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Pragmatic Behavior: grounding behavioral economics on pragmatism

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Abstract

Behavioral economics offers an account of actual human behavior. Contrasting with the conventional normative approach to rationality, rational choice theory, describes the deviations from optimal decision making. These are attributed to failures in two systems, one in charge of automatic behavior (System 1) and the other responsible for reflective one (System 2). As important as this is, an elaboration of the interaction between them seems to be lacking. Philosophical pragmatism can contribute to address this want. It provides an evolutionary explanation of how people act accounting for the continuity of behavior including habitual and reflective action. The former is captured by habits and the latter directed towards objects. Additionally, it proposes a dialogical self, consisting of an interaction between the 'I', denoting impulse, and the 'me', referring to reflective action. As such, pragmatism can provide fertile ground on which to cultivate behavioral insights.

Keywords: behavioral economics, pragmatism, rationality, agency, transaction

Introduction

There is a growing literature challenging the axiomatic account of rationality posited by the dominant approach to human action. This tradition assumes an individual i) with well-defined preferences seeking to maximize them by their choices; ii) whose preferences, in their best knowledge, reflect the true costs and benefits of all options; and, iii) with well-informed beliefs regarding how uncertainty will resolve itself, should it occur, as well as the ability to update them with new information, which is factored in their probabilistic evaluations (Camerer et al, 2003). Such a framework has been regarded as rendering people self-interested, calculative, atomistic chooser (Garcés 2020a) or more colorfully: 'rational fools' (Sen 1977), fictional creatures (Thaler 2015), or the now well-known *homo economicus* (Corrr and Plagnol 2020). Perhaps the most influential account, particularly in practical domains, has been provided by Behavioral Economics (henceforth BE).

BE challenges the conventional rational approach. Instead of focusing on how people ought to behave and do so sufficiently often so as to provide some sort of regularity, BE accounts for how human beings *actually* behave. Contrary to the rational approach, human beings fail to achieve optimal outcomes. Moreover, this divergences from the rational model are systematic, which means that they can be predicted and, for practical purposes, can also be prevented (Thaler and Sunstein 2009).

At the heart of BE, and simply put, is the idea of decision-making is governed by two systems. System 1 is automatic, effortless and reflexive. System 2 is deliberate, effortful and reflective (Corr and Plagnol 2020). Whereas the former deals with habitual and routine situations, the latter is in charge of new and complex situations. As such, they suggest an efficient division of labor in decision-making (Kahneman 2011).

The internal dynamics between both systems, however, is less clear. As (Corr and Plagnol 2020, p. 115, emphasis in the original) put it:

> But there is something worse to come – something rarely discussed in relation to behavioral economics. This matter […] is something of a scandal in the behavioral sciences. This is the problem: if all forms of cognition, feelings and behavior are

(System 1) automatic at the *very* moment they occur then how can System 2 ever gain control over these processes?

To fill that void, classical philosophical pragmatism is advanced. Pragmatism can be defined as an account of how people think (Menand 1997) and act (Garcés 2020b). There are two broad streams falling under the pragmatic label: classical pragmatism and neopragmatism (see e.g., Pihlström 2013, Hildebrand 2003). Since the latter has been influenced by poststructuralist ideas, making it less relevant for this discussion, this paper employs the former.

Pragmatism holds action as its point of departure and ultimate concern. From this perspective, there is a continuity of action in nature and human agency is only one expression of it. All organisms are situated with an environment, which enables or curtails their action. Therefore, there is a constant and mutual influence taking place leading to a continuous mutual change. As such, organisms and environments are constitutive of one another, forming an indivisible unit. Hence, the term transaction[1] was preferred to better account for that exchange and differentiate it from alternative approaches to action.

In the case of human beings, due to the influence of the environment, all action is social action. We learn how to transact with the objects around us to further our action by imitating others. This role-playing allows the internal dialogue that takes place when doubt arises. The 'I' and the 'me' interact to settle the issue and further action.

In what follows the argument is elaborated in four section. The first introduces BE's account of decision-making, highlighting its approach to human fallibility. Second, classical philosophical pragmatism and its account of human agency are presented. The third section discusses some implications of informing BE with pragmatism. The final section concludes.

Behavioural economics and misbehaviors

[1] Until his later work with Bentley (1949), Dewey used the term 'interaction' to account for the relation and dynamics between organism and environment in a way more consistent with pragmatism's notion of experience, i.e. what he and Bentley termed 'transaction'. Nonetheless, since the literature has used both interchangeably, this paper follows suit, unless otherwise stated.

While the conventional 'rational' approach is inherently normative (Elster 1986), BE provides a more realistic account, a descriptive one, of human behavior[2]. It learns from other social sciences, particularly psychology, to inform economic theory and practice. BE "engages in economic analysis with an understanding of how human beings actually behave" (Sunstein 2020, p. 2). In that project, "it is less reliant than mainstream economics on a small number of foundational assumptions/axioms upon which theories and their predictions are based" (Corr and Plagnol 2019, p. 4).

To be sure, the rational model serves as fertile soil for BE since it assumes sufficient optimal decision making and BE explores the instances where people behave sub-optimally. This descriptive approach highlights the deviations from the standard model, what the latter would call misbehaviors. That is, BE provides an account for people's failures in achieving the maximization of their welfare (Le Grand and New 2015). Since departures from the rational framework are systematic, BE contributes in the explanation and prediction of human action. Consequently, this section introduces BE's main contributions and its account of human misbehaving.

Behavioural Economics and its insights

Humans fail to act according to the axioms of full rationality assumed by the dominant approach: rational choice theory (RCT). RCT is an offspring of neoclassical economics (Dawnay and Shah 2005) and follows its prioritization of observables and elegant mathematical modelling (Garcés 2020a). Deviations from the standard model, therefore, are regarded as exceptions and irrational. From a BE perspective, however, they are systematic and, in order to avoid negative connotations, are called misbehaviors (Thaler 2015). They are the product of failures in people's reasoning. For simplicity, BE posits that decision-making involves two systems, which are subject to fail. While one is responsible for automatic behavior, the other is in charge of deliberate conduct (Thaler and Sunstein 2009). Kahneman (2011, pp. 20-21) presents them as follows:

[2] As Richard Thaler (in Corr and Plagnol 2019, p. 7) has stressed "I believe that for the last 50 or 60 years, economists have devoted themselves to studying fictional characters … They may as well be studying unicorns".

> System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control
>
> System 2 allocates attention to the effortful mental activities that demand it, including complex computations. The operations of system 2 are often associated with the subjective experience of agency, choice, and concentration

System 1 (S1) is the setup by default. Simple activities and operations requiring decreasing levels of awareness fall within its domain. People's tendency to act is denoted by it. Freewheeling impulses and associations are some illustrations. S1 can make simple relations and process information about individual things. Contrastingly, neither can it assimilate multiple different issues nor operate statistical data analyses. Put briefly, the more actions decrease in awareness, demand less effort and become unconscious, the more they fall within S1's scope.

As the default system, S1 suggests actions to System 2 (S2) through intention, intuitions, impressions and feelings. These are replications of situations, which provide often reliable short-term predictions useful to solve problems in a rapid and frequently sufficient manner, whose effectiveness increases with iteration (Kahneman 2011).

S2 is in charge of reasoning and operations that require increasing levels of awareness and effort. This means that unlike S1, which is automatic, S2 is deliberately activated. While S1 is active, which is most of the time, S2 operates on standby mode. To the extent operations become more complex, S2's involvement grows. At the extreme, when situations are complex enough, S2 takes over completely and assumes full control of decision making. Thus, from ordering thoughts to establishing sequences, to following norms and institutions, to assimilating multiple properties of things and analyze the latter in terms of the former, S2 engages in activities that demand attention and exert effort. This means that it depends, to a great extent on the energy available. As the latter runs out, the former fails. For efficiency, therefore, S2 only operates on demand and to the extent the task demands it.

Moreover, as S1 can make suggestions toS2, S2 can also affect S1. This happens when automatic responses such as attention and memory are adjusted, overruling thereby conventional processes (Kahneman 2011). One of the most important responsibilities of S2 is assessing S1's suggestions, choosing which will eventually manifest as action directly, which

need to be adjusted, and which ought to be dismissed. Additionally, because S2 is linked to awareness, self-control and discipline fall within its domain. This means that S2, to an extent, is charged with taming S1. Hence, S2 can overrule S1. On the flip side, however, since S2 consumes resources, its influence diminishes as it is employed and energy is used enabling S1 to take control again.

Supervision of S1 is needed because, although its operations often are sufficiently adequate, it frequently fails. It shows biases and employs heuristics, shortcuts that make decision-making efficient but not necessarily efficacious, leading to systematic errors under certain circumstances. The latter are characterized by conditions, properties or attributes in the context in which the choices are made, i.e. the choice architecture (Thaler and Sunstein 2009; Sunstein 2020).

If S2 can perform better than S1, can it permanently replace it? This not possible and neither is it desirable. Being the default system and denoting people's tendency to act, S1 cannot be turned off. At the same time, since S2 is effortful and places great strain on the individual and their resources, it would be paralyzing for a person to have S2 in charge of all decisions, bringing to awareness even those closer to impulse.

The above notwithstanding, S2 is also prone to failure leading to inferior outcomes. As an illustration, calculations and estimations of the probability of an event are handled by S2 and for most people are problematic, prompting errors. That is, the involvement of S2 does not guarantee optimal outcomes.

The discussion so far has suggested that S1 and S2 are processes best understood as taking place in degrees, not all-or-nothing conditions. Additionally, the (in)accuracy of these systems is subject to change. That is, they are not a given. Training, for example, can improve them and age, for instance, can diminish them. Cognitive skills and even discipline can also be bettered or worsened in both. In fact, up to a limit, the effort required to learn talents and abilities decreases as they are perfected (Kahneman 2011).

Divergences from the model of full rationality have been also referred to as 'reasoning failures'. Although reasoning seems to apply mostly to the operations of S2, the literature encompasses failures in both system under this term (see Le Grand and New 2015; Le Grand

2008). Such approach seems justified in light of the aforementioned fact that both systems are a matter of degree and subject to change. That is, even thoyugh it is clear that impulses are the realm of S1 and reflection the domain of S2, it is unwarranted to draw hard lines in between. Less-reflective and more-reflective action can fail and reasoning failures addresses both. The causes of these failures can be categorized in four types of limitations associated to: i) technical abilities; ii) imagination or experience; iii) objectivity; and iv) willpower (Le Grand 2008).

Many of these limitations, biases and heuristics emphasize the fact that preferences and choices are not made in a vacuum but necessarily within a specific context. Human action takes place embedded in a situation. This context, or the circumstances and conditions surrounding choice, is referred to as 'choice architecture', which inescapably influences decision-making, whether deliberately set up or not (Thaler and Sunstein 2009; Thaler 2015). Because of this, and the fact that this architecture can be modified, much of BE's contributions have sought to contribute to policy-making and address those failures (Sunstein 2020; Vlaev and Dolan 2009). In this sense, some authors have roughly distinguished policies seeking to address S1 failures as 'nudges' and those aiming at S2 failures as 'boosts'.

Misbehaving: expanding motivations

An additional and recent contribution from BE to the account of human action beyond the rational model is the expansion of motivations. The convention focuses on the maximization of self-interest, reducing human motivation to egoistic goals. Of late, the BE literature has enlarged this approach and incorporated other-regarding motivations or altruistic goals as well. One of the most salient illustrations is the work carried in the field of environmental policy (see e.g. Sunstein and Reisch 2014; Carlsson et al. 2019; Beckenbach and Kahlenborn 2014).

Research on climate change and policies implemented to tackle it at the level of the individual such as consumption of energy, source of energy, and other environmentally relevant preferences suggest the pursuit of objectives that question an exclusive focus on self-interest. The expansion of motivation finds further support beyond BE. Indeed, there is a growing body of work evidencing the personal sacrifices opted by heads of household, particularly women, to guarantee the provision of certain goods to the most vulnerable

member of the household, especially children. Such insights challenge even long-standing conventions like the well-known mastery exercised over humans by pleasure and plain.

Whether the concern is for the ecosystem, non-human organism or with future human generations, the inclusion of other-regarding goals as part of BE's account of human action and within it, motivation, is momentous. It entails that the individual pursuit of welfare does not apply to the self only. Indeed, as Rabin (1997, p. 13) states

> It has been experimentally verified that people contribute to public goods more than can be explained by pure self- interest, that those free to allocate money as they choose do not universally grab all the money and that people sacrifice money to retaliate against unfair treatment […] there is no debate among behavioural researchers about whether underlying preferences depart non-trivially from self-interest.

To answer the possible argument supporting the idea that altruistic acts are performed due to the personal utility derived from it, the literature scrutinizing the rational model has made some specifications. People act on behalf of others, to promote their welfare, even though an increase in personal utility can be anticipated, but do so for another reason, such as 'doing the right thing'. Such situations have been referred to as illustrations of acting according to commitments (Sen 1977). This is even evident when and individual's goals and actions entail a (known) trade-off between their utility and that of others.

By the same token, the distinction between act-irrelevant and act-relevant altruism can be informative. Act-irrelevant altruism refers to the concern for others that does not require the individual to use their own powers to take action (Le Grand 2003). People experiencing this motivation are contempt to have others address the issue. That is, who actually performs the altruistic act is irrelevant. Conversely, for act-relevant altruism, who carries out the act is fundamental.

> [a]ct-relevance [altruism] could be motivated not so much by feelings of positive satisfaction from performing a helping act but by a sense of duty or obligation to the individual concerned and the desire to avoid a sense of guilt if the individual concerned does not perform the act. Or it could be motivated by a sense of

reciprocity: a motivation to help those who have been kind or thoughtful in the past (Le Grand 2003, p. 36).

The homo sapiens

BE's account of human behavior challenges the rational framework and presents a description of how people actually act. This means that rather than establishing elegant axioms suggesting how people ought to act, and often do, to achieve optimal outcomes, BE acknowledges that human beings are fallible and founder in their pursuit of optimal welfare outcomes. These failures are systematic and, therefore, exploring them contributes to economic explanation and prediction.

In brief, S1 makes suggestions to S2 which, under normal circumstances, are endorsed by it without adjustment or revision, making impulses into voluntary action and intuitions and impressions into belief. Most of the time, this less reflective and often unconscious mechanism is the process taking place in human action. Only on the face of challenges to that action, when the process does not work due to a lack of adequate response by S1, does S2 activate. When the assumptions of the world made by S1 are broken by reality, more reflective and sophisticated tools is required, which fall within S2's purview. This complimentary interaction between S1 and S2 is efficient, leading to sufficiently good outcomes, but not necessarily optimal because people fail.

These have been referred to as reasoning failures, which can ensue due to personal limitations, and contextual features, or a combination thereof. Therefore, for BE, human action is embedded in a situation, with means that context and history matter. While perhaps the best illustration of the influence of context on human behavior is the inescapable 'choice architecture' (Thaler and Sunstein 2009; Sunstein 2020), history can be exemplified by the habits, talents and skills, learnt (or not), which is related to *inter alia* their social norms, and culture. This exposes BE's attention to human diversity.

Finally, BE has recently added other-regarding goals as motivations orienting human action. That is, the maximization of self-interest is not the only objective. Egoistic as well as altruistic aims are accounted for by the approach.

Consequently, for BE human beings not only are "plural, more and less reflective choosers", they are also multi-motivated. Their motivations encompass self- as well as other-regarding objectives. Their plurality is expressed in the combination of the variety of personal and contextual properties. They are more or less reflective since they act both automatically and are also capable of assessing their preferences (and impulses). They are choosers since reflective action is manifested in choice.

Pragmatism

Pragmatism has been subjected to multiple definitions. Some regard it as a theory of meaning and knowledge (Quinton 2010), others an attitude in philosophy and in life (Putnam 2010), others as an account of how we think (Menand 1997) and act (Garcés 2020b). Perhaps because of this, it has also been called a living philosophy (Talisse and Aikin 2008). Pragmatism, however, encompasses two strands: classical and neopragmatism. The broadest distinction lies on the latter's adherence to post-structuralism (see, e.g., Pihlström 2013; Hildebrand 2003; Kloppenberg 1999). Hence, for current purposes, the former is discussed.

At its most basic, pragmatism departs from action, neither from mind, nor things (Friedrichs and Kratochwil 2009). By so doing it avoids subscription to either realism or idealism and, instead, offers an alternative to both (Hildebrand 2003). Action is not only its point of departure but also its ultimate concern. For instance, for pragmatism knowledge is relevant "[p]rimarily, persistingly and essentially for the sake of action" (Quinton 2010, p. 3).

Born against the background of absolutist thought and politics, pragmatism focuses on process and change. Influenced by Darwinian insights, it regards the world as a continuity in constant flux. To flesh out its main contribution pertinent to this argument, this section focuses mainly in the seminal work of John Dewey and George H. Mead by first introducing pragmatism broadly and then addressing its view of human agency.

Pragmatic transaction and habits

Pragmatism's focus on action and its naturalistic approach entail a view of the world in which there is only continuity, where the only constant is change. There are no hard boundaries between the elements composing it and these elements are in constant interaction and

exchange with one another. Indeed, to convey this idea, in his later work with Bentley, Dewey (1949) distinguished the terminology between action, self-action, inter-action and transaction, favoring the latter. Action, as an activity, is considered as an event stressed in terms of its durational transition. Self-action is pre-scientific and conveys the notion of presumptively independent entities (e.g. actors, minds, selves) acting under their own powers and activating events. Inter-action refers to entities presented as organized upon one another and balancing each other as in causal interconnection. While self-action was prevalent in disciplines like sociology, inter-action was predominant in others like economics (Smith 2004).

Transaction, in turn, denotes a system in which the entities composing it are constantly changing each other and constituting one another. That is they are not assumed to be independent, isolated, or detached. It describes the perennial state of exchange of things in the world. The transactional unit is indivisible, whether in terms of the entities making it up or the relations among them, although they can be carefully separated for analytical purposes (Dewey and Bentley 1949).

Consequently, no privileged location is conferred to human beings. They are just one more element making up the world. Transaction challenges the idea that there are discontinuities that act discretely and autonomously in the world. Rather, it emphasizes that there is a continuity among entities in reality in one indivisible unit (Dewey 1938). What is more, there is no order in these entities. They have the same the same relevance. Hence, Dewey favored using the terms organism and environment, even to refer to humans and their context, so as not to suggest any metaphysical primacy of either other the other.

Furthermore, in the case of human beings, there is no separation between mind and body, just like there is no separation between the mind and the world. An individual is a body-mind organism (Dewey 1958) that is emergent nor static, to the extent it is constantly being constituted by its context or the circumstances surrounding it. That is, there is necessarily some contingency in it. Additionally, the environment encompasses the totality of connotation such as ecological, cultural, intellectual, emotional, physical, and social, which exist simultaneously in the same situation and can only carefully be analytically differentiated.

Accordingly, neither the self nor society has conceptual primacy. Contra individualism, an individual's existence can only make sense situated within a society or group, embedded in its traditions and institutions. At the same time, against post-structuralist, despite the influence of society over individuals, the former does not determine the latter, i.e. society does not determine the selves, which do exist both embodied and in personality.

Further, human (trans)action, is taken to be a primitive fact and inherently social. That is, it is the fundamental phenomenon for which causal explanation is not required (Testa 2016). Moreover, given that transaction involves an exchange between organisms and their environment, individuals and their context, and the latter includes other organisms or individuals (social context), all human action is social action.

Dewey (1946) introduces the concept of association, conceived broadly, to elaborate the constant and inevitable relation and connection among organisms.

> Association in the sense of connection and combination is a "law" of everything known to exist. Singular things act, but act together. Nothing has been discovered which acts in isolation. The action of everything is along with the action of other things (Dewey 1946, p. 22).

Specifically, transaction among organisms, i.e. group life, is referred to as 'conjoint action' (Dewey 1946). Conjoint action is also taken to be a primitive fact that cannot be reduced to individual action (Testa 2016). While composed of a multiplicity of acts or actions, conjoint action is distinct from any one of them and from their aggregation (e.g. marriage, a market exchange, an armed conflict, a lecture). Accordingly, Dewey (1946, p. 23) emphatically states "[t]here is no sense in asking how individuals come to be associated. They exist and operate in association".

For pragmatism, the constant flux of action for human beings depends on belief, which denotes the state of people knowing how to act. When internalized enough, they become habits, indicating how to proceed to advance one's intentions seamlessly. Whenever action is hindered doubt, or hesitation as to how to proceed, emerges. While uninterrupted action is referred to as a determinate situation, disturbed action is called an indeterminate one (Bacon 2012). To remove the hindrance and advance action anew, individuals resort to inquiry.

Inquiry denotes the deliberate exchange between individuals and their environment testing hypotheses to regain control over action and make the situation determinate again. Importantly, when belief is gained and action is advanced once more, the issue is settled for the time being only (Cochran 2002). That is, pragmatism recognizes actual human experience, that insights need only be sufficiently, not completely or absolutely, good and that they can and most likely will be replaced for new ones. Thus, the settlement can only be dislodged with good reasons (Dewey 2008), i.e. when action is hindered again, justifying casting doubt on belief. Pierce's (1934, p. 156) dictum conveys this best by stating: "let us not pretend to doubt in philosophy what we do not doubt in our hearts".

Consequently, inquiry is experimental transaction (Dewey in Smith 2004, p. 137). Wary of absolutes in general and universal law in social phenomena in particular, for pragmatism, "[...] conceptions, theories and systems of thought [...] are tools. As in the case of all tools, their value resides not in themselves but in their capacity to work shown in the consequences of their use" (Dewey 1985, p. 163). These tools are valid insofar they serve their purpose. Once they do not, new ones are required. Hence, even in science, pragmatism acknowledges that human beings are fallible and takes the provisional character of insights, belief, or knowledge seriously. Indeed, skeptical of the definitive and conclusive tone of the label 'knowledge', pragmatism favored the term "warranted assertibility" (Quinton 2010) for a hypothesis that succeeds in making an indeterminate situation determinate.

Habit, however, is at the core of human (trans)action. Contra the reflex-arc tradition, habit is more than conditioned response (Garcés 2020b). They are not mindless action either. Habits are predispositions to act, made of a variety or sequence of actions, (Hildebrand 2008) and entail ways of pursuing and obtaining desires through intelligent action. From the most mundane to the most sophisticated acts, habits are what makes much of experience intelligible.

> [a]ll habits are demands for certain kinds of activities; and they constitute the self. In any intelligible sense of the word will, they *are* will. They form our effective desires and they furnish us with our working capacities. They rule our thoughts, determining which shall appear and be strong and which shall pass from light into obscurity (Dewey 1930, p. 25, emphasis in original).

To make sense of experience, habits aid in the formation of preferences and capacities, which generates a person's demands and their possibilities of responding to stimuli. Put simply, what one desires and considers possible is contingent on habits. In fact, "freedom depends on skill and skill on habit" (Hollis 2010, p. 39). Therefore, habits (as predispositions formed by several acts) are more intimate, informative and fundamental about human beings than conscious choices[3] and Dewey (1930, p. 125) states that "[m]an is a creature of habit, not of reason nor yet of instinct".

Habits can be generated in multiple ways. As predispositions for actions, they are not only the result of internalized belief or more reflective action but, to a far larger extent, of the simulation or imitation of social customs and habits, which starts from birth (Dewey 1946).

> An individual usually acquires the morality as he inherits the speech of his social group. The activities of the group are already there, and some assimilation of his own acts to their pattern is a pre requisite of a share therein, and hence of having any part in what is going on. […] There is no miracle in the fact that if a child learns any language he learns the language that those about him speak and teach, especially since the ability to speak that language is a pre-condition of his entering into effective connection with them, making wants known and getting them satisfied. (Dewey 1930, pp. 58-59).

Hence, habits are constitutive of a person's self. Indeed, Dewey's depiction of human beings are creatures of habit can hardly be overestimated. When referring to those around us, with whom social interaction is carried out, he states:

> These others are not just persons in general with minds in general. They are beings with habits, and beings who upon the whole esteem the habits they have, if for no other reason than that, having them, their imagination is thereby limited. The nature of habit is to be assertive, insistent, self-perpetuating. (Dewey 1930, p. 58).

[3] Dewey (1930, p. 176) states «habits formed in process of exercising biological aptitudes are the sole agents of observation, recollection, foresight and judgment: a mind or consciousness or soul in general which performs these operations is a myth». And he continues: «Concrete habits do all the perceiving, recognizing, imagining, recalling, judging, conceiving and reasoning that is done. "Consciousness", whether as a stream or as special sensations and images, expresses functions of habits, phenomena of their formation, operation, their interruption and reorganization» (Dewey 1930, p. 177).

Habits, as all action, are also subject to challenge and change. They can be modified due to the hindrance of habits because of doubt or due to the conflict among competing habits. Whenever habits are not manifested, the situation prompts ideas and impulses to choose from contending habits, changing thereby the environment as intended. This is an internal deliberation, involving trial and error due to human beings' fallibility, to further action again.

Pragmatism's focus on continuity is also manifest in human action, as it pertains cognition. It provides an account that encompasses all degrees of awareness, effort and consciousness, from primitive reflexes, to habits, to reflective intelligence (Baldwin 1988).

Pragmatic objects and the dialogical self

The internal deliberation carried out by individuals is further elaborated by Mead, who subscribed to Dewey's notion of habit[4] and expanded pragmatic thought to address more reflective action (Baldwin 1988). According to him acts are necessarily social and neither individual nor social facts can be reduced to one another because they are constructed simultaneously. "For Mead, functional interrelations among individuals, not a priori social facts, are primary" (Johnson and Shifflett 1981, p. 146).

Social interaction is expressed human group life, which is people acting itself since human action is always social. Although there are no discontinuities, for analytical purposes, the process has been described as a fourfold process: *i)* indication, *ii)* interpretation, *iii)* formulation of response, and *iv)* action (Blumer 2004). Indication refers to the meaningful verbal and non-verbal gestures that individuals convey to each other. Interpretation is the construction of meaning about those gestures carried out by the receiving agent. Formulation of response is the undertaking of designing a course of action in light of the interpretation. The extent to which this phase exerts effort depends on the degree of coincidence or discrepancy in the meaning intended by the person gesturing in indication and the meaning attributed by the receiver in interpretation. Action refers to the result of interpretation and formulation, and is the overt response to indication, which becomes a gesture itself turning this phase into indication as well.

[4] "Reflective thinking arises [...] for carrying out some hypothetical way of continuing an action which has been checked. Lying back of curiosity there is always some activity, some action, that is for the time being checked [...]. The solution of the problem will be some way of acting that enables one to carry on the activity which has been checked in relation to the new act which has arisen" (Mead in Kilpinen 2012, p. 59).

Both action and meaning are affected by these insights. Apropos of action, it is regarded as self-directed, not merely evoked by external stimuli. That is, action is a constant inclination in organisms. As for meaning, it is neither a psychic result of creation added to a gesture nor a gesture's property; rather, it is the future action entailed by the gesture. Hence, pragmatic action is inherently interpretive. Pragmatism, as a theory of meaning, undergirds this with the pragmatic maxim, stated by Peirce (1905, p. 171, emphasis in the original) thusly: "Consider what effects that might conceivably have practical bearings you conceive the object of your conception to have. Then your conception of those effects is the WHOLE of your conception of the object".

Later, this view would be extended, in an anti-positivist manner, by William James (1904, pp. 673-674) who asserts:

> To attain perfect clearness in our thoughts of an object, then, we need only consider what conceivable effects of a practical kind the object may involve – what sensations we are to expect from it, and what reactions we must prepare. Our conception of these effects, whether immediate or remote, is then for us the whole of our conception of the object, so far as that conception has positive significance at all.

Concerning more reflective and purposive action, for Mead, it is directed towards objects. Objects are regarded as anything and everything the individual notices, refers or designates (Blumer 2004). That is, objects can be from within or without the individual's body, material or immaterial, real or imaginary, etc. In simple terms, if the person Is aware of it, it is an object for them. Consequently, an individual's world consists of their objects (Mead 1934).

The awareness of objects is not generated in a vacuum, however. The objects that come to our attention do so in the context of social interaction. People surrounding us, deliberately or not, draw our attention to a variety of items in our environment, which are objects to them. By so doing, they become objects for us as well. Similarly, and perhaps more importantly, they teach by example. We learn how to act towards objects by observing how others interact with them and imitating them. That is, there is a process of 'role-taking' or simulation that allows us to give objects meaning, in terms of action. By mimicking the actions of others towards objects in specific situations, whether hypothetically or in practice, one is able to

give meaning to the object under those circumstances. Hence, the meaning of objects is constructed socially and objects are social creations.

Moreover, those meanings given to those objects become the nature of the object[5]. Those meanings factor in the individual's interests, preferences, values, goals, commitments and designs of action. Accordingly, an object presupposes a subject, the latter giving meaning to the former. Further, because meaning is constructed in terms of action, human action can be examined in terms of the objects making up an individual's or group's environment.

Significantly, given that objects are everything a person notices or of which is conscious, the self can be an object as well. This is because the self is the object that the person is to themselves[6]. As an object, people can act towards it and its meaning is created in terms of action. Self-interaction is based on social interaction since, as mentioned before, the latter undergirded by role-taking. The process of imitation and assuming the position of others enables individuals to treat themselves as objects by facilitating the adoption of a third-person view of oneself from which the self can be given meaning and be acted upon. The wide array of interactions in a person's life offer numerous opportunities for that simulation and role-taking. The multiple 'others' an individual imitates enables the creation of a 'generalized other', which transcends specific roles and gains a more abstract nature. The generalized other, therefore, is the observer and scrutinizer of the self.

The self is not only an object but also a process. Considering the self as an object allows employing the communicative process characterizing human relationships, e.g. group life, in the internal sphere (i.e. indicating an object to oneself, interpreting it, formulating an action, and acting). In this process, the individual as acting by default is the 'I'. These impulses or habits are scrutinized and reflected upon by the 'Me'. Whereas the 'I' can be understood the organism's tendency to act, the 'Me' can be regarded as the view provided by a generalized other (Mead 1934). "The 'I' is the source of spontaneity and innovative actions. The 'Me' is the vehicle of self-regulation and social control" (Baldwin 1988, p. 117).

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[5] "Take the case of food. If an animal that can digest grass, such as an ox, comes into the world, then grass becomes food. That object did not exist before, that is, grass as food. The advent of the ox brings in a new object" (Mead, 1934, p. 129).

[6] This coincides with Taylor (1985, pp. 15-16), who asserts: "But what is distinctively human is the power to evaluate our desires, regard some as desirable and others are undesirable. This is why "no animal other than man" [...] appears to have the capacity for reflective self-evaluation that is manifested in the formation of second-order desires".

Treated as an object, the process of self-scrutiny can ensue. This takes place building on role-taking with the introduction of a ‘generalized other’ and assuming the shape of an internal interaction between the ‘Me’ and ‘I’. Mead (1922, p. 161) states “It is through the ability to be the other at the same time that he is himself that the symbol becomes significant”. Assessment of an individual’s own preferences and values as well as choices is, thus, possible. Nonetheless, it is possible given that all action is social action. Mead (1910, p. 403) asserts:

> We are conscious of our attitudes because they are responsible for the changes in the conduct of other individuals. A man’s reaction toward weather conditions has no influence upon the weather itself. It is of importance for the success of his conduct that he should be conscious not of his own attitudes, of his own habits of response, but of the signs of rain or fair weather. Successful social conduct brings one into a field within which a consciousness of one’s own attitudes helps toward the control of the conduct of others.

Since human (trans)action is social (trans)action, individuals constantly change each other and mutually constitute one another. Belief, doubt, inquiry, values and preferences are the result of the exchange among individuals. That being so, individual habits depend on social ones. Indeed, the self depends on social habits: "The structure of society lies in these social habits, and only insofar as we can take these social habits into ourselves can we become selves" (Mead 1936, p. 375).

Finally, habits not only are that prior action on which deliberate action builds, but they can be object themselves. Whereas people may not be aware of some habits, they are noticeable, and when acknowledged, they acquire meaning in terms of action. Some, in principle, are open to an individual’s reflection and scrutiny, even as they are performed (Kilpinen 2012). People can be aware of certain habits (e.g. smoking). Since habits may reveal preferences and desires, introspection and regarding habits as objects explains deliberate change (e.g. deciding to quit smoking despite one’s inclination to smoke). Thus, self-scrutiny and self-interaction can shed light on first order preferences (as manifested in habits) and second order ones (as expressed in regarding those habits as objects).

What is more, since individual habits are constitutive of the self, they are the basic structure of life. Moreover, since they are influenced by social habits or customs, the latter are constitutive of social groups or entities (e.g. a family, a church, a corporation, a nation).

Habits can also shed light on social action, social reality and change. This can be elaborated based on the possibility of self-reflection, a product of social transaction. Mead (1934) takes the insights of the dynamics of group life to a person's internal realm and explains reflection with the exchange between the 'me' and the 'I'. The former refers to the habits reflexively acquired, or the generalized other, which are accessible to conscious scrutiny. The latter denotes the anticipatory response to the 'me' and introduces divergence and novel possibilities to the self. Thus, the 'I' enables change, without it the self would be a reflection of social structures. Therefore, this transaction makes possible the change in social habits.

> These others are not just persons in general with minds in general. They are beings with habits, and beings who upon the whole esteem the habits they have, if for no other reason than that, having them, their imagination is thereby limited. The nature of habit is to be assertive, insistent, self-perpetuating. (Dewey 1930, p. 58).

Pragmatism and the transagent

Pragmatic human action, hence, occurs within a continuum from automatic to sophisticated. The point of departure is a tendency towards action in all organism. Then, habits take shape and become the resource of all action enabling this process. Since they can be challenged depending on the circumstances, more deliberate or reflective forms of action emerge to make that indeterminate situation determinate again by dint of inquiry. As a result, all action requires thought but different types of action demand different degrees of reflection. Further, deliberate action does not exist in a void by with the background of habits, which enables it. Dewey (1930, p. 67) posited, "thought which does not exist within ordinary habits lacks means of execution".

Pragmatism's evolutionary and naturalistic insights were built upon by Mead, who "recognized the continuity of all types of behavior–from primitive reflexes, to habits, to reflective intelligence" (Baldwin 1988, p. 39). Consciousness, therefore, is not regarded as exclusive to human beings. Rather, it has a matter of degree ranging from simple feelings to

symbolic awareness and, finally, to reflective awareness. The latter pertains the level reached by humanity (Mead 1925). As a corollary, the mind itself is considered as part of that evolution, lacking any primacy over other behavioral processes (Mead 1932).

Pragmatic transagents are "intelligent, reflective, diversely motivated organisms of habit that can be studied in terms of their objects" (Garcés 2020b). Their intelligence is expressed by examining the objects in their world in a forward-looking manner. The concern with the future consequences is at the heart of the assessment of the connections, associations and causes of their ideas and values. The ultimate goal, thus, is to command the constant change in the world. Humans are reflective since they are able to regard themselves as objects and, by so doing, scrutinize themselves. That assessment includes the examination of their preferences, values and motivations, which include self- as well as other-regarding goals. They are organisms, because they are part of a continuity in nature with an inseparable relationship with the environment they inhabit, best defined as transaction. This transactional unit is characterized by constant and mutual change and constitution. Given that habits are predispositions for action, they are the background on which all action, whether more or less reflective, takes place. Therefore, humans are creatures of habit. Their world, in turn, is an entity of objects since they constitute their reality. Human action is directed only towards or against objects, which are everything there is for the transagent. Hence, they can be studied in terms of objects. Importantly, there is a continuity in action, from impulsive, to habitual, to reflective and the gradient in between them.

Pragmatic Behavior

After the detailed discussion carried out above, this relatively brief section argues in favor of the benefits of settling behavioral economics on pragmatic ground. Certainly, this is not an exhaustive elaboration, but it hopefully is sufficient as a first step in that direction. To that end, the argument deals with the relationship between S1 and impulses as well as habits at the outset, then that between S2 and objects as well as beliefs is addressed. An examination of the notions of choice architecture and transaction follows before tackling reasoning failures, association and fallibility.

Since BE's S1 is constant and automatic it seems to depict the background against which action is carried out. In this sense, it resonates deeply with pragmatism's notion of impulses and habit. For pragmatism, human action occurs in a continuity, therefore it is difficult to

draw a hard line to determine where impulse stops and habit beings. Habit, it ought to be stressed, contrary to its common connotation as repetitive mindless behavior, points to the predispositions or tendencies of individuals to act. This does not require iteration and neither does it necessarily imply absence of cognition. Conversely, it suggests that action is an already ongoing process instead of a chain of discrete (repetitive) acts (Kilpinen 2012). As such, there are more and less reflective habits. At different moments, the latter can be challenged and then conscious, reflective is resorted to in order to further the process.

Action that requires awareness and effort is the realm of BE's S2. This is action directed towards objects, which are anything and everything of which an individual is aware and whose meaning is socially constructed in terms of action. This is usefully depicted by belief and inquiry. Again, in the continuity assumed by pragmatism, it is difficult to find rigid boundary between belief and habit. Indeed, for Mead an object is a plan of action (Blumer 2004; Kuhn and McPartland 1954). As in the case of gestures, the meaning of objects does not refer to something given or intrinsic in the object but it is produced in the manner in which the individual is prepared to act toward it. What is more, an individual can see themselves as a certain kind of person (a parent, a professional, a friend, etc.), regard themselves according to the meaning of that designation and organize action toward themselves in terms of that meaning. Hence, an individual is able to scrutinize their preferences, values, beliefs and, of course, habits.

These dynamics between habitual and creative action can be attested in the 'I' and the 'me', which are also part of a continuity and only analytically differentiated. For Mead, the 'me' is the conventional, habitual individual. This is so because the generalized other is the product of social interaction and reflects that capacity people have to assume the role of others. As such, it feeds on social customs and habits and represents more elaborate action. Thus, the 'me' "is the vehicle of self-regulation and social control" (Baldwin 1986, p. 117). The 'I', in turn, becomes the source of innovative responses that challenge convention and habitual patterns of conduct. This is explained by the fact that the 'I' reflects the organism's tendency to act, the source of spontaneity and, thus, less elaborate action. It is the "I", therefore, that enables the breaking of convention and allows for the differentiation of individuals from the group (Baldwin 1986).

Hence, pragmatism's dialogical self seems to very roughly approximate BE's systems. While the 'me' (in charge of self-control) seems to chime with S2 (representing social control), the 'I" (the tendency to act) resonates with S1 (responsible for impulsive action). Further, each responds to one another. That is, in self-interaction, once an action occurs (often only partially), it can be evaluated, manipulated and changed to direct further prospective action, at least to a certain extent[7]. Similarly, as above, this means that the act has a course and is self-directed. The former implies that the act it takes place over time, the latter entails the process of noting an object, considering alternative courses of action, and making choices. The implication is threefold: i) the inclusion of the self-as-process turns the human act into an activity that is constructed by the individual (not only a response to external stimuli); ii) that inclusion also means that the elements of the act, such as motivations, goals, perceptions of objects, plans of action, are intertwined with the act and are not discrete units attached to the act; and, iii) the inclusion highlights the construction of the act as a process in and of it self, irreducible to other factors (Blumer 2004). In this sense, the self as process foregrounds the self in human action, the self as object emphasizes the self as part of what is meaningful for human beings.

This account also contributes to explain human fallibility and reasoning failures. This can be done through pragmatism's primitive fact of association. In the case of human beings, association leads to the creation of a community. This goes the physical domain and encompasses meanings, leading to beliefs but also values and morals.

> Associated or joint activity is a condition of the creation of a community. But association itself is physical and organic, while communal life is moral, that is emotionally, intellectually, consciously sustained. Human beings combine in behavior as directly and unconsciously as do atoms, stellar masses and cells; as directly and unknowingly as they divide and repel (Dewey, 1946, p. 151).

Since action is social action, problems (indeterminate situations) are social problems, and solutions (determinate situations) are social as well. Agents within communities perceive a situation as indeterminate and engage in inquiry in order to make it determinate. That being so, this inquiry is a shared collective one. In this process, if shared belief is to be generated to

[7] The correspondence between action and guidance may not be entirely accurate since there is no complete control over the 'I'. This is so because one can note or be aware of the 'I' only once it has begun to express itself through action.

make the situation determinate, stakeholders are to be involved. Simply put, what makes a situation indeterminate or determinate, what arises doubt or belief, is socially constructed. Such action is referred to as conjoint action. Dewey (1946, pp. 84-85) states:

> Conjoint, combined, associated action is a universal trait of the behavior of things. Such action has results. Some of the results of human collective action are perceived, that is, they are noted in such ways that they are taken account of. Then there arise purposes, plans, measures and means, to secure consequences which are liked and eliminate those which are found obnoxious. Thus perception generates a common interest; that is, those affected by the consequences are perforce concerned in conduct of all those who along with themselves share in bringing about the results.

Moreover, because individuals engage in transaction, their action is always situated. That is, the context in inherently part of their action. Individuals do not approach objects in their environment empty-minded but with theories, preferences, interests and even imagination. Therefore, the meanings given to objects depends on that background, which is likely to differ from individual to individual in light of their distinct experiences. Accordingly, it is as inherent to statements about reality and the world as empirical evidence is (Khalil 2004). Further, because of this transaction there can neither be an object without a subject nor a belief without the environment (Khalil 2004).

That transaction can lead to suboptimal outcomes. The individual's theories, values, and imagination, which are influenced by social ones, employed in inquiry may prove to be limited and inadequate to further action permanently. In fact, because all individuals differ in that wide array of aspects, they are most likely to be able to advance action only temporarily. Certainly, there is no embarrassment in this, sufficiency rather than optimality is what actually guides human beings' behavior. Once a belief or habit proves not to be insufficient to guide action, then the settlement is dislodged, raising doubt and, subsequently, inquiry to further action anew.

The above notwithstanding, although inquiry may lead to action in the short-term, this may imply a trade-off with the long-term. This is exemplified by bad habits (from rather harmless ones like nail biting to rather detrimental ones like stress eating and smoking). That is, human fallibility is pervasive and inescapable. That is why inquiry settle the issue for the time being

only. Once there are good reasons to break that settlement, inquiry starts again. Those reasons can be inter alia because of the emergence of new objects (e.g. the discovery of an illness or a virus such as COVID-19), a change in the meaning of objects (as in the case of the meaning of nature due to climate change). The appearance of objects suggests the relevance that the environment and the changes therein. The modification of meanings denotes the significance of the role of the individual, their capacities, preferences and knowledge, as well as the changes in them.

Consequently, indeterminate and determinate situations depend on personal attributes as well as contextual properties. Whereas the former underscores the role of internal limitations in reasoning failures, the latter highlights the role of BE's choice architecture.

Conclusions

By studying how people actually behave, BE has made a considerable contribution to the study of human agency and the role of rationality. Its account of the systematic divergences from the conventional rational model has greatly informed research and practice in multiple fields. The elaboration of this approach with the introduction of S1 and S2 has proven insightful. While S1 is automatic, tackling effortless and unconscious action, S2 takes over when the reflection and effortful action is required. They interact, the former feeding suggestions to the latter and the latter overruling the former only when deemed necessary. Although this entails an efficient division of labor, this does not guarantee optimal outcomes. Reasoning failures, pertaining both systems, can ensue. Their sources can be categorized in limitation of four kids: technical ability, imagination, objectivity, and will-power.

To ground these momentous insights philosophically, this paper has argued in favor of classical pragmatism. Its attention to action as its point of departure and ultimate concern can provide a promising basis on which to build BE's work. It offers an evolutionary explanation of how we act accounting for the continuity of behavior including habitual and reflective action. Habits, as predispositions for action, depict the former and actions directed towards objects, which are everything an individual notices, capture the latter. The meaning of objects is socially constructed in terms of action, so all action is social. Objects make up people's environment which, together with individuals, constitute a single unit that is in constant exchange referred to as transaction.

In their introspection, people act towards the self, an internal interaction takes place between the 'I' and the 'me'. This is a fluid process in which the human organism is acting (denoted as the 'I') and whose action is being reflected upon (denoted as the 'Me'). While the 'I' can be understood of the disposition of the organism to act, the expression of an impulse, the 'Me' can be considered the view of the generalized other. In other words, the "I" is the source of innovative actions and the "me" is what enables self-regulation and social control. That being so, pragmatism's dialogical self seems to very roughly resonate with BE's systems. While the 'me' seems to chime with S2, the 'I" approximates S1. Consequently, pragmatism can provide an account of the two systems. Additionally, this dialogical self encompasses the personal or internal features leading to sub-optimal outcomes. Transaction in the shape of impulses, habits or actions towards objects, in turn, contribute to providing an account of the role of context, i.e. BE's choice architecture, in human action. This points to interesting directions in terms of the philosophy of science and as well as for experimental and policy analyses.

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