesson. The lesson is that we ought to pay attention to our fellows and include their happiness in our calculations to the extent that we are capable” (Smith, 2019, p.75)

this vein, Nature, once again, “has endowed him, not only with a desire of being approved of, but with a desire of being what ought to be approved of; or of being what he himself approves of in other men” (Smith, 1790, p.117). Hanley (2009) argues that the latter is one of Smith’s “most interesting invisible-hand explanations” since by “preferring good-doing to mere well-wishing, we better fulfill nature’s intentions” and our “greater approbation of good effects than of good intentions is likewise in keeping with nature’s intentions” (Hanley, 2009, p.186).

4.2.2 Custom and Habits

Smith contends that there are principles which are responsible for “many irregular and discordant opinions which prevail in different ages and nations concerning what is blameable or praise-worthy” (Smith, 1790, p.194), and they are custom and fashion. Custom, according to Smith, has a psychological cause which hinges on imagination, since it “acquires a habit of passing easily” from one object to another so that when one appears “we lay our account that the second is to follow”, thus “attention glides easily along them”; custom is “the habitual arrangement of our ideas” (ibidem). However, when two objects that are not familiar to the imagination appear together, it creates a gap, an interval so that “the imagination no longer feels the usual facility of passing from the event which goes before to that which comes after” (Smith, 1795, p.41). Custom is the element that, through the faculty of imagination, impinges on the mind the fluidity of a cause followed by a certain predictable effect, and this is impressed on men “without effort and without interruption” (ibidem) through the repetition of events.

When custom and fashion are aligned with what people naturally conceive of as the principles of right and wrong “they heighten the delicacy of our sentiments, and increase our abhorrence for every thing which approaches to evil” (Smith, 1790, p.200). However, custom may distort to some extent our sense of what is morally agreeable or disagreeable, as in the case of those “who have had the misfortune to be brought up amidst violence, licentiousness, falsehood, and injustice”, they end up warping their judgement on the impropriety of some types of behaviour, losing “yet all sense of its dreadful enormity, or of the vengeance and punishment due to it [them]” (1790, p.200-1). Nevertheless, “[t]he peculiar character and manners which are led by custom [...] have sometimes a propriety independent of custom; and are what we should approve of for their own sakes” (1790, p.202). Hence, there is something inscribed in individuals that cannot completely disfigure their

moral sentiments, since “[t]he sentiments of moral approbation and disapprobation, are founded on the strongest and most vigorous passions of human nature; and though they may be somewhat warped, cannot be entirely perverted” (1790, p.200). The argument Smith mobilises in order for him to defend his view on this limit internally imposed to bar custom from overshooting the boundaries of what could be a risk to the social fabric is a *functionalist* one.

There is an obvious reason why custom should never pervert our sentiments with regard to the general style and character of conduct and behaviour, in the same degree as with regard to the propriety or unlawfulness of particular usages. There never can be any such custom. No society could subsist a moment, in which the usual strain of men’s conduct and behaviour was of a piece with the horrible practice I have just now mentioned [the murder of new-born infants]. (Smith, 1790, p.211)

This is due to the fact that our conduct is the way it is – bounded by some limits– because otherwise society would not survive. Hence we may conclude that there is something guiding the social body towards survival. He goes even further by claiming that “[i]n general, the style and manners which takes place in any nation, may commonly upon the whole be said to be that which is most suitable to its situation” (Smith, 1790, p.209). This means that, since customs differ from place to place as well as from time to time (1790, p.194), there is a variation in the modes of behaviour⁴⁹ which “if men did not in *general* search for ‘the natural propriety of action’, instead of resting content with what is socially customary or fashionable, then society would be in imminent danger of breaking down, thus extinguishing such behaviour” (Haakonssen, 1989, p.60). Therefore, the idea is that we have a certain specific body of rules because their *function* in society is to preserve its order.

The rules of conduct that come from this selection process are frequently thought, as in many other cases in Smith’s theory, to be a product of reason in virtue of their suitability to the social context, and yet, they are “founded upon habit or prejudice” (Smith, 1790, p.195). Habituation of behaviour functions, in Smith’s theory, not only as a “non-deliberative guide [...] to stabilize our expectations and to reduce uncertainty in the mind” (Smith, 2006b, p.35), but also to show that “[i]ntelligent self-interest *alone* will not solve the problem of cooperation [...] Without a modicum of habituated virtue (moral and intellectual) in the citizens, the invisible hand behaves like an iron fist” (Griswold, 1999, p.295).

⁴⁹“Custom shapes the extant social construction of each society and because each society has a unique history and circumstance, so, too, each has a unique set of norms for individual behavior. There are natural, general principles that shape these norms, but each society’s actual norms embody particular variations around those natural principles that can be, as in the Greek case, dramatic and significant” (Evensky, 2005, p.52)

Were it not for the fact that we have a sufficiently strong proclivity to seek for the appropriate behaviour, we would not be able to refrain from destroying society. Likewise, were it not for the habituated practices and moral rules, people's behaviour would not be in consonance with each other.

4.2.3 Wealth and Riches

There is another principle of human nature whose implications reach the social realm, namely, the *admiration for the rich*. Smith claims that the great objects of ambition are “to acquire, and enjoy the respect and admiration of mankind” (Smith, 1790, p.62), and there are two possible paths to accomplish this, which are “by the study of wisdom and the practice of virtue” or “by the acquisition of wealth and greatness” (ibidem). As it turns out, the latter forces “itself upon the notice of every wandering eye”, whereas the former attracts “the attention of scarce any body but the most studious and careful observer” (ibidem). Moreover, “there is scarce any man who does not respect more the rich and the great, than the poor and the humble” (ibidem). This reverence for the rich takes place because “spectators sympathize more perfectly with joy than with sorrow, and because nearly all of us associate wealth with the former rather than the latter, we are naturally led to accumulate wealth and ‘parade’ it” (Griswold, 1999, p.127). Since people sympathise with the opulence of the rich, the latter enjoy displaying their wealth “which in their eyes is never so compleat as when they appear to possess those decisive marks of opulence which nobody can possess but themselves” (Smith, 1776, p.190). Yet, as an unintended consequence, this sort of veneration is necessary “to establish and to maintain the distinction of ranks and the order of society”, but it ends up also being “the great and most universal cause of the corruption of our moral sentiments” (1790, p.61).

The root of this veneration lies in the fact that the rich are believed to be in possession of the *means*⁵⁰ to attain their desires, and, ultimately, happiness. However, the admiration does not come from the utility of the objects owned by the riches, that is, from the end for which they were produced; it comes, nonetheless, from “this fitness, this happy contrivance of any production of art, [that] should often be more valued, than the very end for which it was intended”, in other words, it comes from “the exact adjustment of the means for attaining any conveniency or pleasure” (Smith, 1790, p.179). Therefore, “What makes wealth so attractive [...] is not that it procures physical pleasure or necessary material goods but that it procures the psychic pleasure of being “attended to,” and sympathized with,

⁵⁰Smith argues that the poor “ does not even imagine that they are really happier than other people: but he imagines that they possess more means of happiness. And it is the ingenious and artful adjustment of those means to the end for which they were intended, that is the principal source of his admiration” (Smith, 1790, p.182)

on account of the possessor's presumed happiness and joy" (Griswold, 1999, p.127). Here Smith implies that it is through the faculty of imagination that we project ourselves in the situation of the rich, in which we would be able to procure the means of happiness, being "charmed with the beauty of that accommodation which reigns in the palaces and oeconomy of the great; and admire how every thing is adapted to promote their ease, to prevent their wants, to gratify their wishes, and to amuse and entertain their most frivolous desires" (Smith, 1790, p.183), all of it promoted by "the numberless artificial and elegant contrivances" possessed by them (1790, p.182).

In order to illustrate this situation, Smith tells us the story of the "poor man's son, whom heaven in its anger visited with ambition" (Smith, 1790, p.181). The poor man's son ends up devoting himself to the pursuit of wealth and greatness, though to do so he "serves those whom he hates, and is obsequious to those whom he despises", that is, he unwittingly corrupts his moral sentiments (ibidem). However, after acquiring what he so ardently desired, he realises the delusion to which vanity has submitted him, thereby

Power and riches appear then to be, what they are, enormous and oporose machines contrived to produce a few trifling conveniencies [...] They are immense fabrics, which it requires the labour of a life to raise, which threaten every moment to overwhelm the person that dwells in them, and which while they stand, though they may save him from some smaller inconveniencies, can protect him from none of the severer inclemencies of the season (Smith, 1790, p.182-3)

Notwithstanding the tricky deception the imagination, as the motive of human endeavours – along with men's feeble frame and his desires of elegance and refinement (Smith, 1982, p.340) –, has impinged on us, it brings as an unintended consequence, a grand social benefit. Vanity is responsible for keeping in "the continual motion the industry of mankind", and prompting men "to cultivate the ground, to build houses, to found cities and commonwealths, and to invent and improve all the sciences and arts, which enoble and embellish human life" (Smith, 1790, p.183). In this sense, it is from this pursuit of wealth that arises "our passionate and unceasing efforts to better our condition"⁵¹ (Griswold, 1999, p.128). Hence, we may conclude that "Smith's ideas of basic human motivation seem far from 'materialist'" (Haakonssen, 1989, p.183), actually, it is the other way round, for the desire to better our condition emerges from the ambition produced by an illusion originated in the

⁵¹"From whence, then, arises that emulation which runs through all the different ranks of men, and what are the advantages which we propose by that great purpose of human life which we call bettering our condition? To be observed, to be attended to, to be taken notice of with sympathy, complacency, and approbation, are all the advantages which we can propose to derive from it. It is the vanity, not the ease, or the pleasure, which interests us. But vanity is always founded upon the belief of our being the object of attention and approbation" (Smith, 1790, p.50)

individual's imagination (Griswold, 1999). Haakonssen identifies the activity of natural vanity, which impels man toward changing his own condition, as the very activity of the *invisible-hand*, insofar as the latter "leads and directs all the individual human lives into a more or less orderly social process" (Haakonssen, 1989, p.183).

Hitherto, we showed that the illusion occasioned by the imagination through vanity compels man to action and this mobilises human industry as an unintended consequence. We have now to show how from the distinction of ranks Smith arrives at social order. This is directly related to the only passage, in the TMS, in which Smith mentions explicitly the *invisible hand*.

Smith argues that the rich landlords, by producing way more food than the capacity of their stomachs to absorb, end up distributing their surpluses amongst the poorer ones by way of consumption. The landlords spend their resources in luxury, or, in Smith's words, in "baubles and trinkets" (Smith, 1790, p.184), and by doing so, this resources accrue also to the poor. In Smith's own words:

They consume little more than the poor, and in spite of their natural selfishness and rapacity, though they mean only their own convenience, though the sole end which they propose from the labours of all the thousands whom they employ, be the gratification of their own vain and insatiable desires, they divide with the poor the produce of all their improvements. They are led by an invisible hand to make nearly the same distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, without knowing it, advance the interest of the society, and afford means to the multiplication of the species. When Providence divided the earth among a few lordly masters, it neither forgot nor abandoned those who seemed to have been left out in the partition. (Smith, 1790, p.184-5)

What is interesting is that Smith realises that the "universal opulence which extends itself to the lowest ranks of people" (Smith, 1776, p.22) is due to the landlord's "natural selfishness and rapacity" and not to their "humanity or his justice" (*ibidem*). Smith apprehends that there is a new stable social arrangement in course in commercial society, wherein there is no need to *intend* social justice since the very natural regard the individuals have for themselves is mechanically converted into social justice by way of the economic relations, that is, "it is their own immediate self-interest, as embodied in acts of barter and trading, that binds them to society" (Campbell, 2014, p.72). On this subject, Smith claims:

Society may subsist among different men, as among different merchants, from a sense of its utility, without any mutual love or affection; and though no man in it should owe any obligation, or be bound

in gratitude to any other, it may still be upheld by a mercenary exchange of good offices according to an agreed valuation. (Smith, 1790, p.86)

Beyond this unintended trickle-down of wealth effect there is a historical effect as the consequence of the landlord's luxury consumption. Before manufactured goods were commercialised through Europe, the surplus produce could only be used by the landlords "by maintaining a hundred or a thousand men" whom had "no equivalent to give in return for their maintenance [...] must obey him" (Smith, 1776, p.413). The resurgence of foreign commerce under feudalism increased the supply of manufactured goods with which it became possible for the landlords to spend. However, this implies that they could not maintain anymore that plethora of men under their command, and by doing so, personal social bonds of dependence were unwittingly extinguished. In Smith's words

But what all the violence of the feudal institutions could never have effected, the silent and insensible operation of foreign commerce and manufactures gradually brought about [...] As soon, therefore, as they could find a method of consuming the whole value of their rents themselves, they had no disposition to share them with any other persons. For a pair of diamond buckles perhaps, or for something as frivolous and useless, they exchanged the maintenance, or what is the same thing, the price of the maintenance of a thousand men for a year, and with it the whole weight and authority which it could give them. (Smith, 1776, p.418-9)

The modified sociability of commercial society transforms the command over people into command over labour⁵², insofar as fortune whose possession directly conveys "the power of purchasing; a certain command over all the labour, or over all the produce of labour which is then in the market" (Smith, 1776, p.48). Craig Smith (2006b, p.81) argues that the diffusion of wealth continually increased the life standards of those who depended upon landlords, which created a market of sufficient size so that the individual gets "accustomed to be of use" in a specific way "to his neighbours, who reward him in the same manner [...] till at last he finds it his interest to dedicate himself entirely to this employment" (Smith, 1776, p.28), thus entailing specialisation in a few tasks, that is, it entails the *division of labour*, converting personal dependency into *interdependency* through trade (Smith, 2006b, p.81).

⁵²After division of labour has effectively taken place the value of a commodity reflects the quantity of labour which it can command. "The value of any commodity, therefore, to the person who possesses it, and who means not to use or consume it himself, but to exchange it for other commodities, is equal to the quantity of labour which it enables him to purchase or command. Labour, therefore, is the real measure of the exchangeable value of all commodities." (Smith, 1776, p.47)

The division of labour is one of the most important elements of Smith's theory, since "[t]he greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is any where directed, or applied, seem to have been the effects of the division of labour" (Smith, 1776, p.13). He argues it comes from a "propensity to truck, barter, and exchange one thing for another" (Smith, 1776, p.25), or a "trucking disposition" (Smith, 1776, p.27), which most probably is a "necessary consequence of the faculties of reason and speech" (ibidem). More specifically, Smith ascribes this disposition to the natural inclination to persuade. In his own words:

If we should enquire into the principle in the human into the principle in the human mind on which this disposition of trucking is founded, it is clearly the naturall inclination every one has to persuade. The offering of a shilling, which to us appears to have so plain and simple a meaning, is in reality offering an argument to persuade one to do so and so as it is for his interest. Men always endeavour to persuade others to be of their opinion even when the matter is of no consequence to them. (Smith, 1982, p.352)

4.2.4 The Need for a Historical Approach

Hitherto, we have derived the commercial society from instincts, sentiments or predispositions Smith ascribed to human nature. They are ingrained in human constitution and set in motion, in spite of men's intentions, a series of unforeseeable events and consequences that both produce and maintain the social order. The dread of death leads to the avoidance of unjust acts; resentment yields the virtue of justice; the adjustment of the sentiments of approbation guarantees the precision of the rules of conduct; the natural respect for authority entails the observance of these rules; the irregularity of sentiments produced by the judgement based on the actions of the individuals prevents justice to function as an inquisition and allows the separation between private and public spheres; admiration of the rich prompts social stability in the face of inequality; vanity propels human industry; propensity to barter leads to the division of labour, which fosters commercial society.

Nevertheless, commercial society is also the summit of a historical process that is naturally reached through the succession of stages if the human natural dispositions are left untouched in order for them to be able to steer the historical path. It is necessary to approach the historical dimension because otherwise we would not be able to have a systemic view of Smith's theory. According to Cropsey

When we take under consideration the passage of Smith's general principles into a system of society, we find forced upon our attention the end or way of life to be chosen and also the process of coming into

being of the society based upon the new rule. Smith speculated upon the career of systems of society considered as systems, and emerged with a type of philosophy of history (Cropsey, 1957, p.56)

Moreover, if the “*basis* of the explanations he provides in ethics, political economy, and indeed in every subject about which he wrote is presented as, on the whole, unchanging” then, since as we have seen that rules of morality and society itself change in time, in order for this theory to be consistent Smith has to show “how the phenomena can be brought about into a satisfying explanatory system when certain stable principles are posited, then of course we have good reason to accept those principles” (Griswold, 1999, p.352).

Smith deploys conjectural history whose premise was, according to Craig Smith, that “all societies, if left alone to develop, proceeded roughly according to this pattern of change in the mode of subsistence” (Smith, 2006b, p.48). Moreover, Smith denies any role soever to reason as the faculty that guides this historical process, “[i]nstead, the institutions of society are described as the direct outgrowths of certain material conditions of life which Smith summarizes as ‘the state of property and manners’ prevailing at the time in question” (Cropsey, 1957, p.59). The experiential knowledge acquired through the relation between men and their mode of subsistence, ignited by environmental pressures, is what prompts stadial changes (Smith, 2006a,b). To make a historical approach to how commercial societies have arisen is important since Smith considered that “philosophy of society must in method be historical” inasmuch as societies were “natural growths in their own unique environments, and interpreting that growth implied a theory of growth” (Macfie, 1967). There is also a possible learning process that comes from the historical analysis:

The design of historical writing is not merely to entertain; (this perhaps is the intention of an epic poem) besides that it has in view the instruction of the reader. It sets before us the more interesting and important events of human life, points out the causes by which these events were brought about and by this means points out to us by what manner and method we may produce similar good effects or avoid similar bad ones (Smith, 1762, p.90)

Accordingly, for Smith, a philosophy of history has two properties, namely, the establishment of a causal relationship between events, which means the unveiling of mechanical laws, and it also has a practical aspect, the instruction of men on how to combine different elements to produce a specific result. This resembles Hayek’s assertion on conjectural history that it concerns, in the absence of historical record, a theoretical method to ascertain a sequence of events that, although they may never

occur again in that exact order, the result is, in theory, possible. In this sense, now that we have arrived at commercial society through the operation of natural propensities, we may show how it is also the culmination of a historical process. First, we begin with a theoretical introduction on how and why conjectural history is employed by Smith, then we proceed to the Four Stages theory to assess how it may be related to functionalism and invisible hand arguments.

4.3 Conjectural History

4.3.1 A Theoretical Introduction

In this section, we will run through the Scottish Enlightenment's – and Smith's more particularly – vision on the history of society. They conceived social and historical facts as “not merely contingently connected either at any particular point in time (social statics) or between one period and the next (social dynamics) but reveal a necessary/natural pattern”, making “social history intelligible” (Berry, 2020, p.91). Accordingly, we shall employ a theoretical analysis upon conjectural history in order to understand in which context and why Smith and Hayek engaged in this reasoning. We argue that a possible interpretation, one that would resonate Hayek's own arguments, is that Smith's conjectural history is developed through functional arguments, in the sense that all material and institutional aspects that characterise each historical stage are necessary steps towards commercial society. In other words, all these material and institutional elements perform a function in the whole that would ultimately lead to a specific state of affairs, namely, commercial society.

Smith apprehended social history as a progression of four stages, which are “hunting, pasturage, farming, and commerce.” (Smith, 1982, p.459); what characterised each of them was, mainly, the degree of institutional development regarding the treatment of property, for “its ‘organisation’ has to entail how ownership is identified and maintained and that in turn is inseparable from how law and power both formally (government) and informally (manners) function” (Berry, 2020, p.114). However, “[b]ecause the four-stages theory is a natural history there is no pretence that this progression must happen uniformly” and it does not mean that “the stages are discrete modes of social organisation” (Berry, 2020, p.115), inasmuch as there can be juxtaposition⁵³, coexistence and even a leap from one stage to another that is non consecutive. Thus, four-stage theory

⁵³“But each stage also absorbs the stage before: hunting and herding do not cease because agriculture arises, but they cease to be the sole or chief means of securing subsistence” (Smith, 2006a, p.296).

establishes out of the diversity of social experience a coherent pattern or structure. This structure is that of a natural, that is, predictable, development from infancy to maturity, from the simple to the complex, from the concrete to the abstract. The four-stages theory is best understood against this backdrop. [...] The move from the first stage of the hunter-gatherer through to the fourth commercial age is thus marked by increasing abstraction (Berry, 2018, p.274).

There seems to be a growing degree of abstraction in the elements and social relations as society progresses, for example, the passage from the concrete physical possession of property to their more abstract forms such as paper money or promissory notes (Berry, 2018, p.274). Nevertheless, the abstract character is also present in the very procedure Smith and the Scottish thinkers employ to analyse society, insofar as they abstract from singularities in order to implement more generalised and far-reaching conclusions. As Craig Smith puts it “[i]n terms of the ‘four stages’ theory it is clear that no abstract conception of property exists in the savage or hunter society. The immediacy of life in such conditions precludes much abstract thought and the mode of subsistence is based around securing from what is wild for immediate needs. As a result of this there is little or no government in hunting societies.” (Smith, 2006a, p.297)

The four-stage theory can be viewed as a heuristic expedient evoked to “identify certain coherence in social institutions” (Berry, 2020, p.114) and confer intelligibility to social and historical events. However, one cannot state that the progression towards the commercial society has occurred in the exact terms as described by theory, since there is no record of how they actually happened. Accordingly, when “we cannot trace the process by which an event *has been* produced, it is often of importance to be able to show how it *may have been* produced by natural causes” (Stewart, 1793, p.293), that is, in the absence of the “exact historical narrative”, one can show, “by an act of the imagination” how “certain institutions might have developed” (Barry, 1979, p.36). Furthermore, social sciences are generally faced with the difficulty of conducting experiments, a problem that “the Scots resolve by turning to history as a source of evidence”, albeit the lack of evidence on the “origins of social institution and practices” (Smith, 2006b, p.105). This sort of philosophical investigation came to be known as “*Theoretical or Conjectural History*” (ibidem). What drives the enquiry expressed in the conjectural history method is well summed up by Dugald Stewart in his Biographical Note on Adam Smith:

When, in such a period of society as that in which we live, we compare our intellectual acquirements, our opinions, manners, and institutions, with those which prevail among rude tribes, it cannot fail to occur

to us as an interesting question, by what gradual steps the transition has been made from the first simple efforts of uncultivated nature, to a state of things so wonderfully artificial and complicated [...] In this want of direct evidence, we are under a necessity of supplying the place of fact by conjecture. (Stewart, 1793, p.292-293)

Campbell (2014) argues that conjectural history is a misleading term, since it may induce the interpretation that Smith was trying to “reconstruct the probable course of unrecorded history on the basis of the known principles of human nature” (2014, p.79). Nevertheless, Smith “does not place importance on the historical likelihood of such a series of events; it is, rather, that he is attempting, by reference to such a model, to analyse the effects of processes which are going on all the time in society, and which do not need to be tested against some long past and unrecorded events” (2014, p.80).

Yet, one could argue that the development of one society would be rather different from the other and, by the conjectural method carried out by the Scottish thinkers – and Smith in particular — they would incur in some sort of relativism by having to employ different analysis for different societies, which would mean that they do not share the same characteristics or social processes. However, according to Berry (2020, p.66), conjecture rests on two elements, namely, the principles of human nature and external circumstances. In this regard, if “human behaviour across space and time can be compared, if gaps can be plugged by conjecturing what may have happened, if it is feasible to write a history of mankind then there has to be a basic fixity or constancy in human nature” (2020, p.68). That is precisely what Smith has in mind by assuming that there is a set of fixed human predispositions⁵⁴ that impress regular behaviour upon individuals. Thus “Smith assumes that *all* men are endowed

⁵⁴Smith’s admiration for Newton’s universal gravitational law spread throughout his work. Smith admired Newton’s competence in explaining the motion of heavenly bodies through a single and fixed principle: gravitation. That is why “[s]uch is the system of Sir Isaac Newton, a system whose parts are all more strictly connected together, than those of any other philosophical hypothesis” and thereby Newton’s theory could be viewed “not as an attempt to connect in the imagination the phaenomena of the Heavens, but as the greatest discovery that ever was made by man, the discovery of an immense chain of the most important and sublime truths, all closely connected together, by one capital fact, of the reality of which we have daily experience” (Smith, 1795, p.104-105). In addition to Smith’s commendation towards Newton, many scholars have pointed to the fact that the latter had a significant influence on Smith’s methodology, in such a way that Smith would have sought to express his own social theories in terms of the least number of fixed principles. “Surely it is Smith’s supreme debt to Newton that he was able to eliminate unnecessary explanatory factors to the extent of being left with only key concepts. In his social statics, his connecting principle appears to have been the love of ‘sympathy’, which impels men to act with ‘propriety’ so as to deserve the approbation of the ‘impartial spectator’. In his social dynamics, it appears to have been his guarded belief in the doctrine of progress, economic and social. These two concepts taken together (with the first the *primum mobile* behind the second) link up virtually all of Adam Smith’s observations on the nature of economy and society” (Reisman, 2014, p.43). No wonder Skinner (1979) claims that there can be no doubt regarding Newton’s influence on eighteenth-century moral philosophy, “[n]or can there be any doubt that economics was originally conceived in the image of Newtonian physics” (1979, p.110). For a more systematic view of the impact of Newtonian thought on Smith, see Chapter 5 of Montes (2003).

with certain faculties and propensities such as reason, reflection, and imagination, and that they are motivated by a desire to acquire the sources of pleasure and avoid those of pain” (Skinner, 1979, p.112).

By stressing that there is a constant structure in human nature, Smith is able to compare different societies across time and territory, abstracting from their particularities, and reduce his social theory to a small set of fixed principles from which several assertions can be deduced. This sort of abstraction is what makes it possible to maintain that “the subject of conjectural history is not this or that society, or (still less) the human race, but the *typical* ‘society’, ‘nation’, or ‘people’ ” (Höpfl, 1978, p.25). Since Smith is dealing with a *typical*, or general society, its progression represents, in potential, that of all societies. Nevertheless, one question that remains is the one regarding the differences between actual and conjectural history. The answer to this question lies in the difference between *general* and *particular* phenomena:

what may ultimately have made it impossible for them to distinguish conjectural history from narrative history was that the former differed from the latter not in attempting to construct intelligible sequences of events, nor in attempting to find evidence for such sequences, nor in the sort of explanations of changes advanced, (for there was no difference between the two in these respects), but simply in the fact that the sequences narrated in conjectural history were deemed to be *typical*, whereas the sequences of narrative documentary history were *unique* and *particular*. (Höpfl, 1978, p.23)

Here, we may have an interesting parallel with biological evolutionary theory, since it also comprises a historical reconstruction of past environments and how individuals interacted with these environments. In the absence of a precise historical record of how these interactions produced the morphological structures that we observe in individuals, the scientist must conjecture on what the most plausible conditions that led to these structures were.

The theory of natural selection is a *historical* one: it constructs a *situation* and shows that, given that situation, those things whose existence we wish to explain are indeed likely to happen. To put it more precisely, Darwin’s theory is a *generalized* historical explanation. This means that the situation is supposed to be *typical* rather than *unique* (Popper, 1979, p.270)

This universality, Craig Smith argues, comes from the human need for subsistence, which impels different forms of societal organisation according to the means used to provide for such needs (Smith, 2006a, p.295). Since men have similar physical constitution, mental processes, and natural proclivities, the pursuit of subsistence entails similar stages, as well as similar progression (*ibidem*). The

specific form through which men search for material satisfaction requires and gives rise to different political, juridic, and behavioural properties, which are all inextricably interrelated.

In this context he [Smith] brings in economic determinism and argues that each convection of social, political and moral phenomena results directly from a particular economic basis: stages are hence characterised by the division of labour, ownership of property and nature of economic dependence rather than by social, political or moral factors, which are merely dependent variables⁵⁵. (Reisman, 2014, p.137)

In view of this potential, albeit “soft” determinism⁵⁶ (Berry, 2020), which “unlike the hard determinism of physical causation, they can accommodate change or variation” (Berry, 2018, p.275), one could argue that Smith develops his reasoning with an end-point in view, in the sense that all previous stages’ properties have a function in developing the necessary conditions towards commercial society. Since there is no historical record on how certain social institution came about, one of the things the social scientist is able to do is “the identification of its parts [the structure’s parts] and the function to which they serve” (Pimenta, 2018, p.102, our translation) .

This would imply a *functionalist* analysis of society, which would bring closer together Hayek’s and Smith’s thoughts in methodological terms. That is, Smith, along with the other Scottish thinkers, would have engaged in conjectural history as a tool for the intelligibility of the past for which there is no historical record, to advocate and support a specific kind of society, that is, *commercial society*.

In other words, Smith employs a functional argument because he has an end-point in view⁵⁷ when he conjectures what would have been the previous stages that collapsed in the final stage of commercial society⁵⁸.

⁵⁵Meek (1967) claims that the Smithian theory of four stages has had an influence on Marxian sociology, ascribing a sort of materialistic view of society to the Scottish thinker, insofar as the mode of production in each stage would determine how people think and behave. In his own words, “even if we cannot properly ascribe *the* materialist conception of history to Smith, we may certainly ascribe to him *a* materialist conception of history” (Meek, 1967, p.40). Hamowy (1987) follows the same line as Meek, for “societies evolved through four stages, marked by the primary method whereby wealth is produced” (1987, p.15). Campbell (2014) also agrees with a materialist vision of Smith’s four stages, albeit not in a deterministic sense, since Smith did not take economic progress to be irreversible (2014, p.81). However, this is not unanimous amongst Smith’s scholars, since Haakonssen argues that Smith would have considered the economic condition as a necessary but not as a sufficient condition for historical development (Haakonssen, 1989, p.188). Moreover, Höpfl maintains that this kind of separation into material and ‘ideational’, or ‘superstructural’, arguments would make no sense, since, for the Scots, there was no doctrinal position on this matter, for these elements would not stand in a hierarchical ground (Höpfl, 1978, p.35).

⁵⁶Determinism has a theoretical function, since if it were not applied, their social theory would “collapse into some sort of descriptivism” (Berry, 2020, p.85)

⁵⁷“Like so much of the eighteenth century historicism, however, Smith’s four-stage growth-path seems to be more an expression of belief than an impartial inquiry into the nature of historical evolution” (Reisman, 2014, p.135)

⁵⁸In Reisman (2014)’s view, Smith would have failed in his historical approach in giving too much importance to the commercial society, since he does not give the same treatment of the present as he gives for the past, that is, whereas the past has some intrinsic dynamic element, as one stage gives rise to another, the moral philosopher seems to give a sudden stop in the progression of stages as soon as society reaches the commercial age. “Yet since Smith saw the past as a process

It might be an account of some past episode(s) written with a view to pointing a moral, or to illustrating or confirming some general proposition (or 'principle') concerning human nature or conduct, or it might be a narrative designed to celebrate the present or to advance some current cause. But strictly speaking, the past for such a history would be simply a vast reservoir of factual information for the social scientist to draw on, and both the cast of the narrative (if the narrative form is adopted at all) and the choice of subject matter would be governed by the end in view. (Höpfl, 1978, p.21-22)

In this sense, Campbell (2014) argues that Smith is not only interested in the efficient causes of social phenomena, but also in *final causes*. It means that he is concerned not only with “the cause which gives occasion to it [social phenomenon]” – which relates to the former cause — but also with “the end which it answers” (2014, p.70) – which alludes to the latter cause. Campbell claims that Smith follows a sort of functionalist analysis of society, especially when he explains that “a particular pattern of social behaviour is essential for the survival of the society” (2014, p.74), which means that the very existence of this specific behaviour is due to the function it performs to the whole of society.

We may now turn to Smith's conception on the Four Stage theory to ascertain the presence of functional teleological arguments and how it relates to other concepts such as invisible hand explanations and unintended consequences. We argue that once we assume that Smith's description is functionalist, we may conclude that every institutional and material novelty in each stage performs a role in the advancement of commercial society. Smith describes this “soft determinism” (Berry, 2020) by appealing to natural proclivities inscribed in men; they carry the instructions needed to arrive at commercial society. The principle of “bettering one's condition” impels men to engage in economic relations and yield the best result possible, prudence maintains a certain hierarchy in the allocation of capital amongst the economic sectors. This fosters the division of labour, which, in its turn, is the result of another natural propensity, the tendency to barter.

4.3.2 The Four Stages

In this section, we develop Smith's Four Stages theory. We show that the establishment of civil government, which configures one of the most important institutional improvements that arise in the course of his conjectural history, needs two features inscribed by nature in men, namely, the principle of authority which, along with the reverence for the rules and the principle of utility, ensures political stability. We show that each stage is preceded by material and institutional innovations, that

of becoming, not being, it is strange that he saw commercial society as the end of the progression rather than as a half-way house to something different” (2014, p.136).

is, individuals acquire and transmit new empirical knowledge by creating new ways to maintain social order. The malleability of their social relations and institutions in order to maintain social stability reflects a plasticity in human behaviour that invites teleological reasoning. That is why, in each stage, every institutional and material innovation has a function to perform in society's maintenance. We conclude that the natural predispositions inscribed in man are strong enough to provide them with a repertoire of behaviour that engenders the rise of commercial society even when the succession of stages gets inverted, showing once again the plasticity of social survival.

Smith establishes four stages in the development of society, which are, "1st, the Age of Hunters; 2^{dly}, the Age of Shepherds; 3^{dly}, the Age of Agriculture; and 4^{thly}, the Age of Commerce." (Smith, 1982, p.14) . In each stage there are different notions of what can be configured as private property, that is, in each age there emerges different institutions that attribute distinct social and juridic patterns as to what objects – which assume forms progressively more abstract (Berry, 2020) – may be possessed or owned by the individuals.

One aspect permeates the Four Stages theory of Smith without which we cannot apprehend his conjectural history, it is the concept of the *principle of authority*, or as Smith says, the fact that "every one naturally has a disposition to respect an established authority and superiority in others, whatever they be" (Smith, 1982, p.318). This is intimately related to a topic we have already covered, that is, the reverence for the rules of conduct. Individuals follow rules and obey authority out of a natural disposition that is socially reinforced through habit. This disposition to obey is ingrained in each individual, "[t]he young respect the old, children respect their parents, and in general the weak respect those who excell in power and strength" (ibidem). Accordingly, since one is born in society and there is no previous state, she comes across with an already established chain of authority, and thus her obedience is demanded as much as the others' around her by their superiors. Hence obedience comes as a natural instance of life in any stage of society, the only element that changes is the form in which this authority will be exerted.

What Smith seems to be arguing here is that it is not from a rational decision that individuals submit to a certain form of authority; it is rather from an unconscious process of socialisation and absorption of social habits, which internalise and naturalise authority and respect for superiors. This process develops in time, the habituation of obedience yields the habituation of authority (Smith, 2006b, p.57), and the individual may not fully apprehend all the social benefits that accrue to a society

that functions based on hierarchical modes of obedience. In this regard, Craig Smith claims that

This, then, is the basis of socialization, the habituation through time, of an individual through interaction with others. Through socialization we come to follow accepted modes of behaviour in a non-deliberative manner which cannot, of itself, be fully broken by the rational reflection of the individual himself, so strongly have our minds become accustomed to it. (Smith, 2006b, p.36)

However, the “principle or duty of allegiance” (Smith, 1982, p.318), in accordance with which people are induced to obey civil government, relies on a second element, in addition to the principle of authority, which is the principle of utility or general interest (Smith, 1982, p.402). The latter has to do with the advantages – albeit not previously calculated – of submitting to the authority of a government. According to Smith, the government is responsible for both the security and the independence of each individual (Smith, 1982, p.318). However, this utility that springs from obedience is not – or, at least, not only, and certainly not mainly – private, but *public*. Men would have a natural appreciation to be in a functional and orderly society; and Smith compares society to a machine which men like to contemplate as it runs smoothly and its parts are harmonically integrated.

Human society, when we contemplate it in a certain abstract and philosophical light, appears like a great, an immense machine, whose regular and harmonious movements produce a thousand agreeable effects. As in any other beautiful and noble machine that was the production of human art, whatever tended to render its movements more smooth and easy, would derive a beauty from this effect, and, on the contrary, whatever tended to obstruct them would displease upon that account. (Smith, 1790, p.316)

Smith seems to be arguing in favour of a much deeper and tacit social process ingrained in human constitution, as it relies on two natural propensities, namely, the propensity to obey others that are in a higher hierarchy in society, and the propensity to derive beauty from orderly systems⁵⁹. The beauty of the order comes from the fact that “social norms prescribe particular patterns of conduct and character, and these are beautiful to behold because of their propriety” (Reisman, 2014, p.53).

Every one sees that the magistrates give security to property and strength to the laws, and that without them all must fall into confusion. It seems therefore to be his own interest and that of every one else to

⁵⁹This appreciation of the beauty of systems is also manifested in Smith’s account of what motivates scientific inquiry. That is why, for Smith, “the aim of scientific inquiry is thus passionate, not utilitarian or practical. It is not to discover ‘useful’ facts or to give us control over nature but to smooth the passage of the imagination” (Reisman, 2014, p.31). Man becomes intrigued – or *wondered*, using Smith’s vocabulary more precisely (Müller, 2022) – by natural or social phenomena and, in order to alleviate its imagination, he tries to connect apparently disjointed events, in order to establish causal relations between them. In Smith’s words “[p]hilosophy, by representing the invisible chains which bind together all these disjointed objects, endeavours to introduce order into this chaos of jarring and discordant appearances, to allay this tumult of the imagination, and to restore it, when it surveys the great revolutions of the universe, to that tone of tranquillity and composure, which is both most agreeable in itself, and most suitable to its nature” (Smith, 1795, p.45-46).

obey the established government, when it acts with ordinary moderation and tolerable decency. Every one sees that the government has a vast authority and great influence over others so that all attempts to overturn it must be resisted, and with great vigour. (Smith, 1982, p.322)

In this sense, the principle of authority gets a higher status relative to the principle of utility, which leads Reisman (2014, p.31) to claim that the beneficial results that are obtained from man living in society and observing its norms are the *unintended consequences* of an almost “instinctual” process of creation of and adherence to the social rules of conduct. It seems that for Smith, utility only comes as a reinforcing mechanism of what nature has instilled in men – his predispositions and naturally embedded features – which shapes his behaviour, and his actions. Smith maintains that nature has endowed men with the volition to fulfil its ends as well as to the means that will ensure the attainment of such ends. However, “though man [...] be naturally endowed with a desire of the welfare and preservation of society”, yet nature “has not entrusted it to his reason” to grasp the suitability of certain means towards specific ends (Smith, 1790, p.77). Therefore,

With regard to all those ends which, upon account of their peculiar importance, may be regarded, if such an expression is allowable, as the favourite ends of nature, she has constantly in this manner not only endowed mankind with an appetite for the end which she proposes, but likewise with an appetite for the means by which alone this end can be brought about, for their own sakes, and independent of their tendency to produce it. (Smith, 1790, p.77)

Smith, in another passage from the *Theory of Moral Sentiments*, mobilises once again the metaphor of society as a machine, but this time as a watch. He uses it to advance the idea that just as the watch wheels are not aware of their role in the whole and continue to carry out their *function* in the equipment, men are *led* to act *as if* they knew how to achieve certain goals, and here, just as with Hayek, we see the *as if* reasoning employed to explain unconscious action which, although unintended, seems to have been previously designed to attain certain goals.

The wheels of the watch are all admirably adjusted to the end for which it was made, the pointing of the hour. All their various motions conspire in the nicest manner to produce this effect. If they were endowed with a desire and intention to produce it, they could not do it better. Yet we never ascribe any such desire or intention to them, but to the watch-maker, and we know that they are put into motion by a spring, which intends the effect it produces as little as they do. (Smith, 1790, p.87)

Accordingly, people are capable of perceiving the advantages that accrue from submission to authority, although it does not seem that it is this preconceived rational perception which makes

individuals obey and adhere to social norms, since a much more deeply ingrained natural disposition may be acting beforehand. For instance, when civil government is introduced in the stage of shepherds Smith claims

It thereby introduces some degree of that civil government which is indispensably necessary for its own preservation: and it seems to do this naturally, and even independent of the consideration of that necessity. The consideration of that necessity comes no doubt afterwards to contribute very much to maintain and secure that authority and subordination. (Smith, 1776, p.715)

Smith argues that rational apprehension comes only *after* the institution of government, which allows us to conclude that government arises unconsciously and in spite of men's volition. It arises as an unintended byproduct of the dispersed actions of individuals. On this subject, Craig Smith states that

The instigation of government was a product of a process of unintended consequences: it arose from the temporary reactions to present concerns and literally 'grew' from there in reaction to new circumstances. As time passed these conventions among humans became habitual and possessed a force in their minds which, though the institutions themselves were ultimately underwritten by notions of utility, carried an emotional strength which made them part of the social bond. (Smith, 2006b, p.58)

Moreover, Smith employed a functional argument in the above quotation. Government, Smith says, "was established to defend the property of the subjects" (Smith, 1982, p.324). The rise of government has a function in the social order, that is, to protect private property and thereby to maintain the social whole. As shown before, we could say that Smith is employing an argument analogous to evolutionary Biology, since he is looking back in time for the (conjectured) origin of government and analysing the plausible forms it assumed, thus bringing about a causal-genetic explanation. Besides, he is also ascribing the reason for the rise of government to the function it performs on the social order, its maintenance, thus employing a functionalist argument. If we recall Braithwaite (1953)'s assertions, Smith's argument has explanatory power in teleological terms, since we can infer that the actions of man are *plastic* enough⁶⁰, since they seek ways and new forms of interaction that stabilise the social order into a natural or normal state.

⁶⁰Smith understands that people modulate their passions and their behaviour in an adaptation process in accordance to different circumstances. He says "Every savage undergoes a sort of Spartan discipline, and by the necessity of his situation is inured to every sort of hardship. He is in continual danger: he is often exposed to the greatest extremities of hunger, and frequently dies of pure want. His circumstances not only habituate him to every sort of distress, but teach him to give way to none of the passions which that distress is apt to excite." (Smith, 1790, p.205)

Returning to the Four Stages properly, there are several ways by which the hierarchical superiority may be established, and it depends on which of the historical stages we are dealing with, since in each one of them we have different social relations and institutions. For example, in a primitive society as the Age of Hunters there is no capital or wealth accumulation, whereupon “scarce any property”, thereby there is no need for a civil government or a robust system of justice. Passions that may destabilise society, such as envy or malice, can only injure the person herself or her reputation (Smith, 1776, p.709), but seldom her own property. In this fashion, it is the members of the tribes in which a relatively low number of people live that constitute both the executive and the judiciary powers, in the sense that “[d]isputes betwixt others can in this state but rarely occur, but if they do, and are of such a nature as would be apt to disturb the community, the whole community then interferes to make up the difference” (Smith, 1982, p.201), and thus this social organisation and deliberation can be considered democratic (*ibidem*). However, although democratic and equal in fortune (Smith, 1776, p.712), it does not mean that there was no authority and subordination, for in this stage “age is the sole foundation of rank and precedency” (Smith, 1776, p.711).

We can see, if we follow Craig Smith’s (2006a) reasoning, that from the mode of subsistence – and he highlights the knowledge acquired to transform these material structures – we can infer how social relations will be established and what kind of institutional background will be necessary. For instance, in the age of hunters, since hunting is the activity that promotes material subsistence, game is the only known form of property (Smith, 1982, p.14). Yet people are all poor and equal in fortune; thereby there is no need for a sophisticated system of rules and laws in order to protect this scarce form of property. The equality in fortune determines the form of authority which will take place, that is, the subordination by age, as well as the form of political organisation, democracy. Therefore, the order, that is, the material and institutional framework of this society, which arises from the regularity in the behaviour of the individuals, is generated through a series of unintended consequences that emanate from “the natural effort every individual [has] to better his own condition” (Smith, 1776, p.540) that guides him to seek alternative modes of subsistence.

The next stage is the age of shepherds. The Smithian driver⁶¹ of any transition of stage is the size of population, since its growth impels the individuals to *adapt* and procure “some other method whereby to support themselves” (Smith, 1982, p.14). As hunters come into contact with their animals,

⁶¹However important population pressures exerted on society are, Craig Smith argues that they are not the sole cause of social change, for if the persons cannot acquire the knowledge of a new mode of subsistence, the change cannot be implemented (Smith, 2006a, p.296)

which are their sole means of subsistence, they gradually develop the skills to tame them and form the knowledge of shepherdry (Smith, 2006a, p.297). The size of the population triggers individuals to change their behaviour and develop new skills, so that the “most naturally contrivance they would think of, would be to tame some of those wild animalls they caught” (Smith, 1982, p.15). This provides food on a larger scale than the previous stage, thus returning society to a stable state.

The shepherds have residencies which are more fixed than the hunters, although they still migrate, and this is due to the character of the objects they own, making them less mobile than in the previous stage. As men developed another kind of relation towards the animals they once hunted, and when they “came to think of taming these wild animalls and bringing them up about themselves, property would necessarily be extended a great deal farther” (Smith, 1982, p.20), becoming “of a very considerable extent” (1982, p.16). In fact, “the step betwixt these two [stages] is of all others the greatest in the progression of society” (1982, p.107), since the expansion of the notion of property is the most radical and profound.

The way people relate to property entails radical changes in social structure. As the notion of private property becomes widened, society needs a better and sophisticated institutional apparatus to deal with the issues that arise from the ever more complex social relations that emerge, since “in this way of life there are many more opportunities of dispute betwixt the different persons of a tribe or nation than amongst a nation of hunters” (Smith, 1982, p.203). The need for punishments for property infringements arises, and the government has to emerge to provide the best legislative and coercive tools. That is why Smith claims that the age of shepherds is when “government properly first commences” (Smith, 1982, p.202). One may be able to infer from this that the government itself is the institution that emerges as an *unintended consequence* of the uncountable social interactions that emanate from the engagement of the individuals in certain property relations, which demand an institutional innovation that preserves social order. However, there is another important unintended consequence that comes with the stage of shepherds, namely, social inequality.

The appropriation of flocks and herds renders subsistence by hunting very uncertain and pr(e)carious. Those animalls which are most adapted for the use of man, as oxen, sheep, horses, camels, etc. which are also the most numerous, are no longer common but are the property of certain individualls. The distinctions of rich and poor then arise. Those who have not any possessions in flocks and herds can find u no way of maintaining themselves but by procuring it from the rich. (Smith, 1982, p.202)

Social inequality establishes new social relations as well as new degrees of dependence, since the

rich begin to support the poor as they are the ones in possession of the means of subsistence of this society. Accordingly, the surplus of production of the rich gets to be spent on the subsistence of a large contingent of people, upon which the owners of the flocks and herds have the most power and influence, establishing new authority relations. This inequality could be a source of social instability, were it not for the natural mechanism of the “disposition to admire, and almost to worship, the rich and the powerful” (Smith, 1790, p.61). This provides a social balance and guarantees that society will not collapse. Here again Smith shows the utility of the natural, programmed, propensities in direct society towards order. Craig Smith summarises the unintended rise of new forms of authority, government, and property rights in the stage of shepherds:

Some institution to enforce claims of right was required by shepherds. The origin of that institution was also to be found in this inequality of fortune, for those who could not practice shepherdry and yet saw the stock of wild animals fall would become dependent on those who had mastered the skill. Those that controlled herds and flocks came to occupy superior positions as an unintended consequence of their possession of the knowledge of shepherdry [...] Dependants develop a habit of obedience and accept their position as clients in order to secure easy access to the means of subsistence. They come, as a result of this process of habit, to accept the validity of the shepherd’s claim to his flocks [...] Thus government and property rights develop as an unintended consequence of the acquisition of the knowledge of shepherdry (Smith, 2006a, p.298)

The stage of agriculture has its origin, again, driven by the pressures the growth of the population impinges on the modes of subsistence, which make people “naturally turn themselves to the cultivation of land and the raising of such plants and trees as produced nourishment fit for them” (1982, p.15). The cultivation of land is a skill that is developed through a system of trial and error in which the accidental element is of great importance. Individuals observe what happens when some kinds of seed fall on some types of soil and infer, upon the repetition of the same results, how they should proceed to cultivate their land.

They would observe that those seeds which fell on the dry bare soil or on the rocks seldom came to any thing, but that those[s] which entered the soil generally produced a plant and bore seed similar to that which was sown. These observations they would extend to the different plants and [trees they found produced agreeable and nourishing food. And by this means they would gradually advance, in to the age of agriculture. (Smith, 1982, p.15)

One can conclude from this last passage that “observation and experience [...], not active reason, help us gradually build up a stock of conditioned responses to various sorts of stimuli” (Reisman,

2014, p.37) and that “habit and custom for Smith were forms of experience-based knowledge: knowledge which is non-verbalized yet vital to the success of our actions” (Smith, 2006a, p.300). We saw that Hayek also regards tacit knowledge that alters mental patterns and gets internalised through experience as one of the most important elements in his social theory. Therefore, it seems as if Smith is implying that men constitute their knowledge through a process of induction, that is, to make predictions based on previous observations and thereby depart from the recurrence of a particularity to make a general statement. However, although observation is essential to place “an event in a sequence of events” it is necessary to compare “sequences of events themselves” and this requires the formulation of hypothesis regarding “unobserved connections between events” (Campbell, 2014, p.38). This does not downplay the role of empirical knowledge, since experience seems to precede rational reflection.

In the age of agriculture, men fix their homes, as their main source of subsistence comes from a fixed element, that is, land. This fixity induces them to “make a division of the land⁶² once for all, rather (than) be put to the unnecessary trouble of dividing the product every year.” (Smith, 1982, p.22). Hence, the property of land is erected as an unintended consequence of the establishment of agriculture. The notion of property gets once more extended as land becomes susceptible to possession; and this is only possible due to the fixity of habitations, for in the case the latter were erratic, it would not make any sense to claim ownership of an extensive piece of land and thereby exclude others from its fruition. Accordingly, with the rise of the age of agriculture comes the need to modify the institutions in order to include this whole different way of interacting with the object of possession, that is why Smith claims that “laws therefore tho perhaps not so rigorous will be of a far greater number than amongst a nation of shepherds” (Smith, 1982, p.16). Here again, new social institutions emerge to stabilise and preserve the order.

Another important unintended consequence of the age of agriculture is the rise of cities. This happens because the division of land presupposes the existence of neighbours who can “make inroads upon them” (Smith, 1982, p.409), which induces the need for protection. In Smith’s own words

They must therefore fall upon some method to secure themselves from danger, and to preserve what it formerly cost them so much trouble to procure. It would be more easy to fortify a town in a convenient place than to fortify the frontiers of the whole country, and accordingly this was the method they fell upon.

They built fortified towns in the most convenient places, and whenever they were invaded took shelter in

⁶²Smith claims that the division of land occurred as a result of the organisational and practical problems that arose with the distribution of the product of land amongst its inhabitants as well as the definition of who could occupy this or that piece of land (Smith, 1982, p.22)

them with their flocks and moveable goods, and here they cultivated the arts and sciences. (1982, p.409)

Moreover, the authority that was once in the hands of the leaders of the several clans of shepherds was ended with the rise of cities. Citizens enrich and escape from their leaders' domain since the revenues that accrued to the latter were not large enough as to retain people in dependence (ibidem), thus shifting the form of government from democracy to republic. With people in the cities, the population density in a single territory increases, thereby people interact with each other in a higher frequency and the opportunity to engage in commercial transactions is magnified. Therefore, since the age of agriculture produces a larger surplus than the previous ages, people "would exchange with one another what they produced more than was necessary for their support, and get in exchange for them the commodities they stood in need of and did not produce themselves" (Smith, 1982, p.15).

The predominance of the commerce as the manifestation of people's engagement in social interactions, as well as the institutional adaptation to comprise new forms of property, give rise to the specialisation of the citizens in one professional branch, thus configuring what we have already mentioned as one of the most important concepts in Smith's thought, the *division of labour*. In this age, men are able to "confine themselves to one species of labour", and thereby "they would naturally exchange the surplus of their own commodity for that of another of which they stood in need." (Smith, 1982, p.459). Along with the intensification of commerce and the division of labour, comes the *commercial society*, which is the next and final stage.

Hence, Smith deducts this final stage from two different perspectives, one that departs from the vanity of the rich, which engenders a trickle-down effect on wealth, entailing an increased purchase power for the poor, thereby increasing the demand for manufactures, fostering commercial relations and, finally, arriving at the division of labour. The other perspective is the one we have just seen that deals with the succession of the four stages, which, one by one, enlarge the scope of private property and, consequently, following the natural chain of institutions that arise we arrive at the commercial society.

We could see from above that Smith's conception of the successive abstract historical stages is permeated by the notion of *unintended consequences* and *functionalism*. As there is a shift in the mode of subsistence, which is itself an unintended result from human experimenting with their own reality and adapting to novel circumstances, unintended consequences may arise. As we showed, the introduction of the age of shepherds brought along a hierarchical superiority of those who possess

the means of subsistence, which in turn introduces a habituated obedience towards the latter and a requirement of a form of government able to guarantee property rights. In the age of agriculture we saw the unintended origin of the cities as a secure locality, whereby commerce is further developed due to magnified social interactions and the amplification of the division of labour, bringing about the age of commerce, and thus ending with personal forms of dominance. We could also see that natural proclivities seem to be adjusted or programmed to fulfil some end which contributes to the preservation of the social order, and that was the case of the natural propensity to better one's condition and the admiration for the rich. The rise of new institutions has a similar role to play in stabilising the order, which operates as a homeostatic device whose very existence is warranted by the *functions* each part performs on the whole.

Now we may analyse the case of Western Europe, where there is a reversal in the natural order predicted by the four stages. This reversal, we show, is not enough to prevent the commercial society from arising. In this sense, since we want to employ a Hayekian view on Smith, we argue that human propensities carry the instructions necessary to arrive at commercial society, which means that men act *as if* they wanted to produce this specific final stage even when under plastic circumstances, thus justifying for the use of teleological arguments.

4.3.3 Europe: the reversal of the Four Stages

Smith is clear that there is a natural ordering of the four stages which is determined by the necessity to provide for subsistence. In this sense, as subsistence “is, in the nature of things, prior to conveniency and luxury, so the industry which procures the former, must necessarily be prior to that which ministers to the latter” (Smith, 1776, p.377). The country accordingly must first develop so that the surplus produced in it can provide resources to the towns (*ibidem*). The cultivation of land requires the assistance of some services provided by “some artificers”. These, in their turn, “stand occasionally, in need of the assistance of one another”, which induces them to settle their homes next to one another, thus forming “a small town or village” (1776, p.378). Therefore, we may say that the rise of towns is an unintended consequence of the activity carried out by the country.

The Four Stage sequence emerges when the “natural inclinations of man” are left unimpeded to exert their proper effects. In this sense,

According to the natural course of things, therefore, the greater part of the capital of every growing society is, first, directed to agriculture, afterwards to manufactures, and last of all to foreign commerce.

This order of things is so very natural, that in every society that had any territory, it has always, I believe, been in some degree observed. Some of their lands must have been cultivated before any considerable towns could be established, and some sort of coarse industry of the manufacturing kind must have been carried on in those towns, before they could well think of employing themselves in foreign commerce. (Smith, 1776, p.380)

However, this is not what happens to countries in western Europe. In this case, foreign commerce was the one that introduced the manufactures so that these two sectors together “have given birth to the principal improvements of agriculture” (1776, p.380), and Smith ascribes this inversion to their original government which “necessarily forced them into this unnatural and retrograde order” (*ibidem*). Therefore, Smith conceives of this rather distorted historical process as a perversion performed by human institutions that “thwarted those natural inclinations” of men (1776, p.377). After the fall of the Roman Empire, along with the Barbarian invasions, “the country was infested by robbers and banditti, so that the cities soon became deserted, for unless there be a free communication betwixt the country and the town to carry out the manufactures and import provisions no town can subsist” (Smith, 1982, p.245). The German folk, who were in the “state of shepherds, and had even a little agriculture” (Smith, 1982, p.107), took all the land, and although “one had property of cattle it could be of no service to him unless he got the liberty to pasture them”(1982, p.245), and since there was no practice of arts and commerce was decimated⁶³, he would have no alternative but to submit to the landlords’ authority, thus scattering the population through the territory, wherein they would settle under the domain of different lords, thus establishing a form of dependence even more intense than the one in the shepherds stage (*ibidem*).

The division of land was made amongst a few “chiefs and principal leaders of those nations” (1776, p.382), in that the law of primogeniture was established so that no subdivision would take place at the moment of their transmission, and thus weaken the landlord’s power (1776, p.383). Smith contends that the law of primogeniture is founded upon a natural propensity “to continue his [man’s] regard towards those which are nearly connected to him” (Smith, 1982, p.217). However, it should be noted that the expression of this natural feature only takes place in a specific political context in which the need to secure the land from invasions and protect the power of the landlords rendered it more advantageous to transmit the property rights directly to only one member of the family without

⁶³“The rapine and violence which the barbarians exercised against the antient inhabitants, interrupted the commerce between the towns and the country. The towns were deserted, and the country was left uncultivated, and the western provinces of Europe, which had enjoyed a considerable degree of opulence under the Roman empire, sunk into the lowest state of poverty and barbarism.” (Smith, 1776, p.382)

dividing the territory.

However, Smith observes that “the right of primogeniture hinders agriculture”, for if the land gets “divided among the sons, each one would improve his own part better than one can improve the whole” (Smith, 1982, p.466). The argument Smith advances has to do with the lack of incentive to improve the land, which lowers the productivity and thereby produces only a fraction of the product it would otherwise yield were the land divided into smaller portions. In this sense, regarding the landlord, Smith asserts:

In Europe, the law of primogeniture, and perpetuities of different kinds, prevent the division of great estates, and thereby hinder the multiplication of small proprietors. A small proprietor, however, who knows every part of his little territory, who views it with all the affection which property, especially small property, naturally inspires, and who upon that account takes pleasure not only in cultivating but in adorning it, is generally of all improves the most industrious, the most intelligent, and the most successful. (Smith, 1776, p.423)

Besides the lack of stimulus to expend profit on land improvement, there is also a lack of incentive for the occupiers of land, since “[t]hey were all or almost all slaves” (1776, p.386) and “whatever it produced over and above his [the slave’s] maintenance belonged to the landlord; he had therefore no inducement to be at any great expense or trouble in maturing or tilling the land” (Smith, 1982, p.185-6), “making the land produce as little as possible over and above that maintenance” (Smith, 1776, p.389).

Accordingly, this pattern of land occupation and the low supply of productive land along with regulation keep “so much land out of the market, that there are always more capital to buy than there is land to sell, so that what is sold always sells at a monopoly price” (Smith, 1776, p.423). It is not profitable to employ capital in European agriculture, thereby capital flows from this activity towards trade. This last sector develops above the capacity of the agriculture to support it, as it would naturally take place, and then attracts manufactures which, in turn, develop the agricultural sector, making Europe arrive at the commercial stage in an inverted fashion. We could say, in this vein, that what becomes inverted is also the hierarchy of the profit rates from each sector, which would have to follow the natural structure in the sense that “the capital of every growing society is, first, directed to agriculture, afterwards to manufactures, and last of all to foreign commerce” (Smith, 1776, p.380).

In seeking for employment to a capital, manufactures are, upon equal or nearly equal profits, naturally preferred to foreign commerce, for the same reason that agriculture is naturally preferred to manufactures.

As the capital of the landlord or farmer is more secure than that of the manufacturer, so the capital of the manufacturer, being at all times more within his view and command, is more secure than that of the foreign merchant (Smith, 1776, p.379)

There is a psychological component as to why the capitalist should invest first in one sector and not in the others. The degree of security is the main variable to define capital flow. This attitude in the economic sphere is intimately related to an important virtue to Smith, namely, *prudence*. According to Smith, “security is the first and principal object of prudence” (Smith, 1790, p.213). A prudent conduct

is averse to expose our health, our fortune, our rank, or reputation, to any sort of hazard. It is rather cautious than enterprising, and more anxious to preserve the advantages which we already possess, than forward to prompt us to the acquisition of still greater advantages. The methods of improving our fortune, which it principally recommends to us, are those which expose to no loss or hazard. (Smith, 1790, p.213)

Smith believes that following this kind of conduct, by not risking⁶⁴ too much as well as striving to maintain their possessions, individuals are capable to better address their well-being and end up naturally introducing division of labour so that “they promote their private interest better by confining themselves to a particular trade, than by exercising a great number” (Smith, 1776, p.697). Also, prudence has the role of alleviating the deception that strikes people through vanity (Hanley, 2009, p.93) by introducing a sort of parsimony.

In this sense, he claims that in a free commerce “if the bargain be managed with ordinary prudence it must be profitable to both”, and this logic extends itself even when nations⁶⁵ are involved (Smith, 1982, p.390). Prudence is therefore founded on the natural principle of “bettering one’s condition” which impels individuals to engage in economic relations and yield the best result possible (Griswold, 1999, p.226). Accordingly, we may conclude that prudence and persuasion foster commercial relations, as are promoted by these very economic relations, since “by Smith’s claim that economic interdependence within the framework of liberty, justice, and competition, mediated by processes of persuasion, encourages the virtues of mutual accommodation and responsiveness (e.g., honesty,

⁶⁴Campbell claims that the virtues of prudence, justice and beneficence “come into play only when there is some form of temptation” (Campbell, 2014, p.168). Hence, they are all virtues associated with self-command. However, “Self-command is not therefore a uniquely moral virtue, but it is closely connected with moral virtues since, without it, men would not be able to conform to the standards of propriety.” (2014, p.169)

⁶⁵“International relations are on the whole regulated by the political considerations of national interests and needs, rather than by laws of justice, and accordingly Smith’s critical concern is more with political prudence than with natural justice” (Haakonssen, 1989, p.146)

trustworthiness, reliability, frugality, punctuality, prudence, abstention from the use of force [...]” (Griswold, 1999, p.298). Moreover, in addition to providing the best engagement in trading with each other, prudence is also, by its aversion to risk, a fundamental mechanism to steer capital accumulation (Fiori, 2021).

As we have seen, the natural principle of bettering one’s condition gives rise to the virtue of prudence. In this sense, “concern for our own happiness recommends to us the virtue of prudence”, which is “originally recommended to us by our selfish [...] affections” (Smith, 1790, p.262). The selfish feature of prudence comes from the fact that “[e]very man is, no doubt, by nature, first and principally recommended to his own care”, and thus “fitter to take care of himself than of any other person”, since “[e]very man, therefore, is much more deeply interested in whatever immediately concerns himself, than in what concerns any other man” (Smith, 1790, p.82-3). Accordingly, “[t]he preservation and healthful state of the body [...] may be considered as lessons delivered by the voice of Nature herself, directing him what he ought to chuse, and what he ought to avoid” (Smith, 1790, p.212). Once again, nature has inscribed instructions concerning how men have to behave and act.

However, the exercise of this self-interested virtue, although the individual seeks only his own benefit, it is only when “prudence is combined with other virtues [justice and beneficence], and the ability to calculate for one’s own benefit is turned to the pursuit of the good of others, that it becomes fully admired, praised and rewarded” (Campbell, 2014, p.180). In this sense, the pursuit of better conditions for the individual, in this context, gets mechanically converted into social benefit, and this is the very description of the functioning of the invisible hand, that is, a kind of argumentation that connects the individual to the social sphere by highlighting the discrepancy between the individual’s intentions and the result achieved. Smith himself describes this mechanism below, but now regarding the employment of capital:

Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of the society, which he has in view. But the study of his own advantage naturally, or rather necessarily leads him to prefer that employment which is most advantageous to the society. (Smith, 1776, p.454)

Men, as a result of prudence, following the same logic as in the case of the hierarchy of investment in sectors, opt to allocate their capital in their own country, since capital would “never [be] so long out of his [their] sight as it frequently is in the foreign trade of consumption” (Smith, 1776, p.454), thus it would be “under [their] own view and command” (1776, p.455). Accordingly, they

end up naturally fostering domestic industry, since, by following his own impetus of employing capital in the most profitable sectors, as a way of “bettering one’s condition”, they mobilise a greater number of productive workers thus producing the largest amount of products, increasing the value of national production when they actually intend only their own advantage (Santos, 2005, p.13). We are undoubtedly before an invisible hand situation in which, once again, individual benefit gets mechanically converted into social welfare. No wonder, it is in this context that Smith introduces the only passage in the WN in which he *explicitly* mentions the invisible hand; Smith argues that interventionist policies to protect domestic industry wind up being innocuous inasmuch as it tries, poorly, to reproduce a result that is naturally, and more effectively achieved if individuals are allowed to pursue their own interests in the presence of prudence.

As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestick industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the publick interest, nor knows how much he is promoting it. By preferring the support of domestick to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. (Smith, 1776, p.456)

The idea is that, in an interventionist situation, capital will be allocated in such a way that it does not mobilise all the productive work it is able to do when individuals decide, based on the knowledge of their “local situation” (1776, p.456), upon the application of their own capital. When the statesman attempt to direct capital allocation, he distorts sectoral rates of profit inducing capital to flow towards branches of business that will not foster as much as it would be possible the division of labour, and hence, it will not magnify the wealth of a nation as much as it would be possible.

Therefore, it can be said that commercial society is as much a natural product of the operation of human sentiments, passions, and predispositions as it is a historical process. Actually, as we could see, historical processes and natural predispositions are mediated through custom⁶⁶. In other words, the historical process could be seen as the distinct forms of habituation of the products of the natural proclivities when they interact with different environments – or rather, different social

⁶⁶“A grand unifying scheme of eighteenth-century Scottish moral philosophy [...] was the demonstration that the history of society and its institutions was the product of a long-term, undesigned, self-organizing evolution” (Sheehan e Wahrman, 2015, p.258)

scenarios. Habituated rules of morality and justice comprise the crystallisation of social conducts that got perpetuated through the benefits which accrued to society at a certain point of time – those benefits can even be anacronic, as in the case of infanticide. Nevertheless, historical contingencies may cause a deviation from the natural order of the Four Stage Theory, yet, there is a certain plasticity in the development of societies in different social contexts, which may still lead towards the same endpoint, as in the cases of Western Europe and North America, namely, commercial society.

As we could see, under this interpretation, there is a strong imbrication between conjectural history and functionalism, in the sense that one could interpret Adam Smith's four stages as a functional-teleological exposition of the history of society. Each stage develops the institutional and material conditions for the next one to take place, aiming at the establishment of commercial society. We could also see that Smith employs this heuristic device in order to circumvent the unavailability of historical record, thus forcing him to mentally reconstruct what would have been the conditions and the elements that integrate and make possible the overall social pattern.

4.4 Nature, Spontaneity and Teleology

Hayek, as we have seen, speaks of Adam Smith as a thinker whose theory was affiliated with the *spontaneous order tradition*. However, Smith has never used this word in this context in all of his works. Nonetheless, it does not mean that Smith did not comprehend society as a spontaneous arrangement resulting from individual agency. We have seen above the importance of what is *natural* in human instincts and propensities, since these features set in motion a series of unintended consequences that somehow, as if led by an invisible hand, reinforces and guarantees social stability, especially when human behaviour is left unimpeded. We argue that, in order for one to advocate Hayek's treatment of Smith as part of the spontaneous order tradition, one has to enquire about the meaning of the word *spontaneous* in the 18th century. We also argue that one should provide a specific explanation regarding the concept of *Nature* in Smith's thought.

Sheehan e Wahrman (2015) argue that the meaning of the word *spontaneous* shifted from something that meant out "of free will" to something that meant "without effort or premeditation" from the late seventeenth century onwards, so that it meant "forms of unpredictable and unpredetermined behavior that characterize individuals endowed with 'agency', individuals now ready to be cast in the role of self-moving components of self-organizing systems" (2015, p.78). The introduction of

probability as a science in the late seventeenth century transfigured the way the order of the world was conceived, instating the possibility that “perhaps order is an immanent process, the operations of self-organizing matter and spontaneous complexities”, making “stable deductions impossible and let orders emerge in unpredictable ways from the aggregate behaviors of chaotic elements” (2015, p.71).

If we recall Smith’s considerations above, it is possible to claim that he is inscribed in this tradition. In commercial society, economic relations freed from personal bonds and propelled by self-interest⁶⁷ introduce an interdependency amongst all economic agents which makes it unpredictable the net result of these interactions. The individual may only recognise the social pattern in hindsight, thus extracting “the explanation of an at first sight jarring and discordant scene, which the theorist succeeds in depicting as an orderly and coherent progress” (Rothschild, 2001, p.122). In this sense, when Smith describes the operation of natural, *effortless*, instincts, sentiments and predispositions in the enactment of a social pattern that was not intended by any of the actors and thereby *unforeseen* by all of them, he speaks of the rise of a spontaneous order in the precise semantic use of his time, that is, as a structure comprised of effortless and unpredictable individual actions (Sheehan e Wahrman, 2015).

Now, we have to address the problem of theology, which means that we have to provide an appropriate argument as to whether Smith conceives nature as a manifestation of a religious entity fulfilling its own benevolent plans through the guidance of the actions of men; or whether Smith can be viewed as a secular author who used all those circumlocutions as metaphors for a self-organising system. Hitherto, we saw that teleology and functionalism play an important part in Smith’s reasoning, so that commercial society is created and maintained mostly through natural proclivities habitually reinforced. Historically, all material and institutional changes seem to have a function in bringing about commercial society, and even if historical contingencies come into the way, the features inscribed in the individuals by nature may ensure the rise of the fourth stage. Therefore, let us now see how we could address the problem of theology.

⁶⁷One ought not to read commercial society as “simply a collection of strangers structured so as to encourage the individualistic *pleonexia* (greediness) of its constituents”, since “[h]is [Smith’s] moral psychology holds that we are thoroughly “social,” interdependent, and communal beings whose good can be achieved only in concert and through sustained friendships. He argues that the structure and dynamics of an extended and liberal commercial republic are congenial to genuine cooperation and friendship” (Griswold, 1999, p.287-8). As we have seen, it is rather prudence, benevolence and justice the virtues which sustain the commercial social order.

4.4.1 The New View on Adam Smith

Griswold (1999, p.314) identifies seven different meanings of *nature* in Smith's thought, namely, as essence or form; as the opposite of conventional, reflecting the differences between nature and history; as the opposite of artificial, which means something "envisioned or designed"; as what immediately appears to us or is habitual; as the opposite of supernatural (divine); as the teleological; as the whole (1999, p.314-6). As one can see, none of these meanings alludes to a theological or religious interpretation of nature. However, some scholars maintain the interpretation that nature and religion are conflated in Smith's thought. Let us first assess the arguments mobilised by this kind of interpretation before we move onto what would be a Hayekian view of Adam Smith, that is, a view that portrays the Scot as a secular author, belonging to the spontaneous order tradition, who mobilised invisible arguments as a form to mediate individual agency and overall social patterns, and who resorted to final causes whenever there was a demand for an etiological explanation.

Jacob Viner, frequently associated with a religious interpretation, claims that Britain, between the seventeenth and the eighteenth centuries, came across "a new ethics, which insisted on the existence of a ruling providence, but strained every effort to explain its mode of operation through secondary causes constituted by human psychology, the moral sentiments and human reason, without appeal to revelation" (Viner, 1972, p.57), which culminated in an "eighteenth-century British social [...] soaked in teleology" (1972, p.60). In this sense,

Smith's analysis of the sentiments is in form and in fact partly naturalistic and inductive. It is also, however, partly providentialist and teleological, and is so expressly, deliberately, and repetitively. It is in fact an extension, the only systematic and elaborate one I know of, to the subrational behavior patterns of mankind of a type of providentialist explanation which [...] a long line of predecessors had already applied systematically to the physical universe, to the organic world of plants and animals, to animal and human anatomy and physiology, and to the instincts which man shares with the animals. (Viner, 1972, p.79)

For Viner, Smith subscribes to a providentialist tradition of thought, in that the moral sentiments have a divine origin and a providential end. Providence is understood as an external element, an intelligent being that governs nature (1972, p.4), yet Smith adhered to a "general providence⁶⁸", the

⁶⁸Harrison (2011) relates the notion of general providence to Calvinism, in that the invisible hand would have a providentialist interpretation. "This exegetical commonplace was reinforced by Calvinist conceptions of providence, according to which God made general provisions for the welfare of his creatures and at the same time worked in secret ways to shape the course of history. 'Invisible hand' thus became a shorthand expression for the means by which God exerted control over human affairs in spite of the apparent contingencies of history and the free choices of human agents" (2011, p.39)

one that conceives God as operating through the laws of nature (ibidem). Accordingly, Viner criticises two vicious ways of “dealing with the religious ingredients of Smith’s thought”, that is, whereas some “put on mental blinders which hide from their sight these aberrations of Smith’s thought”, others “treat them as merely traditional and in Smith’s day fashionable ornaments to what is essentially naturalistic and rational analysis” (1972, p.81-2). These writers tried to attribute a “nuisance value” to the teleological aspects of Smith’s thought (1972, p.82). In fact “Smith’s system of thought, including his economics, is not intelligible if one disregards the role he assigns in it to the teleological elements, to the ‘invisible hand’” (1972, p.82) . Accordingly, regarding spontaneous behaviour, Viner would not disagree in classifying it as *teleological*, since Smith considers those natural predispositions to be ingrained in human constitution, thus containing the very end which they eventually accomplish.

There is no logical conflict between teleology and automatism if ends or design have been built into the automatic mechanism itself, as was universally affirmed. There is no logical conflict between a socially oriented teleology and individualism if the individual either has conscious social ends or by providential design serves such ends without having adopted them as his own ultimate objective. (Viner, 1972, p.60)

Automatic, or rather natural or prereflexive, behaviour may be teleological, insofar as the end which they attain be inscribed previously into the individuals without being an element of their choice. Yet Viner speaks of a providential *design*. Alvey (2004) states that “some key features of the design argument (and teleology) were its link to monotheistic religion, unalterable laws of nature, a general optimistic outlook, and the promotion of religious belief” , concluding that “[i]f the parts of a thing fulfill the goal of the whole, *purpose* in the construction and an *intelligent contriver* can be implied” (2004, p.337). For Alvey, the very presence of a *functionalist teleological* argument implies design, purpose, and an intelligent being that conceives the blueprint of the whole wherein every element has its own function.

Alvey (2004) points to three main topics of his argument, “there is a providential role of nature in the provision of instincts for man [...] as a counterpart to this, human reason is downplayed [...] Smith links his teleological views to the ‘Director of Nature’: Teleology is one foundation for his theology” (2004, p.339). In this sense, the very “coherence and uniformity of nature” which Smith observes makes him derive the existence of “purposeful design” by a benevolent being, and the uniformity suggests the existence of *one* designer (ibidem). Therefore, human instincts were provided by this entity with the *purpose* of endowing humankind with the appropriate means towards its own preservation, procreation and perfection (Kleer, 1995, p.296), and since these features are inscribed

in men we may say that “[t]here is teleology immanent in the human constitution” making “Smith’s account of nature [as] clearly teleological” (Alvey, 2004, p.339). Thereby,

It was common for seventeenth- and eighteenth-century deists to perceive God as a creative demiurge who desisted from direct intervention in human affairs via miracles, visions and so on. On this view, God is the First Cause, a ‘general’ rather than special ‘providence’ pre-existing the world, creating it perfect and equipping it with uniform laws of Nature in order to keep it in motion. (Hill, 2001, p.5)

God, according to this view, never intervenes directly in human affairs, yet “‘He’ operates in and through Nature; all the parts of Nature, including the external environment, were designed to operate in concert to produce a harmonious, purposive result” (Hill, 2001, p.6). Accordingly, “society would be lasting only if it conformed to the laws of divine Nature”, and man would correctly approach to God “through respect for those rules of Nature, which Smith called the wisdom of God” (Fitzgibbons, 1995, pp.29-30). Nature is whereupon the very set of mechanisms previously devised in order to attain social and individual self-perpetuation and self-organisation.

The political body, as we have seen, results from the establishment of government, which stems from the natural respect for authority and the inequality of ranks, as well as from justice, which stems from resentment and the judgement by actions. In the same way, markets, which account for division of labour and accumulation of capital (Santos, 2005), both ignited by natural proclivities, namely, respectively, the natural predisposition to barter and “an unthinking fascination with well-contrived devices and an instinctive desire to be noticed by others” (Kleer, 2000, p.22-3). Hence Smith realised that the political body as well as the markets, in the same way as nature, have a self-perpetual feature –after all, the markets are, somewhat, a byproduct of natural proclivities–, so that “Nature regulated nature, markets regulated markets. The internal logic of both allowed for self-regulation” (Harcourt, 2011, p.90). Accordingly,

Nature wants society to endure; hence, it wants society properly ordered. To assist in achieving the end of order, nature provides two instincts as means. First, internal order rests on a system of justice (by justice Smith usually means commutative justice), which is as perfect as possible. The natural sense of justice arises from resentment, and Smith’s moral theory provides an explanation of how this natural sense is perfected and instituted into a system of jurisprudence [...] Second, contrary to a contractarian or utilitarian foundation of a class-structured society, the doctrine of nature instills a strong natural deference to authority. Hence, the final causes of preservation, procreation, and order are all supported by instinctive efficient causes. (Alvey, 2004, p.342)

The *New View* movement identified limitations in the secular interpretation, especially regarding the teleological passages and their importance in Smith's works. In this sense, Alvey claims that "while still adopting a secular interpretation, most of them [scholars with secular interpretations] suggest that such passages *can be removed without affecting the analysis*" (Alvey, 2004, p.344), which would imply that "it was decided that Smith must have intended to deceive his readers" (Fitzgibbons, 1995, p.90). They realise that Smith conceives of beneficial results springing from individual unintended actions, yet once reason is discarded what naturally follows is that human instincts and passions turn out to be the cause (ibidem). Nevertheless, "[t]his is not sufficient [...] In removing teleology, they have to suggest *why* the good results that Smith mentions come about" (ibidem), that is, they would have to explain, for instance, "why just they, and not other emotions equally possible happen to be in place" (Kleer, 1995, p.396), whereupon "it is needed to resolve the main explanatory problem of a theory which traces the correspondence of morality and happiness to certain basic yet arbitrary pleasures and pains embodied in human nature" (1995, p.297). In this sense, "Smith also found himself confronted with the problem of explaining the original placement of the miraculously balanced elements of Nature. He needed to fill a gap which could not be accounted for solely in terms of efficient laws of motion" (Hill, 2001, p.7). In sum, a complete explanation of the social phenomena approached by Smith need "to show *how* and *why* it came to be that private acts (apparently) worked to the good of all" (ibidem, my emphasis).

Recalling Mayr's (1988; 2004; 2013) division between *proximal* and *ultimate* causes, he ascribed to the former explanations of *how* and to the latter those of *why*. The *why* questions accounted for those that were related to evolutionary thinking, in the sense that if we wanted to explain *why* certain kinds of birds migrate from one place to another in certain specific stations of the year we may say that they do so in order to escape harsh temperatures, whereupon we employ a teleological reasoning. No wonder, the *New View* argues that the most common way for the secular interpreters to deal with Smith's teleological passages is to offer "some variation on the Darwinian thesis of natural selection" (Alvey, 2004, p.345), or to "detect prescient strains of evolutionism in his writings", such as Hayek does, for whom Smith was considered as a proto-Darwinian (Hill, 2001, p.17).

Indeed, there are some scholars who maintain that Adam Smith came close to the idea of natural selection, provided that he "saw very clearly in certain areas the relation between those [psychological] characteristics which nature seems to have chosen and those which increase the likelihood of

survival” (Coase, 1976, p.539). Evensky (2005) also works with the notion of evolutionism in Smith’s theory, though he claims that the invisible hand is the hand of the deity (2005, p.3), and contends that there is a design, even though men are not able to perceive it (2005, p.4). Nevertheless, Evensky does not juxtapose Smith’s evolutionism to Darwin’s, asserting that the former is a function of individual choices whereas the latter is not, and that Darwinian evolution implies divergence as there is differentiation amongst species whereas Smith’s is about convergence, as societies tend towards liberal society (1989, p.11). In the same vein, Campbell argues that self-preservation and the propagation of species as the two favourite ends of nature⁶⁹ were explained by Smith through “his theological beliefs, but as these have been replaced in the science of biology by the theory of natural selection, a similar step can be made in the science of society (Campbell, 2014, p.75).

In this regard, the *New View* rejects the reductionism that evolutionist authors employ by stating that Smith’s system works only towards survival as some process analogous to natural selection. Hence, “[n]o evolutionary theory, for instance, posits a connection between natural selection and human happiness; yet the latter is one of the purposes which Smith attributes to nature” (Kleer, 1995, p.300). Viner adds that “by emphasizing the divine origin of the moral sentiments and attributing to them so much power to influence the patterns of social behavior, Smith tied himself implicitly at least to a static or non-evolutionary theory of social psychology” (Viner, 1972, p.84). Yet, although recognising the slow pace of change that Smith attributes to history and institutions, Hill concedes that “Smith’s model is therefore evolutionistic only in the narrow ‘gradualist’ sense that practices and institutions develop slowly, ‘insensibly and by degrees’ ” (Hill, 2001, p.18).

Accordingly, we can summarise the *New View* as an intellectual movement that recovers and extends Jacob Viner’s contributions on Providentialism in order to establish a non-secular view on Adam Smith by way of contending that Smith’s teleological passages could not be correctly understood without resorting to theology. In their perspective, Smith believed in a providential arrangement that introduced in human nature all the means necessary to produce beneficial ends for mankind, such as auto-preservation and human happiness. They also reject approximations between Smith’s theo-

⁶⁹“With regard to all those ends which, upon account of their peculiar importance, may be regarded, if such an expression is allowable, as the favourite ends of nature, she has constantly in this manner not only endowed mankind with an appetite for the end which she proposes, but likewise with an appetite for the means by which alone this end can be brought about, for their own sakes, and independent of their tendency to produce it. Thus self-preservation, and the propagation of the species, are the great ends which Nature seems to have proposed in the formation of all animals. Mankind are endowed with a desire of those ends, and an aversion to the contrary; with a love of life, and a dread of dissolution; with a desire of the continuance and perpetuity of the species, and with an aversion to the thoughts of its intire extinction.” (Smith, 1790, p.77)

ries and Darwinian evolution, claiming that the scope Smith intended was broader than mere human survival. Moreover, they attribute huge importance to Smith's teleological arguments by stating that, sticking only to efficient causes, one cannot correctly apprehend *why* some features of human nature, and not others, unfold in social structures that benefit the whole of society.

We argue a proper Hayekian view on Adam Smith would concede that the *New View* seems to have an interesting point in claiming that secular scholars often relegate teleological explanations to a secondary instance, downplaying its importance in Adam Smith's work. Moreover, they also point to the fact that efficient causes are insufficient if we want to address etiological questions, an idea that we have also developed in Section 3.2. If we want to address the question as to why this and not that class of emotions gives rise to a certain social institution, describing the mechanical laws that operate in the process only answers the *how* questions, not the *why* ones. We saw this tension in Canguilhem (2022), when he claims that the more one understands about the physical chains of causation, the more one is pushed away from genesis. This reflects the tension between machine and organism in the sense that the first is characterised by a rigid hierarchy of events that could only be achieved by an exact sequence of causation, whereas life would be characterised by its *plasticity* (Canguilhem, 2022). If we recall Braithwaite (1953)'s assertion that teleological arguments are best used when we have the attainment of a goal under several different environmental conditions, we may say that, when dealing with plastic social orders, teleology is an adequate answer.

However, we reject the necessary link between theology and teleology. We argue that if we interpret nature, as well as all of its cognates, as metaphors, Smith's teleology could be seen as a link to evolutionary theory, not in the sense that Smith would have anticipated Darwinian natural selection, but in the sense that the essence of the argument that supports spontaneous order is teleological, thus anticipating modern functional teleological reasoning, which is also mobilised in modern evolutionary theory. In the next chapter, we will delve into this question more thoroughly.

5 Teleology deprived of Theology: a Hayekian reading of Adam Smith

In this Chapter, we approach Smith's epistemological and methodological writings. We argue that Smith interprets philosophical systems as imaginary tools that endeavour to describe nature's functioning, as well as society's, in a fictional fashion. This would mean that the orderliness Smith envisions in society is something the philosopher posits, rather than something that has an objective reality. It implies that when Smith speaks of Providence, Creator, Architect, or God, he does not mean that there is an actual entity that organises society according to its own plans. He means it as a fiction, as a metaphor representing its exact opposite, that is, the lack of direction and design in commercial societies. What would corroborate this vision is that Smith criticises anthropomorphic descriptions of the world, taking them as superstitions, and establishes that the orderliness found, or rather posited, by the philosopher determines the religious conceptions of society and not the other way round, which would mean that one could not ascribe his own visions of society to his religious thinking. Finally, we conclude that if social orders are posited by men as they inspect reality and imagine connections amongst events, there is no need to assume design or assign purpose by an all-seeing wise creature. We argue that the metaphors employed by Smith are the expression of an absence, the absence of a directing mind in a social order that self-organises and is produced and maintained by individuals who did not intend to do so although they act *as if* it was their purpose.

Smith's epistemological and methodological writings are dear to us since they help us formulate consistently what was his conception of nature. In the *History of Astronomy* (HA), Smith describes the intertwined development of philosophy and religion. Smith differentiates three classes of sentiments often associated with the intellectual activity; they are: wonder, surprise, and admiration⁷⁰. The first one has to do with "what is new and singular", whereas the second is related to "what is unexpected", and the latter with "what is great or beautiful" (Smith, 1795, p.33). The impulse towards intellectual enterprise to systematise and organise human experience comes from the excitement caused, espe-

⁷⁰These three sentiments reinforce one another and exert a greater effect upon men the more unfamiliar and unanticipated an event is. If we have a familiar phenomenon wonder and surprise would be ineffectual and so too would be the admiration. "These sentiments, like all others when inspired by one and the same object, mutually support and enliven one another: an object with which we are quite familiar, and which we see every day, produces, though both great and beautiful, but a small effect upon us; because our admiration is not supported either by Wonder or by Surprise: and if we have heard a very accurate description of a monster, our Wonder will be the less when we see it; because our previous knowledge of it will in a great measure prevent our Surprise." (Smith, 1795, p.34)

cially, by “the sentiment properly called Surprise, and afterwards, by the singularity of the Wonder” (Smith, 1795, p.40), which may cause a violent flow of emotions (1795, p.36), forcing the individual to search for ways of filling the “gap” left by the object one is trying to apprehend, and for which one cannot yet define a causal relation with other objects of her sphere of experience (1795, p.42). Smith, when talking about Kepler’s difficulties with the previous scientific model, claims:

The imagination had no hold of this immaterial virtue, and could form no determinate idea of what it consisted in. The imagination, indeed, felt a gap, or interval, betwixt the constant motion and the supposed inertness of the Planets, and had in this, as in all other cases, some general idea or apprehension that there must be a connecting chain of intermediate objects to link together these discordant qualities. (Smith, 1795, p.91)

We may notice that it is the projecting activity of imagination which establishes the connection amongst “events which appear solitary and incoherent with all that go before them, which therefore disturb the easy movement of the imagination”, prompting philosophy to represent “the invisible chains which bind together all these disjointed objects” (1795, p.45), thus rendering imagination to ultimately “flow smoothly and easily along them” (1795, p.42). In this regard, Smith is adamant in stating that “[w]onder, therefore, and not any expectation of advantage from its discoveries, is the first principle which prompts mankind to the study of Philosophy” (1795, p.51). Accordingly, “the aim of scientific inquiry is thus passionate, not utilitarian or practical. It is not to discover ‘useful’ facts or to give us control over nature but to smooth the passage of the imagination” (Reisman, 2014, p.31).

Scientific endeavour is both a classificatory and an aesthetic enterprise that seeks to organise and to establish an order to human experience. As of the former characteristic, Smith claims that “[w]e observe a greater variety of particularities amongst those things which have a gross resemblance; and having made new divisions of them, according to newly-observed particularities, we are then no longer to be satisfied with being able to refer an object to a remote genus”, which prompts us to divide “that great class of objects into a number of inferior assortments, according to those varieties which his experience has discovered among them” (Smith, 1795, p.38). As of the aesthetic feature, Smith contends that men has a natural praise for orderly systems, as in the case of the contrivances promoted by the objects consumed by the rich (Smith, 1790, p.182), as well as in the contemplation of a well functioning society. In Smith’s words

The perfection of police, the extension of trade and manufactures, are noble and magnificent objects. The contemplation of them pleases us, and we are interested in whatever can tend to advance them. They

make part of the great system of government, and the wheels of the political machine seem to move with more harmony and ease by means of them. We take pleasure in beholding the perfection of so beautiful and grand a system, and we are uneasy till we remove any obstruction that can in the least disturb or encumber the regularity of its motions. (Smith, 1790, p.185)

Smith mentions that through mathematics, although its utility and necessity are not immediately grasped, individuals obtain a greater pleasure by contemplating it (Smith, 1790, p.189). Another example is music, men admire “the exact harmony or coincidence of all the different sounds which are heard at the same time, and by that happy variety of measure which regulates the succession of those which are heard at different times” (Smith, 1795, p.204).

This aesthetic fruition associated with the orderliness of objects has to be further qualified. Since we are speaking of an imaginative activity, by connecting the events once dispersed, the philosopher actively *posits* order into the world. This means that the order is not previously present in reality, so that the philosopher only needs to reveal it by work of his mind. Smith, on the other hand, claims that the philosopher “*pretends* to lay open the concealed connections that unite the various appearances of nature” (Smith, 1795, p.51), and represents “the *invisible* chains which bind together all these disjointed objects” (1795, p.45, my emphasis). The philosophical systems are “mere inventions of the imagination [...] making use of language [...] *as if* they were the *real* chains which Nature makes use of to bind together their several operations” (1795, p.105, my emphasis), consequently, the “attentive survey” of the philosophers makes them discover or “imagine they had discovered” the worldly connections (Smith, 1795, p.113). This means that, for Smith, all scientific models that endeavour to describe the functioning of nature, as well as of society, are fictions. A scientific system is like a machine whose function is to connect, *in imagination*, different events by establishing a causal link. In Smith’s words

Systems in many respects resemble machines. A machine is a little system, created to perform, as well as to connect together, in reality, those different movements and effects which the artist has occasion for. A system is an imaginary machine invented to connect together in the fancy those different movements and effects which are already in reality performed. (Smith, 1795, p.66)

The kind of curiosity that drives human philosophical inquiry needs a stable political environment with developed government and laws (Smith, 1795, p.48), as well as a time of leisure to enjoy rendered by some relative development in material conditions (1795, p.50), in order to manifest itself. Otherwise, as in the stage of savages, men are “exposed to the rudest dangers”, so that they

do not direct their attention to proper philosophical objects, rendering the irregularities of nature to cause them “terror and consternation” (1795, p.48) instead of those three sentiments that mobilise the philosophical enterprise. Here, we can clearly observe the relation between the state of science and religious belief, since, according to Smith, those irregularities produced by nature are ascribed to anthropomorphic intelligent creatures who are responsible for those appearances. It is in this context that Smith uses for the first time the term *invisible hand*. In his own words

Hence the origin of Polytheism, and of that vulgar superstition which ascribes all the irregular events of nature to the favour or displeasure of intelligent, though invisible beings, to gods, daemons, witches, genii, fairies. For it may be observed, that in all Polytheistic religions, among savages, as well as in the early ages of Heathen antiquity, it is the irregular events of nature only that are ascribed to the agency and power of their gods. Fire burns, and water refreshes; heavy bodies descend, and lighter substances fly upwards, by the necessity of their own nature; nor was the invisible hand of Jupiter s ever apprehended to be employed in those matters. (Smith, 1795, p.49)

Regarding the passage above, Macfie (1971) argues that the use of the invisible hand expression in HA differs significantly from the other two mentions in TMS and WN. The invisible hand of Jupiter would have to do with the capricious agency of the deity, whereas the role of the invisible hand in the other two works has to do with “order-preserving”, nonetheless, it does not configure an inconsistency, since it reflects the typical view of the ignorant savage which the Enlightenment often cultivated (1971, p.596). Rothschild (2001), on the other hand, maintains that Smith’s attitude regarding the invisible hand is the same in the three passages. According to her, “[h]e is amused by the polytheists who believe in the invisible hand of Jupiter in the ‘History of Astronomy’; in the *Theory of Moral Sentiments* and the *Wealth of Nations* he is amused by the individuals who are led by the invisible hand (the hand they cannot see, or the hand behind their backs)” (2001, p.117). According to Rothschild, Smith considered that “the subjects of the invisible hand are also foolish, in that their intentions are puny and futile” (2001, p.123); and this consideration gets rather explicit in the division between civilised and uncivilised people. Regarding the former, provided that “they have so few occasions to feel their weakness, and so many to be conscious of their strength and security, renders them less disposed to employ, for this connecting chain, those invisible beings whom the fear and ignorance of their rude forefathers had engendered” (Smith, 1795, p.50). Savage nations, therefore, were more favourable to employ superstitious explanations concerning natural phenomena.

For several times, Smith showed his disavowal towards superstition , which is often associated

to religious conceptions of the world, “[f]or it may be observed that in all Polytheistic religious among savages, as well as in the early ages of Heathen antiquity, it is the irregular events of nature only that are ascribed to the agency and power of their gods” (Smith, 1795, p.49), insofar as the savages project upon nature the characteristic agency of men⁷¹ to “alter the course, which natural events would take”, thus they create “other intelligent beings, whom they imagined but knew not, [that] were naturally supposed to act in the same manner” (1795, p.50). The procedure is clear, without proper scientific investigation, people tend to have an animistic view of nature, projecting upon anthropomorphic beings their own sentiments and conducts, that is, their conceptions become based on “vulgar superstition” (Smith, 1795, p.49).

During the ignorance and darkness of pagan superstition, mankind seem to have formed the ideas of their divinities with so little delicacy, that they ascribed to them, indiscriminately, all the passions of human nature, those not excepted which do the least honour to our species, such as lust, hunger, avarice, envy, revenge. They could not fail, therefore, to ascribe to those beings, for the excellence of whose nature they still conceived the highest admiration, those sentiments and qualities which are the great ornaments of humanity, and which seem to raise it to a resemblance of divine perfection, the love of virtue and beneficence, and the abhorrence of vice and injustice. (Smith, 1790, p.164)

With this attitude towards superstition it is difficult to imagine that all those circumlocutions that Smith uses, especially in the TMS, such as “Author of Nature”, “Providence”, “God”, “Nature”, amongst others, are in fact expressions of religious content. Moreover, Smith insists in the primacy of science, or rather philosophy, over religion, in that when men were not yet civilised and could not enquire about nature, as civilised philosophers do, they would only see irregularities and then, they projected this view on religion, thus ensuing polytheism. However, when men began to elaborate on general mechanical laws of nature and then derive order in the world from these very rules, they winded up thinking of the universe as a machine, that is, as an object analogous to the most exemplary human contrivance, thereby enacting a form of religion that conceived of nature as something created by an intelligent being that only animates it, which makes nature as mechanical as a machine. The order of causation is clearly from the philosophical elaborations to religion, “thus, as ignorance begot superstition, science gave birth to the first theism” (Smith, 1795, p.114). In this sense, readings of Smith that ascribe to his religious beliefs the reason why he conceives of a spontaneous order in the

⁷¹As we have seen, Hayek has a similar view on the origin of the animistic conceptions. He also takes men to be the model upon which animistic conceptions are based, that is, they project upon social phenomena what they see in their own bodily motion.

social realm or a harmonious nature, attributing it to a divine providence or the invisible hand of a deity, are flagrantly opposed to the reasoning just exposed. In this regard, Brubaker argues that

Nature or natural principles prompt or lead us to certain religious conclusions, including belief in a benevolent deity. But the causal relation never runs the other way: religion and the deity are not used to account for or explain nature [...] Whatever Smith is going to teach about the Author of nature he intends us to learn from observing nature herself. (Brubaker, 2006, p.176)

If nature is not a product of a religious view, then we must ask ourselves what is the actual meaning and function of nature in Smith's theory. In this regard, Cropsey (1979) argues that "[n]o one has ever seen nature; what we see is the world, and from it we go on to arrive at nature, which is an explanation of the world", thus "there can be no such thing as an account of the world as *nature* that does not go beyond the mere description of the phenomena as phenomena" (1979, p.172). Nature, then, in this view is a theoretical construction, something that we do not have an immediate contact since there is an intellectual mediation, which goes in line with Smith's vision that philosophy posits its elaborations upon the world through the activity of the imagination.

If nature is a theoretical construction, one needs to show what is the content of this theory. In this sense, "[n]ature is to begin with the inescapable causes of human actions" (1979, p.172), which corroborates the idea that nature is the features inscribed in human constitution, the features that drive human action toward consequences that are not foreseen by the range of possible events idealised by men, hence "[nature] prescribes the remote ends of those actions and in addition causes those ends to materialize in fact, according to an intention that must be said to belong to it (nature) and not to the human actors", which lead us to the conclusion that "nature is only too literally just that – Smith's construction: a rationalized wish" (ibidem). What Smith posits in the world in order to constitute nature is "compulsion and benevolent purpose" (ibidem).

We may add to Cropsey's view that the lack of intentionality of the agents to produce certain aggregate results is converted, *metaphorically*, into a purpose of nature, *as if* nature intended these results. Accordingly, regarding the ascription of functions to certain objects, "it is certainly more than plausible that the attribution of purpose to and organ or a 'natural' institution is indeed merely metaphorical", from which we conclude that "we would be viewing them metaphorically, *as if* they were made for that purpose" (McLaughlin, 2000, p.142, my emphasis). Smith saw analogy and metaphor as a powerful explanatory tool, since there are correspondences amongst different systems

of explanation, which corroborates the idea that he could have been resorting to this technique when speaking of nature. In his own words, there are

parallels of painting and poetry, of poetry and music, of music and architecture, of beauty and virtue, of all the fine arts; systems which have universally owed their origin to the lucubrations of those who were acquainted with the one art, but ignorant of the other; who therefore explained to themselves the phaenomena, in that which was strange to them, by those in that which was familiar; and with whom, upon that account, the analogy, which in other writers gives occasion to a few ingenious similitudes, became the great hinge upon which every thing turned. (Smith, 1795, p.47)

Accordingly, when Smith mentions those circumlocutions he may be less manifesting his religious beliefs through a theoretical framework than “reluctant to adopt this particular explanation”, being it more “a means of evading giving an answer to the question than the statement of one” (Coase, 1976, p.539). Raphael (1985, p.36) contends that this kind of vocabulary in Smith’s works is mere rhetorical strategy, since “Smith is preoccupied, throughout his work, with the idea of persuasion” (Rothschild, 2001, p.137), making of God “more something we posit than something we know to be true” (Fleischacker, 1999, p.144). If the social order or the harmony in nature may be both products of human imagination from which we may derive religious conceptions of the world and not the other way round, then we may conclude that “[t]he existence of order does not imply the existence of design” (Rothschild, 2001, p.135). The use of the expression invisible hand, for instance, as a metaphor

is serious, and unironic, in its intimation that there can be order without design; that a society can be prosperous without being conducted by an all-seeing sovereign, just as the universe can be orderly without being conducted by an “all-wise Architect and Conductor.” But in a different and deeper sense, Smith is once more ironic. For the intimation of the invisible hand is that society will in fact turn out to be prosperous, or orderly, in the absence of government direction. (Rothschild, 2001, p.135)

According to this view, Smith conceives of social order as well as of nature as structures that do not need *design* and thereby they do not have a *purpose* designated by an intelligent being. Fleischacker mobilises the Kantian concept of *purposiveness without purpose* to explain this apparent paradox (Fleischacker, 1999, p.67). He defines that “[a]n object is purposive without purpose, then, if it seems more or less to satisfy an indefinite range of purposes without being exactly tailor-made for any of them⁷²” (ibidem). In this sense, when Smith evokes unintended consequences, according to

⁷²Fleischacker (1999)’s idea of an object that could be used for several purposes without being previously designated to any of them resembles Hayek’s Primacy of the Abstract when he contends that the external world triggers a class of responses, rather than one specific, then one of the actions in this class superimposes on the others

Fleischacker, he is questioning the very notion of an *end*; in other words, if the actions of individuals have consequences which were not intended by any of them, and yet these same actions produce a whole different outcome *as if* they intended to produce it, it means that they are able to satisfy purposes which are different from their original intention; thus, we have a certain plasticity in the appropriateness of an action to a range of possible outcomes (Fleischacker, 1999, p.144).

To think of purposiveness without intention, or rather function without design, is precisely what Darwinian evolutionary theory does, in the sense that “[w]hat Darwin has enabled us to do [...] is not to ‘think of design without a designer’, but rather to think of eyes being for seeing without presupposing that they are designed for seeing. We do not think of a plan (design) without a planner but of adaptation without intent (design)” (McLaughlin, 2000, p.152). In this regard,

To think in terms of individual actions that are, let us say, bounded by quite limited aims, while recognizing that such aims can contribute to socially significant results or indirectly fulfill abstract functional requisites, is already to take a significant step toward what sociologists now call structural-functional analysis or, more briefly, functional analysis or functionalism. (Schneider, 1967, p.xlvii)

In our case, the actions of individuals satisfy the emergence of a certain social pattern, albeit they were not intended or designed to do so. What we have here is a Smithean anticipation of modern functionalism according to Schneider. Then, what Smith does is to separate and work with two different theoretical levels, namely, forces “that operate at the level of individual motivation and at the level of abstract functional requisites for a society that the activities initiated at the first level so often unwittingly fulfill”, wherein the former level is related to efficient causes and the latter to final causes (Schneider, 1967, p.xlviii). In this sense, we may say that when Smith wants to move between the individual’s plane towards the social patterns’ plane, he may use final causes, or *functional teleological* arguments, so that the vehicle to make such a connection is the *invisible hand* in its functional dimension that we explored above.

There is, however, another dimension of invisible hand arguments, which is the causal-genetic one. Smith seems to be intrigued with how certain aggregate results are produced, and since he does not locate causality outside nature, that is, since he understands nature as exhaustive, as nothing more than the mechanical laws themselves (Cropsey, 1979, p.172), he winds up with an immanent notion of teleology. The same thing could be said about his social theory, since it is self-exhaustive, depending only of the mechanical laws that regulate human behaviour. In this sense, systems that work on mechanical laws are not underdetermined, since efficient causes are enough to describe its

behaviour; nevertheless, their internal laws create a self-referential circularity, and thus we are not able to determine the origins of these systems (McLaughlin, 2000, p.23-4). What Smith does to circumvent this is resorting to *conjectural history*, as well as to *functionalism*. This etiological gap that cannot be filled with efficient causes gives way to an imaginative *a posteriori* process in which Smith, for instance, creates categories like the Four Stages, which succeed one another through consequences not originally intended, in that the invisible hand functions as a bridge between the lost origin of a certain social pattern (markets, social institutions, and so forth) and the pattern itself.

Smith also resorts to the functions natural predispositions perform on the whole of society in order to circumvent the lost causal link between orderly social formations and individual behaviour. We may notice that both functionalism and conjectural history work as tools that are used to deal with the same class of problems as evolutionary biology deals, namely, the lack of historical record and the need to mentally reconstruct a whole that seems to have been deliberately contrived. Teleology is brought forward as a means of not resorting to intentionality as an explanation. Then, both Hayek and Smith, if one accepts the particular interpretation exposed above, resort to a kind of fiction, that is, to suppose agents behave *as if* they intended to produce and maintain the social order. In the end of the day, they both resort to a metaphor in order to avoid purposeful intentional behaviour, and therefore to avoid ascribing to reason a role they seem not to be willing to concede, or the intervention of an extrinsic entity that puts in motion its own benevolent plans, which would mean incurring in some form of anthropomorphic superstition or providential injunctions.

Accordingly, the social patterns that Smith describes, which would latter be called spontaneous orders, do have something in common with evolutionary theory, not much in the sense that he would have anticipated natural selection, cultural evolution or adaptationism, but in the sense that Smith anticipated modern functional thinking. The orders Smith speaks of are the result of functional teleological reasoning, in that they emulate intelligent design in the same way Darwinism does (Popper, 1979), as well as conceive of functions without purpose (McLaughlin, 2000). All this may be subsumed under the notion of *teleonomic processes*, in that social patterns can be considered as end-directed, not by an external intent, but by a *program* (Mayr, 2004), which would be analogous, in Smith's theory, to those natural propensities and sentiments inscribed by a nature entirely deprived of any remnant theological conception and determined by its own inner laws, driving human conduct toward some self-maintaining, self-organised state, be it a historical state, an institution, or the market

itself.

5.1 The Value of Fictions

The difficulty faced both by the social scientist and the evolutionary biologist is due to two elements, namely the limitation of human language to capture the operation of processes (Hardin, 1959) and its characteristic opacity (Pimenta, 2020). Human language would be very successful in describing “substances and persons, but poorly adapted to dealing with processes, which it constantly tends to degrade to things or beings”, which is why “[i]t is language that deceives us. Our language breeds gods” (Hardin, 1959, p.60). Hardin points to a tendency with which Smith and Hayek were already concerned as they criticised the anthropomorphisation of self-organising systems, which is seen by Smith as superstition, and by Hayek as a tendency to ascribe social phenomena to human design.

Both spontaneous social orders and the products of biological evolution seem to be produced by an intelligent mind because of their suitability to some purpose. No wonder both Hayek and Smith use the metaphor of society as a machine. As Pimenta puts it

To say that a machine is a rationalisation that is developed from a premise is very different from claiming that it is the result of a plan. In this case, the machine is conceived as the effect of an intelligent cause; whereas in that case, it is itself intelligence, or, to put it better, the premise of rationalisation reveals itself as intelligent only when its development is able to confirm this through the suitability of the machine with respect to the purpose to which it has been built (Pimenta, 2018, p.106, our translation)

Blind processes that take place *in spite of* men’s intentions deceive them into believing that they were the product of an intelligent mind. However, it is a *retrospective illusion* produced by the fact that men identify finality in both social and biological structures. This illusion, as Smith would put it, is *imaginative*, since “imagination forges it [the illusion] for its own benefit, creating an object of contemplation, perfect and complete on its own, which, due to this, produces a pleasant and comfortable feeling” (Pimenta, 2018, p.110, our translation). Our imagination fills in the gaps left by an object that refuses to be captured in its totality. This opacity is due, if we bring Hayek to the game, to an immanent constraint on the human mind, since it cannot grasp objects of the same degree of complexity, and to an external constraint which has to do with the inaccessibility of historical record on how both social and biological objects came to be.

To circumvent these limitations, both Hayek and Smith resort to metaphors and analogies. As we could see, machines and organisms were frequent references invoked both by Smith and Hayek, and

by invoking them, they were probably not searching for mere similitude, since metaphors may have a more sophisticated and important semantic use. As Hodgson (1996) puts it, about the metaphor of the economy as an organism

Metaphors are more than similes [...] To take an apposite example, to describe the economy as ‘evolving’ is not simply to state that the economy develops like an organism or a species in the natural world. It may also prompt the investigator to consider the meanings and ambiguities in the term ‘evolve’ and the many extensions and facets of the implicit analogy between the natural and the social world [...] The interaction generates novel semantic context, and goes beyond the literal meaning of the terms of the metaphor itself (Hodgson, 1996, p.19)

This novel semantic context is clear when we think of the invisible hand. We saw that Smith uses the image of an invisible hand as a metaphor for the opposite of what it would suggest, that is, he uses it to describe the absence of command and intervention in commercial societies. We could say the same for all the circumlocutions Smith uses when he needs to deal with Nature. The anthropomorphism in these sentences is not meant to be taken literally, but rather as the sign of its very opposite, of a material process that is regulated by its own inner laws.

The use of fictions is not limited to metaphors and analogies, but it also takes into account *heuristic* devices. We focused especially on two of them, namely, conjectural history and teleology. In the absence of historical record, Smith and Hayek created concepts and fictitious stages to account for the development of human civilisation and social institutions. They did not intend to reconstitute the exact succession of historical events but only establish generalised stages in order to give an internal cohesion and to know the elements that might have caused those social events.

Regarding teleology, Vaihinger (2021) states that it remains a useful heuristic fiction. However, “if taken metaphysically and hypothetically is certainly a ‘sorry shift’, as Goethe says in commenting upon this tendency to explain things by their final causes. On the other hand, it forms a very good auxiliary if used only heuristically for the purpose of discovery” (Vaihinger, 2021, p.40). It is useful as “a *modus reflexionis (modus dicendi)*, a makeshift, a crutch, a mere regulative and subjective auxiliary principle” (ibidem). Teleology served as a way to address the paradoxical statement of purposive behaviour deprived of intentionality. Individuals act *as if* led by an invisible hand towards a benefic perpetuation of the social order, *as if* they intended to produce it, because they are guided by rules of conduct, in the case of Hayek, or by a propensity inscribed by nature, in the case of Smith. However, the ‘as if’ sentence is, by definition, the statement of something unreal, that is,

The necessary connection of the consequence with the condition is definitely expressed, though, at the same time, the possibility of the condition being fulfilled is expressly negated ; so that the main clause or apodosis, whose validity is bound up with the condition and which necessarily follows from it, is thus seen to contain something unreal (Vaihinger, 2021, p.259)

Accordingly, the procedure followed by Hayek and Smith is the following. They state an impossible case, such as individuals intend to produce the overall social pattern, then the necessary consequence that flows from this impossible statement is that the order is a product of human intention. The next step, according to Vaihinger (2021, p.259), is “the equation of something (with the necessary consequences flowing from the impossible case)”, which in our case means that the order is teleological. Teleology serves as a tool to understand the purposeful, though unconscious behaviour of individuals in the social order.

An ‘as if’ statement has a major methodological value. It may not be used in every situation, but in the presence of severe limitations, it is recommended, as in the case of social theory, insofar as we cannot account for historical record and the degree of complexity of the object is deterrent. However, “such an artifice is quite legitimate, and may always be employed where a subject is not open to experimental treatment, or where too much confusing detail has grown up around it” (Vaihinger, 2021, p.187).

What Hayek’s critics seem not to have accounted for was the highly fictional character of his assumptions and methods. When they accuse him of evading to give an efficient cause argument to the adherence to the rules of conduct when he provides a functional explanation, they did not take into account the fact that it is an unconscious action that takes place *as if* it was a deliberate choice, hence a Prisoner’s Dilemma framework that assumes that all agents are rational and form their strategies based on that assumption does not seem adequate to refute Hayek’s argument, since this is not a matter of utilitarian calculation. Agents act *as if* they were rationally choosing what rules to abide by, following, as Smith argues, a naturally inscribed propensity that warrants reverence towards authority. Furthermore, another thing that seems not to be taken seriously by Hayek’s critics is the severe epistemological and ontological limitations on human knowledge that Hayek takes into account. These limitations justify the use of unorthodox methods in face of circumstances, such as heuristic techniques like teleology and conjectural history. In this sense, both spontaneous orders and evolutionary theory may be twins in the sense that they share the same restrictions and employ similar methods to circumvent epistemological and ontological limitations.

6 Conclusion

This work sought to answer the conundrum of the “twin ideas”. As we have seen, the conflation between evolution and spontaneous orders seems to be a common element of disagreement among Hayek and several authors. For most of them, the conflation is inadequate, and the root of this confusion would lie in Hayek’s misapprehension of the Scottish moral philosophers of the 18th century (Barry, 1982; Vanberg, 1986; Hodgson, 1991; Petsoulas, 2013). Some of these authors claim that by blending these two concepts, Hayek would have abandoned an argument based on efficient causes in favour of a problematic use of functional explanations, especially when dealing with the observance of rules of conduct (Vanberg, 1986; Whitman, 1998; Witt, 2002; Gray, 2013).

Our thesis is that both spontaneous orders and evolutionary theory resort to similar heuristic procedures in order to circumvent similar problems. Both have to deal with etiological demands (Wright, 1976), that is, both have to explain the origin of phenomena to which one does not have a historical record to resort to. In this sense, one has to conjecture and extrapolate into the past (Brandon, 1981) how these phenomena occurred, that is, as Hayek would like it, one has to employ a *compositive method* (Hayek, 1955a). Moreover, both social and biological phenomena are characterised by the absence of design, which, as we argued, welcomes the use of functional-teleological arguments, since markets and other social formations are purposive systems deprived of intentionality, in the sense that their agents act as if they intended to produce the overall social pattern.

We showed that spontaneous orders and evolution may be considered as twin concepts by employing a Hayekian reading of Adam Smith. We saw that this reading can be made to work if we consider that previously inscribed natural predispositions lead to commercial society. Because of the conflation between order and evolution, his Four Stage Theory becomes a somewhat deterministic account of the origin and development of a commercial society. Even if not designed, the latter would already have been programmed in human nature (Mayr, 1974). In this reading, modern commercial society is a spontaneous order, but the only one possible. Depending on the prevailing institutions of each society, it might take more or less time to get there, it might even take an unnatural inversion of stages, but the end is the same for all of them.

We did not intend to exhaust the debate over the twin ideas, much less the theoretical imbrication between Hayek and the Scottish moral philosophers of the 18th century. However, we hope that this

teleological approach to spontaneous orders sheds light on the importance of metaphorical and fictional arguments in the sense that they give consistency to scientific explanations when appropriately employed. We saw that both spontaneous orders and organisms are characterised by their plasticity in maintaining themselves as self-organising structures, thereby entailing teleological arguments (Braithwaite, 1953). The approximation between different fields of knowledge provides powerful analogies that illuminate both their limitations and their tools to circumvent them.

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