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Custom and path dependence in economics

Abstract: This paper deals with the role of customs in economics. With few exceptions, economists reserved scarce interest to this topic. Some classical authors counterposed custom to market competition, by considering the former as limiting development and the latter as progressing it. By following cognitive economics and particularly Schlicht's idea that custom derives from a predisposition of human mind to clarity, this paper avoids that dichotomy by investigating the real relationship between them and its relevant implications for economics. In this framework, path-dependence emerges as a unifying element which permeates the indissoluble and complex process and, starting from the construction of personal knowledge, reaches the social dimension of customs. This leads to meaningful perspectives for economic analysis, especially in reference to uncertainty, free will, and efficacy. On a methodological level, the idea of a complete return of economics to social sciences is also supported.

Keywords: Custom, cognitive economy, path-dependence, routine, uncertainty, free will.

1. Introduction

The role of custom in economics has so far received little attention and indeed, albeit sporadically, economists only recently dealt more deeply with this line of research (Schlicht 1998, 2004, 2021; see also the symposium on this topic published in the American Journal of Economics and Sociology in 2002). While references can be found in the relevant works of John Stuart Mill, Alfred Marshall, and Joseph Schumpeter, the investigation on the role of custom in economics remains scarce. On the contrary, the economic literature on routines is particularly extensive, especially with respect to decision making (since Simon 1947) and economics of innovation (see Nelson and Winter 1982 and the evolutionary economics tradition). Although they share some aspects, custom and routine emerge from different roots, have different characteristics, and express dissimilar levels of pervasiveness since custom appears more extensive.

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In the 1980s, a branch of research that focused on the role of path-dependence developed and found several applications in the economic literature (e.g., economics of innovation, institutional economics, experimental economics, and cognitive economics). This paper aims to explore in more detail the role of custom in cognitive economics by examining its relationship with path-dependence and suggesting its emergent fruitful implications.

Considering both the extensive use of routines in economics and the limited attention to custom, we try to shed light on similarities and differences among routines, customs, and path-dependence (par. 2). Subsequently (par. 3), we also investigate the following relationships: custom and uncertainty (3.1); custom, decision-making, and free will (3.2); custom and economic efficiency (3.3).

On the basis of the previous sections, paragraph 4 highlights the most relevant consequences for the economic analysis, by acknowledging the right role of customs in economics in connection with path-dependent dynamics. Finally, paragraph 5 summarizes the most important aspects considered in the paper and offers some conclusive remarks for further research.

2. Routine, custom, path-dependence

2.1 *Routine*. In general, a routine is the repetition of successful practices and experiences in solving a problem. In economics, routines found extensive application in the theory of the firm, thanks to the pioneering contributions of March and Simon (1958), Nelson and Winter (1982), and earlier researches by Marshall (1920 [1890]) and Schumpeter (1934 [1911]). The focus on the role of routines is however present in the literature since Diderot and Adam Smith, highlighting respectively its positive and negative side. In fact, Diderot enhances the cleanliness in work tasks and order due to the adoption of routines as an organization tool, which in turn improves the dignity of the labour. Smith, on the contrary, underlines the degradation of labour and considers routines as deadening the mind of people who constantly perform the same tasks without any connection with creative and human dimensions typical of craftsmanship (Sennet 1998, ch. 2). This dichotomy is actually present throughout the evolution of industrial organization (consider for example the wide debate on the advantages and disadvantages of the Tayloristic organization of work).

In organizations and institutions, we consider as routine all organizational and technological procedures which are functional to the achievement of goals through satisficing performances. We can therefore define routines as adopted behaviours, explicitly planned, deriving from successful experiences which have been previously applied in problematic situations. In other words, routines can be deemed as "codified knowledge" which can derive from exogenous (for example worse performances due to institutional contexts or market dynamics changes) as well as endogenous causes (aptitude to innovate as a development strategy of the firm). At the beginning, there are some problems to be solved. Also, there are several crucial elements that lead to the origin and implementation of a routine: previous

knowledge and skills; accessible and available information; environmental and institutional constraints; fluidity in decision-making dynamics. In a nutshell, the onset of a problematic situation prompts the search for a solution through a process of procedural rationality, which, in line with problem solving theory (Newell and Simon 1972), typically occurs through different stages, including the representation of the problem, the formulation of solving conjectures, trial and error checks with the use of "rules of thumb", the evaluation of feed-backs and – upon reaching repeated satisfactory solutions to the desired aspiration levels – the adoption of the new procedure which will continue to be used identically and repeatedly until a new problematic situation arises and triggers an impulse for change. However, this is not an automatic or simple process. As Schumpeter (1934 [1911]) argued, routines have a solid conservative force that can distort decision making to generate new things (p. 86) so that any step outside the existing ones appears very difficult to decide considering their enclosed codified knowledge and the habit of reproposing it unwittingly "as firmly rooted in ourselves as a railway embankment in the earth"(p. 84). To overcome this resistance and produce change, a special figure with extraordinary skills is needed: the entrepreneur. Beyond the Schumpeterian vision, the emergence of routines, their evolution and change are a very complex process. In the light of the most recent literature, we know that routines directly affect the neurocognitive aspects of explicit and tacit representation and learning processes, the transformation of information into personal knowledge and the "history", considered as a previous path, of the firm. We elsewhere described in detail all these aspects (Rizzello 1997 and Egidi-Rizzello 2004). Here it is enough to remember that routines are the memory of organizational and technological knowledge of organizations and institutions and determine their identity.

2.2. *Custom*. Custom is a continuous way of acting, operating and proceeding. It derives from habits, conducts, deep-rooted traditions that recur spontaneously, permeate action and are the result of the interaction between individuals. The set of these interactions conditions and directs the action of the preponderance of the subjects, which in turn slowly modifies them in a relationship of mutual influence.

First, consider habit. The predisposition to use in a repetitive way what already learned makes available mental energies to solve new problems, with obvious evolutionary advantages. In identical or similar contexts, we automatically employ successful action procedures which have been acquired through trial and error attempts or by imitation. As a species, we would have risked leaving the field open for the full automation of behaviour. The relational dimension, however, prevented it. Alongside habits, customs have arisen as well. They regulate the potential conflicts of different habits upstream, coordinating social relations in an orderly manner. If the nature of habits is mostly individual, that of customs is essentially collective. There is no doubt that the two mutually influence each other in onset and development. However, several habits are individual or at least restricted to a very small number of individuals (for example due to family or emotional ties), whereas, customs, to become such, must be "followed" by a very large number of people, hence their social nature.

Unlike the norm, which, once codified, crystallizes and precisely defines the sphere of its applications, custom assumes its autonomy with greater dimensions and extensions and also orders human relations. Custom does not necessarily precede the rule and extinguishes when the norm is applied. In fact, custom and norm can be very close linked since the norm can be codified "on the basis of custom". This is the case, for example, of the dynamics that govern the relationship between formal and informal rules (i), which is one of the cornerstones of the Austrian school and Hayek's (1963) in particular. At the same time, there are rules which are often introduced *ad hoc* and linked to contingent situations, with no clear direct evidence of derivation from customs (ii). In (i) we refer to rules of behaviour, which emerge spontaneously as result of individual action and, in the same way, are spontaneously selected because they are useful to the group, leading to social order. In (ii) we face with laws through which power is exercised with the goal of achieving specific political objectives by using coercive methods, which can have distorting effects on the social order. While understanding a close relationship between these two levels, in case (i) the exclusive reference to the idea that norm derives from custom seems inappropriate, not only for the existence of (ii), but above all because norm and custom are two dissimilar forms of social regulation, with different modalities and logics, even when closely related. In fact, custom presents not only greater flexibility than norm *tout court* but also carries out an action of "education", information, and transmission of even tacit cultural "visions" which shape prevailing habits, preferences, and dominant moral attitudes.

Economic processes, as well as more generally social ones, are permeated by some customary aspects, considered as ordinary ways of behaving, thinking, and evaluating (Schlicht 2004). In the rare literature on this topic, custom is sometimes considered as an impediment to change and a slowdown in economic development, but at other times as an element that reduces transaction costs, with particular reference to the contractual constraints. Consider, for example, fiduciary relations, mutual cooperation or, more generally, the dense and complex system of relationships that we define "social capital" (Arrow 1972, Putnam 1994 and, more recently, Perrotta 2020, Ch. 8) and it is also typical of the relational dynamics in industrial districts (Becattini 1998). In an economic dimension in which the regulatory aspects are dominated by conventions, if everyone follows them, it is reasonable to comply. From the point of view of economic analysis, this entails obvious advantages in terms of simplifying the levels of uncertainty and forecasting expectations, leading to the particular equilibrium defined in game theory as "Nash equilibrium".

Ekkehart Schlicht (1998) argues this happens because custom is an amalgam of habitual, emotional and cognitive elements which are not easily separable and simultaneously shape preferences, behaviours, and norms (p. 13). It derives from the fact that human mind has a natural propensity to prefer regularity and to spontaneously seek coherence between cognition, emotion and reason. This is largely related to the functioning of the mind, i.e. its ability to actively structure and order external stimuli, giving them meaning and order in a clear and coherent way.

Rules formation is therefore not a purely social process and customs are not a system of conventions. Their specific nature is based on the predisposition of the hu-

man mind to provide coherence and simplification to the largely tacit processes of knowledge construction and the "conservative strategies" of our mind which lead us to prefer coherence and conformity in behaviour (Schlicht 1998). This is also in full harmony with individuals' risk aversion, imitative processes, and preference for cognitive coherence, as widely highlighted by experimental economics (Bardsley *et alii* 2009). It also emerges in the domain of cognitive economics, where the link between decision-making and social regulation, in contexts characterized by complexity and structural uncertainty, is illustrated in detail with direct reference to real limits and effective potential of our cognitive abilities (Rizzello 1997). Consistent with this approach, Schlicht's contribution (1998, in part p. 3) convincingly highlights that, in order to understand nature, role, and dynamics of conventions, it is necessary to investigate the psycho-neurobiological micro foundations underlying our natural predisposition to clarity. In these terms, customs take on a more complete, pervasive, and robust role than any other factor in understanding social regulation since they represent "the primordial soup" from which economic and legal relations emerge. They do not singularly exhaust, but rather they coexist in a relationship of mutual influence. In the economic sphere, in particular, many activities cannot, do not want to, or must not be mediated by market and competition (Schlicht, 1988 p. 23). Norm-custom relationship is also not unidirectional, but one of reciprocal influence. In fact, the rules can also contribute to change customs. For example, anti-discrimination laws in the workplace can lead to easing forms of discrimination in wider social spheres. Customs can be both adaptive, in strengthening the existing ones, but also active in modifying them (Schlicht 2004), considering that repetition shapes the custom which in turn reinforces the tendency to further repetition. A path-dependent process, which is implicitly present in all dimensions illustrated so far (psycho-neurobiological, cognitive, individual, and social), then clearly emerges.

2.3 *Path-dependence*. In general, we can define path-dependence as a property of complex dynamic systems, according to which even small events in the past can later have relevant consequences. Decisions can only partially, or not modify at all, these events implying that situations of multiple or inefficient equilibria can arise.

In economics, since its introduction in the 1980s, path-dependence was extensively used in various fields such as economic history, economics of innovation, economic geography and, later, institutional economics and cognitive and experimental economics. However, different controversies have been arisen with reference to the examples supporting the thesis that small historical events tend to push the system towards irreversible suboptimal choices. Also, broad disputes over the validity of the proposed analysis, which appear as not being empirically proven, have been raised (Rizzello 2004). Here we do not intend to propose them again (please refer to Arthur 1994; Liebowitz and Margolis 1995; David 1997 and 2000). Our intent is rather to understand if routines and customs exhibit similarities and differences with path-dependence, what kind of relationship they have with it, and still evaluate how fruitful this can be for economic analysis.

By path-dependent processes we mean here the complex processes typical of human nature we find in the extended spheres of interpersonal relationships. In

addition to being easily discovered in many biological systems, these dynamics significantly characterize the complex psycho-neurobiological paths of acquisition of personal knowledge (Lotto 2017, Kandel 2018) and the interindividual interaction, going from simplest forms of communication up to articulated dimensions of organizations and institutions in a relationship of mutual evolutionary conditioning.

In this sense, path-dependence emerges as a pervasive and ineluctable dimension of human nature and therefore it is necessary in any kind of socio-economic analysis, obviously including those who are characterized by the nature, characteristics, and dynamics of customs. In economic field, attributing such a pervasive role to path-dependent processes has disruptive effects on some cornerstones of the mainstream approach. Among the most appropriate to the comparison with routines and customs, we mention two in particular:

i) most economic phenomena are characterized by efficacy and not efficiency;
ii) it is necessary to deeply reconsider the concept of individual free acting, as epistemic foundation of mainstream approach in economics.

With reference to i) we remember a_i) that the construction of personal knowledge is a karst path, implemented through trial and error, trying to give meaning to external stimuli by bringing them back to what is already "known" through tacit and supra-conscious mechanisms (Hayek 1952); b_i) search ends when we find a satisficing solution to the problem (by reaching our levels of aspiration) (Simon 1956 and 1959); c_i) that a_i) and b_i) are continuously influenced by external, natural, and social feedbacks in a relationship of mutual conditioning. Considered a_i) b_i) and c_i), it follows d_i) that interactive dimension is pervasive and constantly present in every single or collective learning process and any behavioural analysis carried out must always be considered "systemic". Regularized epiphenomenal results of these interactions are e) norms of behaviour, conventions, customs, organizations and institutions. Like all dynamic systems (this is their nature), they are characterized by efficacy and not efficiency. The difference is between a redundant system, with excess resources and from which a satisfactory solution always emerges, and a system that uses (optimizes) the resources at its disposal in a "perfect" way, without any cost or effort higher than minimum necessary. A redundant and effective system is typical of real complex systems, while an efficient one can only be of simple systems or theoretical models. Finally, since a_i) and b_i) emerge from path-dependent dynamics and c_i) and d_i) follow path-dependent dynamics, e) must also be analysed in this perspective which is typical of non-linear complex systems.

As regards ii), a premise must be made: since the subject is enormously vast, we specify that we will deal with it only with reference to the micro-foundations of mainstream approach. In economics, free individual action is one of the essential prerequisites of standard models. Alongside the assumption of rational behaviour by economic agents, which complements it, free individual action is the prerequisite for achieving economic equilibrium. Consumer sovereignty and optimizing choices by producers plastically represent human action in a context of total freedom. The only constraint is, in the first case, disposable income and, in the second,

technology. Mere mechanics of prices condition individual choices and influence their outcomes, through the cybernetic action of market, which conveys relevant information towards a selective system of perfect rationality. It is evident that this model effectively cancels "free" individual action, reducing it to a simple instrument of a broader mechanism, which must converge towards a general economic equilibrium with successive approximation.

For over half a century, however, experimental economics convincingly highlighted that economic agents systematically violate the principles of rational behaviour predicted by mainstream models and recognized an active role (much more relevant than mere principle of rationality) for emotions, imitation, and, more generally, the context in which choices take place (Bardsley *et alii* 2009). However, the solidity of the general economic equilibrium model eventually derives by considering market as a cybernetic mechanism able to overcome the limits of economic agents. In other words, it is accepted that individuals have limitations that prevent them from consciously achieving optimization. Nonetheless, perfect rationality, which is not possessed by individuals, is ensured by the system, which by selection leads agents to act *as if* they were indeed perfectly rational (Friedman 1953). This mechanism works perfectly only if, in addition to other requisites, everyone acts freely in pursuing their own goals (self-interest) and the system is unbounded by regulatory and institutional constraints, other than those allowed for minimal State (*laissez faire*).

It is clear at this point that this "pan-rationalistic" dimension makes free individual action fictitious and completely subordinated to the continuous directing of the system towards the only behaviour deemed virtuous, the maximizing one. But, as the studies in the neuro-cognitive field amply demonstrate (Lotto 2017, Kandel 2018), if knowledge used by agents to decide and choose is the result of a complex process of active construction, with a significant role of previous experiences and a continuous comparison with external feedback, we find again that decision-making process is almost always aimed at efficacy and not efficiency.

More generally, outcome is not predictable because depends on the individual interpretation of external data and on the feedback with environment, which in turn will be characterized by the action of others who also act applying the same criteria. On closer examination, "conditioning" elements are all linked to dependence of individual path (knowledge acquired, previous experiences, education, professional profiles) as well as social and relational dimensions (institutional, cultural, religious contexts).

Therefore, free individual action is expressed in a condition of a_{ii}) structural uncertainty (indefinite outcome of individual choices conditioned by actions of others, not perfectly predictable because they are the result of complex processes of construction of personal knowledge) and within c_{ii}) a social order whose rules emerge from these spontaneous interaction processes. In turn, social rules play the dual role of b_{ii}) simplifying the scope in which subjects use their limited (with respect to the complexity of the system) assessment and decision-making skills and d_{ii}) standardizing, dynamically considering that they change over time, the rules of social behaviour. Once again, let us therefore note how e) (rules of behaviour, conventions, customs, organizations and institutions) are functional to real individual

free action, consistent with the cognitive, rational, and emotional actual capacities of economic subjects.

The pervasiveness of path-dependence as a unifying element of this complex process is evident. The process starts from the construction of personal knowledge and arrives to institutions. In summary we define as:

> path dependent any dynamic process in which each subsequent step is influenced by previous path at a neurobiological, cognitive, gnoseological (a_i $a_{ii,}$ b_i b_{ii}), and social level ($c_{i,}$ $c_{ii,}$ $d_{i,}$ d_{ii}) in a relationship of mutual influence where (e) rules of behaviour, conventions, customs, organizations and institutions are the result of an unplanned and unpredictable outcome of the personal processes of acquiring knowledge and freely acting and, in turn, direct them towards a dynamic systemic order.

It seems evident that routines and customs have some elements in common, but also considerable differences. The former have an explicit purpose and are based on identical repetition, with very stringent and well-defined interactive levels. There is no doubt that they too have a path-dependent nature, especially of $a_{i,}$ $b_{i,}$ $c_{i,}$ type, because they are the result of decision-making processes based on previous knowledge and contain codified information. In the context of organizations and of firms, they represent their identity and are functional to their performance. It is therefore not surprising that the analysis of their role found wide room in economic literature and in the firm's one in particular. Furthermore, the fact that they have a certain "conservative" rigidity towards potential innovations, since they cannot normally be "updated" quickly, makes them compatible with the mechanistic model of mainstream economics.

On the other hand, the more indefinite, complex, broad, and flexible characteristics of customs, which, in addition to presenting all the aforementioned traits of path-dependence ($a_{i,}$ $b_{i,}$ $c_{i,}$), are more suitable for understanding the dynamics of social regulation (d_i, $a_{ii,}$ $b_{ii,}$ $c_{ii,}$ d_{ii}), make them a much richer and more interesting tool, which involves some crucial aspects of economic analysis.

3. Relevance for economic analysis

Conceiving custom as a path-dependent process has some significant consequences for economics. We consider the main ones in more detail in the following sections.

3.1 *Custom and uncertainty*. As it is well known, Frank Knight (1921) first explicitly pointed out the difference between risk and uncertainty in economics. Where it is possible to give a probabilistic degree to possible future events, we face situations characterized by calculable risk. However, when, on the other hand, it is not possible to prefigure future events even in probabilistic terms, we face situations characterized by uncertainty. It is interesting to remember that, despite the introduction of calculating risk dates back to Fibonacci, up until the mid-1700s

venture companies calculated risk "at a rough guess", through verbal considerations and discussions which is, similar to what we now define heuristics (Sennett 1998, pp. 81-2). Regardless of current sophisticated risk calculation techniques, this aspect highlights how human nature typical tends to make approximate predictions about future events even when a probabilistic degree can be assigned. As already mentioned, however, when this is not possible we are in conditions of uncertainty.

This distinction represents a clear dividing line between mainstream and heterodox economics. The whole theoretical and conceptual apparatus of the neoclassical school developed models which were entirely based on the idea of calculating risk and whose evolution was homogenised accordingly (from expected utility theory to rational expectations, up to and including behavioural economics). The idea of incommensurability of probabilities is instead the common thread that characterizes the heterodox approach to cognitive economics from Keynes (see in particular Carabelli 2021) and thanks above all to Hayek's contributions on the theory of knowledge and institutions, but also to Simon's ones on procedural rationality and organizations, the economics of complexity, and a relevant part of experimental economics. Based on these considerations, it seems clear that the analysis of the role of custom in economics is placed in the second area, that of uncertainty.

The idea of considering custom only as a behavioural regularity (Antonides 2002), and bringing it to mere empirical market dynamics, does not capture the rich interaction between cognition, motivation, and action which results from human mind's predisposition to clarity. Furthermore, in line with this view, the role of custom as a shaping force of behaviours would also be lost.

If this were not enough (and it is a decisive aspect), customs are not always compatible with rational behaviours aimed at the efficient achievement of ends, but rather emerge from our propensity for symmetry, coherence, analogy, and all those psychological tendencies, including emotions, collectively referred to as clarity (Schlicht, 2002). Even in art, in which human creativity is expressed at highest levels, the introduction of schemes to order chaos is functional to our need for regularity. Perspective, chiaroscuro, contour lines do not actually exist or exist in very unstable and mixed aggregate states. Artists utilized these visual conventions to direct the gaze and help us to give meaning to a complex multitude of stimuli (Gombrich, 1960). This predisposition, which we all have since birth, to expect and continually seek regularity (Jacob, 1977), also makes customs functional to make us act, often successfully, in conditions of uncertainty. Customs therefore reduce uncertainty thanks to their ability to make world appear orderly and understandable.

Finally, we must consider that uncertainty is a source of stress. As also emerging in experimental field, in a problematic situation, it is typical of human nature to find an answer, even negative, instead of tolerating multiple scenarios, although some of these may be far preferable. Imagine that we are unable to understand what is and what is not dangerous when we are evaluating a situation. Everything seems dangerous, stress increases, and a response becomes necessary. This response is typically of a narrative type and is not necessarily supported by scientific basis (de Berker *et alii* 2016).

In summary, in most limited situations characterized by risk, we can use probabilistic calculation tools. In most extensive conditions of uncertainty, on the other hand, we act, reducing it, thanks to the continuous process which, starting from cerebral circuits of the neuro-cortex (perception and representation), reaches customs. This happens almost as the technique of musical counterpoint is applied, with the "organic" internal and external forces working together in shaping rules of conduct in terms of clarity (Schlicht 1998).

3.2 Custom, decision, and free will. When we leave the domain of mainstream economics, abandoning the less significant situations characterized by risk to analyse the most relevant circumstances marked by uncertainty, a problem of great importance emerges. If economy does not work if based on an abstract rationality, with perfectly maximizing agents, it is necessary to explain in an alternative way how individual behaviour achieves economic goals. Joint combination between theory of knowledge and nature and role of institutions, in Hayek (1963), and procedural rationality, satisficing, and theory of organizations, in Simon (1976), represents a convincing solution, consistent with a dimension characterized by uncertainty (Rizzello 1997). Both scholars, however, base their theories on a common, crucial assumption concerning free individual action. By acting in conditions of procedural rationality, and on the basis of approximate knowledge of problematic situations faced, individuals provisionally acquire results requiring continuous verification. They are conditioned by it, at different levels, including organizational and institutional context in which they operate and in turn contribute to modifying it with their actions. Although the domain of application of individual decisions may be more or less extensive, the prerequisite is that they act freely, with the outcome of actions not entirely predictable.

What exactly do we mean when we talk about freedom of decision-making and action? Certainly, there is no space here to adequately address the eternal contrast between free will and determinism, which, as Trautteur argues (2020, p. 33), is a topic of constant interest in the history of humanity, probably since the beginning of conscious thinking. For the purposes of this paper, it is appropriate to focus on two aspects in particular. The first concerns the causal relationship between thought and action, whereas the second is related to the relationship between individual behaviour and predictability of collective dynamics. On the first point, Daniel Wegner (2003) questioned the direct relationship between conscious thought and action. Conscious desire for what we do leads us to believe that it is caused by consciousness. But accurate cognitive, social and neuropsychological studies "suggest that experiences of conscious will frequently depart from actual causal processes and so might not reflect direct perceptions of conscious thought causing action" (Wegner 2003, p. 65). In reality it would be a trick of the mind, which produces useful insights into the authorship of our gestures, but it is not the foundation of an explanatory system that is outside the paths of deterministic causality. Thinking that we are the ones to consciously decide, to implement a conduct, means that it is thought that generates it. However, according to Wegner, this would be an illusory perception, because when we become aware of wanting

to perform an action, brain has already decided to do it. In other words, we would not be faced with the cause of an action, but with a feeling of will that coexists with it. Despite brain generates both, mind devises the "trick" that leads us to infer that it is thought that causes action, while this feeling of will is indeed something that is added to the action and not its cause. Nevertheless, it is not entirely excluded that a causal relationship may exist. This is an issue that must be scientifically investigated in depth; however, we cannot establish that this is the case, simply because it appears so. Furthermore, the abandonment of the idea of a direct causal relationship would explain cases in which action and awareness of wanting to perform it do not coincide. This would support Libet's experiments (2004) where awareness of wanting to carry out an action would come after neuronal process to carry it out has been triggered. Therefore, for Wegner, since mind gives us a representation of anticipation, we must not infer that it actually happens, but rather think that there may be some general relationship between thought and action, yet to be thoroughly investigated. Why would we have this illusion? What would it be useful for? Answer probably lies in the fact that, if total determinism of human actions was ascertained, this could lead to inconceivable effects on cultural, moral, ethical, social, and juridical levels (Trautteur 2020, p. 129).

Although it is widespread the idea that human behaviour is deterministically generated by a mix of psychoanalytic unconscious, cognitive unconscious, and brain processes that escape awareness, this is not shared by those who support the principle of intentional behaviour. Michel Gazzaniga (2012), for example, argues that in a very short time lag, measured in Libet's experiments as the time between brain decision and awareness, subjects are able to veto and inhibit action, allowing us to choose. In truth, Libet himself (2004, Ch. 4) agrees with the idea that in that time lag of about 150 milliseconds, we can most likely exercise a veto and decide whether to do it or not.

List (2019), on the other hand, argues that seeking free will on a physical level, in neuro-cerebral processes, is a mistake, considering that is an emerging, higher-level phenomenon belonging to the field of psychology. Thought and intention are properties of mind, and not of brain, namely the "locus of physical processes". Intentional acting and control over our actions belong instead on a different level than physical world, just like mind, culture, institutions, etc.

According to these points of view, physical determinism and psychological indeterminism could coexist and give life, in List's words, to a sort of "compatibilist libertarianism" since any deterministic dimension at cerebral level would not compromise intentional action. Intentional action would rather develop at a different level, the psychic one, which is also, if not above all, relational. It would therefore be a matter of emergent properties, typical of complex systems, which cannot be reduced to properties of single components that constitute it (Gazzaniga 2012).

On the basis of this emerging picture, action would derive from the mix between the tacit, probably deterministic, dimension of neurocerebral dynamics – which is conscious and therefore intentional one of the property emerging at mental level – and relational dynamics that allow us to "adapt" our behaviours as ability to limit some impulses, with beneficial effects at social level. For Gazzaniga

(2012), in particular, emerging mental states, in turn, reconfigure the processes of brain activity through continuous feedback, in which the two dimensions mutually influence each other. As evidently emerges, this idea is consistent with Hayekian theory of construction of personal knowledge, both in the feedback between tacit and conscious neurobiological dimension, but also for the relevant and essential presence of relational nature.

Here we address the second aspect which concerns the relationship between individual behaviour and the predictability of collective dynamics. In a scenario of individual behaviour dominated by such extensive uncertainty, characterized by indeterminism and imperfect predictability of outcome of human action, how is it possible for a social order to emerge? Many answers have already been given to this question. In particular, for Hayek, this would happen thanks to the role of institutions.

However, what has emerged so far allows us to hypothesize that customs play a crucial role in determining social order as well (if not above all). This hypothesis is consistent with Austrian – and Hayekian in particular – tradition on nature, role, and dynamics of institutions. Also, if we consider source of customs from predisposition to clarity, typical of human nature, it has the advantage of being even more connected to the complex neurocognitive process described above. Practically, considering the social dimension, if individual conduct remains not entirely predictable, the trend of overall behaviour is not since it is regulated by custom. As happens in quantum physics, where the distribution of photons or electrons in the two slits experiment is, on the whole, predictable, while the movement of the single particle is not (Trautteur 2020, p. 59), customs can be considered as the predictable macro-event of individual unpredictable behaviours. World could also have a causal nature, but one can imagine that in "laws of nature" there are flaws that are not grasped at a macroscopic level, but that would be able "to reconcile uniqueness of evolution of world with the branches necessary for freedom "(Trautteur 2020, p. 75, *my transl.*).

Access to knowledge takes place by making two different paths converge: one is immediate direct experience, often fallacious; the other, which can last for centuries, is scientific and the result of disputes and deep discussions. The second path, before consolidating, is filtered through experiments, mediations, and arguments. It is often counter-intuitive and contrasts with direct perception (Trautteur 2020, pp. 106-7).

In the process towards knowledge, customs spontaneously bring individual and heterogeneous paths of construction of personal knowledge back to clarity, slowly incorporating "dissonant" scientific discoveries with direct perception in the progressive harmony of social order.

3.3 *Custom and efficiency*. In capitalist economy, efficiency denotes a state of perfection. On the production side, given the present technology, it defines the best possible configuration of available resources, to obtain the highest realizable profit, determining maximum gap between revenues and costs. On consumption side, efficiency is given by the ability of individuals to maximize their income, with the achievement of the highest possible level of utility. As for savings, efficiency is given by the perfect allocation of savings, in such a way that it guarantees the high-

est possible levels of returns. In labour market, this is reached when a wage level is determined such that demand equals supply. Overall, a system is in a condition of efficiency when in all markets a configuration of prices of goods is reached such that maximum profit is obtained. That is, when same price configuration similarly allows consumers to allocate their income perfectly, obtaining the highest possible utility, and when an interest rate level is reached, such that demand for capital from investors is equivalent to supply of private savings.

The one just described, in a very synthetic and simplified form, is the general economic equilibrium model, which has as prerequisites completeness of markets and free competition.

When we refer to efficiency in economics, we therefore describe a perfect, complete, and static configuration of the world, without waste of resources, disequilibria, or dominant positions. Whatever "perturbation" intervenes (new technologies, new markets, new products, etc.) to break that equilibrium, "left to itself" system is able to reach a new efficient configuration of general equilibrium, in a short time, thanks to free competition. The conception of economics based on efficiency is the result of the process of progressive distancing from other social sciences, to be configured as an "exact" science or "as a pure logic of choice", in Hayek's words (1937). But reality economics, in its orthodox version, is the only "science" to have persisted in a static world that of classical Newtonian physics, which was predominant at the end of the 19th century, when its principles were formulated.

In this moving away process, which sanctioned the transition from classical to neoclassical school, customs were also excluded from economists' interest, suffering the same lot as morality, ethics, history, institutions, law, and politics, with the aim of transforming political economy into economics. John Stuart Mill, a decisive figure in understanding the shift towards the new paradigm of Marginalist school, was very clear about the fact that, for example, customs, like competition, regulated economic processes. But what he observed (we are in the mid-1800s) was, in his opinion, a legacy of tradition inexorably tending to a transformation that would take place in a short time (Mill, 1929 [1848], ch. 4). Economy would be coordinated by market competition alone, with gradual disappearance of any role for customs in economic sphere. Indeed, he added, only by referring exclusively to the principle of competition, economics can become science. The road of economics to efficiency was thus cleared.

Throughout last century and, surprisingly still today, we are witnessing enduring supremacy of this idea. Indeed, this vision has been further strengthened, with increasingly hegemonic belief that economic conditions ultimately control all human relations. Schumpeter (2003 [1943], in part. Ch. XI) also follows in Mill's wake. In his opinion, customs limit economic development, when they predominated unchallenged in pre-capitalist phase. Modern civilization is due to their overcoming and the affirmation of capitalism, "the propelling force of the rationalization of human behaviour " (p. 125).

However, in the light of "heterodox" considerations carried out so far on uncertainty, rationality, knowledge, decision-making, etc., it seems clear that we cannot really explain economy by basing it on an abstract rationality, which outcomes in

the efficiency of markets. On the contrary, a much more adequate and rich, albeit approximate, but reasonable explanation of behaviour of economic agents can be provided, by referring to processes of perception and construction of personal knowledge (as previously illustrated) and to continuous, mutual influence with social dimension. In the latter, considering their characteristics described above, customs play a decisive role for the understanding of economic phenomena, at least in most realistic conditions characterized by efficacy.

Paradoxically, the role that Mill himself attributed to customs in favouring an orderly (but primitive and slowing) development of economic affairs, with "social sanctions" for who deviate from them (p. 237), now emerges as relevant to really understanding them in their complexity. The long path towards "modernity", which in the opinion of Mill and Schumpeter (and in part also of Marshall, 1920 [1890] pp. 7 and 58) was represented by emancipation of competition from the friction of custom, revealed a fatal mistake, which contributed to impoverish economic investigation and led it on the asphyxiated tracks of a purely accounting discipline. Market economy is only one aspect of social complexity, intrinsically intertwined with other dimensions that are, if not more, at least as relevant.

Customs, on the other hand, have a more pervasive and extensive role and are not mere residues of tradition, destined to perish in the face of modernity of competition. Choosing to remain in the analytical field of efficiency has so far made possible to produce elegant interpretative models, but which configure a too simplified reality. If we overturn this conception, subordinating dynamics of competition and market to customs, interpretative scenarios are opened that are more suited to a social science of complexity such as economics.

4. New scenarios

As emerged in this paper, the recognition of the central role of customs allows us to explore economic phenomena more effectively, including uncertainty, free will, and complexity. The simultaneous presence of these factors explains nature and role of customs in social dynamics, including economic ones, with path-dependence holding them together. In this context, customs are functional to social order because they standardize unpredictable behaviours of individuals. The most relevant aspect that seems to emerge from this analysis is that norms of behaviour, which innervate customs, do not emerge and are selected only for their instrumental utility (utility for the group), as for Hayek (1982 p. 99). Also, if not above all, they respond to criteria of clarity towards which human mind is naturally disposed. Environmental complexity, *lato sensu*, drives us in seeking regularity, through learning, which evolved because it is faster than genetic adaptation and therefore more suited to a rapidly changing reality. We are actively looking for regularity in environment to use it (Schlicht 2021). This is the source of the tendency to order, which arises from our "spontaneous" preference for linearity, coherence, analogy, and clarity. This incessant and continuous process leads us to create interpretative models (construction of personal knowledge with path-dependent procedures) to

maintain them (trying to adapt "the new to the already known", in path-dependent way) and to expand, or modify them, to achieve our levels of aspiration (efficacy of the action in path-dependent perspective). What drives us are mainly customs: macro result of composite individual actions tending to clarity and which, in turn, condition behaviour by bringing them back to it.

Market and competition dynamics do not escape this process, but take place within it. Obviously, like others of a political, moral, ethical, and religious nature, they contribute to changing customs. But those are the water that flows in the riverbed of these: levees direct course and are in turn more slowly modified (Schlicht 1998).

This mutual relationship of reciprocal conditioning is the key element that places us outside of any deterministic analysis, thanks to path-dependence, and which allows us to understand the considerable differences in social sphere, between micro and macro dimensions and their interactivity.

Similarly, but not exactly in the same modalities, to what happens in physics, where it is possible to have a good predictive capacity of the macro-phenomena ordering the unpredictable quantum micro-phenomena.

As described above, starting from complex psycho-neurocognitive processes of construction of personal knowledge, it is possible to identify this continuous feedback among the provisional meanings we give to stimuli coming from the environment, bringing them back to knowledge which has been previously acquired, and consolidate that in case of a successful outcome. In this "tacit" dimension we can already identify decisive elements for our ability to use free will, except that criteria driving our decisions are extremely more complex than mere "rational behaviour".

If we really want to understand the dynamics underlying economic phenomena, it is essential to do this within a detailed analysis of weave of which they are interlaced and in which they are immersed: customs. It is misleading and unrealistic to have to assume that to understand economic phenomena we must always rationally orient ourselves to maximizing self-interest. By doing so, we eliminate from analysis the qualifying aspect of our nature which is the ability to be oneself only *together* with others, including emotions, morals, sense of justice, empathy, and creativity.

Instead, considering customs as a spontaneous macro result of human mind's tendency to clarity, including all their dimensions, it seems to us that it opens an extremely interesting scenario for economic analysis, especially if considered in a path-dependent way.

5. Concluding remarks

This paper aimed to explore the role of customs in economics, highlight the link with path-dependence, and evaluate the implications for economic analysis. In general, customs have found little attention among economists. In classical authors, in particular Mill and Schumpeter, the rather negative idea of custom prevailed as an impediment to capitalist progress, or, for Marshall, as an inertial force that, at best, belatedly adapts to the new. Market and competition, on the other

hand, represent forces that act in opposition to the yoke of custom. Their progressive affirmation would have untangled economic development towards progress.

Mill, in particular, went beyond. He argued that, if economics claims to become science, scholars must direct their attention to the study of competition dynamics, leaving aside customs. This represents a crucial aspect in the progressive abandonment of economics from its social science dimension. Removing the intertwining of economic phenomena and political, moral, philosophical, legal, and institutional spheres from interest of economists has reduced economics to a "pure logic of choice", compatible with a dimension characterized by the ability to give probabilistic weight to realization of future events in terms of risk. This severely limited any analytical capacity in conditions of uncertainty.

Furthermore, considering customs and competition in dichotomous opposition relegated the relevance of the former as functional to social coordination, in precapitalist phases, or predominant in rural areas or in small communities where, compared to larger ones, competition tends to be successful. This contrast is too trenchant and, as argued, does not allow us to understand the significant influence of customs on economic phenomena.

Referring to more recent contributions offered by cognitive economics, from the literature on path-dependence (as argued in 2.3) and, remarkably, from the studies of Ekkehart Schlicht, a more varied picture emerges, opening up interesting scenarios, which we have partly explored.

A first important aspect concerns the neurobiological origin of customs, connected to the spontaneous tendency to clarity of human beings. Their intrinsic social nature is connected in a complementary way. Particularly, they differ from habit, a dimension which is mainly individual, or restricted to a limited number of people, while custom have essentially a collective dimension.

A second aspect concerns the difference between routine and customs. We especially explored this part relation with the wider attention received in economic literature by the former, as compared to the latter. It emerged that, despite having common traits such as presence of path-dependence, which can be traced in the process of creating knowledge, they also differ in relevant ways. In organizations, routines are codified as knowledge and are explicitly aimed at achieving specific performances. Customs have a broader, more flexible dimension and permeate a wider spectrum of social relations, including economic ones.

This introduces the third important aspect: the full compatibility of customs in situations characterized by uncertainty. Indefinite outcome of individual decisions, linked to incomplete predictability of individual behaviour, is brought back to an "orderly" dimension thanks to the role of customs. This does not mean that a causal or deterministic dimension is determined at macro level, but simply that these "forces" act spontaneously in directing overall behaviours in terms of clarity. Nor does it mean that, thanks to the presence of customs, we may be able to perfectly predict future outcomes, because the relationship between individual actions and ordered collective outcomes is dynamic and mutually influencing. In fact, the former contribute to slowly modify the latter as well. The fundamental difference lies in the fact that individual decisions are more unpredictable, also thanks to free will. On the other

hand, customs change, generally but not always, more slowly, thanks to a gradual modelling process that individual actions determine. Individual decisions, in turn, are conditioned by customary channel in which they take place.

The *fil rouge* around which this complex relationship is woven, which goes from neuro-cognitive dimension of perception to social order, is the "tendency to clarity in a path-dependent way", typical of human mind in aligning emotions, beliefs, and behaviours. Customs are at the same time most manifest and most latent phenomenon. Manifest, because they are easily recognizable in collective behaviours, latent because they unconsciously condition us in our actions.

Thinking that economic phenomena could be exempt from them, or that they would be released from them, adapting only to competition is an unrealistic and anachronistic idea. Schlicht (1998), in particular, indicated in property, law, business, and market the main areas in which economic analysis can benefit from a correct consideration of the role of customs. Here, through a greater focus on microfoundations, uncertainty, decision, and efficiency were also indicated as relevant, and it was highlighted how path-dependence is constantly present. In our opinion, this last aspect gives further coherence to Schlicht's ideas.

Looking forward, it would also be desirable to study in depth the role customs play in keeping few situations of privilege inaccessible (perhaps by profitably referring to the part of Mill's thought (1929 [1848], p. 247) which clearly glimpses these distortions). In this way, we could provide ourselves with further tools to understand capitalist system failure in containing growing inequalities and how to contribute more effectively to drastically reduce pernicious effects on the ecosystem of present economic development.

Similarly, it is interesting to investigate what kind of influence customs have on expectations, how they condition them and how they are in turn conditioned. In this paper, some issues have been addressed such as perception, construction of personal knowledge, habit, routine, decision, convenience to adapt to the behaviour of the majority, etc. In this way, conducting a specific analysis also on the relationship between expectations and custom could give profitable results.

In short, this approach proposes that economists take into due consideration the intertwining between theoretical analysis and empirical investigation, also in order to evaluate "real" forecasts and effects of economic policies. If for long time economics shied away from empirical investigation, taking refuge in more comfortable and elegant formal dimension of its models, recent award of the Nobel Prize to David Card, Joshua Angrist and Guido Imbens (and before that also to others) seems to show a turning point, thanks to full recognize the relevance of empirical methods for a correct understanding of economic phenomena. In this direction, a serious consideration of role of customs can give fruitful results.

Last but not least, try to study in depth nature dynamics and role of customs, in a comparative and *endogenous* way to capitalist development, as well as providing us with new and more adequate tools of analysis for a more effective understanding of the profound transformations taking place in contemporary capitalist system and its future perspectives. This can be fundamental to bring economy *wholly* back to the most profitable field of social sciences.

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