

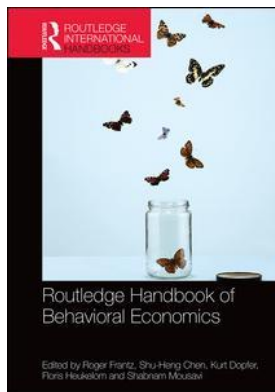
This article was downloaded by: 10.2.97.136

On: 22 Mar 2023

Access details: *subscription number*

Publisher: *Routledge*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: 5 Howick Place, London SW1P 1WG, UK



Routledge Handbook of Behavioral Economics

Roger Frantz, Shu-Heng Chen, Kurt Dopfer, Floris Heukelom, Shabnam Mousavi

Behavioural Rules

Publication details

<https://test.routledgehandbooks.com/doi/10.4324/9781315743479.ch11>

Georg Blind

Published online on: 27 Jul 2016

How to cite :- Georg Blind. 27 Jul 2016, *Behavioural Rules from:* Routledge Handbook of Behavioral Economics Routledge

Accessed on: 22 Mar 2023

<https://test.routledgehandbooks.com/doi/10.4324/9781315743479.ch11>

PLEASE SCROLL DOWN FOR DOCUMENT

Full terms and conditions of use: <https://test.routledgehandbooks.com/legal-notices/terms>

This Document PDF may be used for research, teaching and private study purposes. Any substantial or systematic reproductions, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The publisher shall not be liable for an loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

11

BEHAVIOURAL RULES

Veblen, Nelson–Winter, Ostrom and beyond

*Georg Blind***Introduction**

Any economist will agree with the definition of the discipline as the study of the behaviour of agents under conditions of scarcity. Anything beyond this common denominator, however, is subject to debate. Opinions start to diverge when economic behaviour is to be explained. For long and for many, the behaviour of economic agents has been understood as being driven by the pursuit of self-interest and as being guided by the rule of law.

While rules were seen as simply being decreed by the “benevolent dictator” in neoclassical economics, more recent scholarship inquires how legislation comes about (Brennan and Buchanan 1985). A common understanding of the term rule is equivalent to “law and regulation”. The analytical reach of such reasoning thus remains limited to rules that control the *social* behaviour of agents. In its most general reading, however, a rule represents a condition–action statement linking a condition to a specific outcome. Accepting this definition, rules may equally well govern *individual* behaviour of agents.

Orthodox economists typically have little interest in rules governing individual agent behaviour, for the simple reason that the pursuit of self-interest continues to serve the purpose of such rule. Individual agent behaviour would be thus be controlled by a single rule that reads: “for deciding upon one’s economic behaviour, that is, one’s operations, consider your self-interest”.

In the course of the last decades, concerns have been rising whether one single rule may actually suffice to explain individual behaviour of economic man in a meaningful way. Criticism to the single-rule approach has two predominant sources: theoretical objections and empirical counter-evidence. Concentrating on the latter, the remainder of this chapter discusses a selection of milestones in the development of a multi-rule approach for explaining individual agent behaviour. Sections 2 to 4 document the “reasoning about rules” that can be found in the works of Veblen, Ostrom and Nelson–Winter. Section 5 then shows how their understanding of rules can serve as building blocks for a general multi-rule approach that promises three important analytical merits: heterogeneous agents (between-heterogeneity), heterogeneous behaviour in individual agents (within-heterogeneity), and change in the behaviour of agents.

Thorstein Veblen: determinism of economic behaviour

“The whole canon of his work and thought was beyond economics and fell primarily in the realm of cultural anthropology” (Ault and Ekelund 1988: 431). This assessment of Veblen’s work points to the “nature of man” as being centre-stage in Veblenian analysis. While being known best for his analysis of institutions, his works actually build on a distinct concept of individual behaviour. Veblen sees the economic agent as “a coherent structure of propensities and habits” (1919b: 74). By the term “habit”, he denotes what contemporary scholarship considers a behavioural rule. Importantly, his analysis of institutions equally builds on behavioural rules. As Veblen puts it, “institutions are an outgrowth of habit” (1909: 628).

Heterogeneous habits as evolving patterns of behaviour

Veblen figures as one of the earliest opponents of a single-rule system in economics. For orthodox economics, he identifies “a preconception of normality”, that is, an “archaic habit of thought” to reduce “facts and events to terms of fundamental truth” and to make them “square with the requirements of definitive normality” (1898b: 378–9). In essence, “definitive normality” precludes the very existence of heterogeneity: “the human material with which the inquiry is concerned is conceived [...] in terms of a passive and substantially inert and immutably given human nature” (1898b: 389).

Criticising this “state of economic science”, Veblen observes “the apparatus being invested with a tendency to equilibrium at the normal, and the theory being a formulation of the conditions under which this putative equilibrium supervenes” (1898b: 383). Significantly, for Veblen, “the scheme arrived at is spiritually binding on the behaviour of the phenomena contemplated” (ibid: 383–4). Accordingly, “Features of the process that do not lend themselves to interpretation of the formula are abnormal cases [...] and are neatly avoided” (ibid: 384).

In contrast, Veblen himself understands of such “abnormal” features as representing entirely natural elements of a developmental course in the economic system. In his view, “each society and each stage of society had its own set of habits” (Ault and Ekelund 1988: 435). This qualifies behaviour as being heterogeneous not only in a historical, but also in a spatial dimension. What is more, the term “set” hints at Veblen’s understanding of economic man as a “multi-rule agent”. This worldview of Veblen’s, obviously, originates from his fortunate reasoning as a “cultural anthropologist”.

Veblen’s recognition of a multitude of behavioural rules becomes even more apparent in one of his early qualitative empirical studies on “the instinct of workmanship” (1898a). Veblen starts his argument by pointing out a central axiom of orthodox economics: “men desire above all things to get the goods produced by labour and to avoid the labour by which the goods are produced” (1898a: 187). From the observation that many individuals work beyond the degree required to secure their livelihood, Veblen derives the existence of the said “instinct of workmanship”. As a behavioural rule, it rivals the rule of “status” followed by members of what Veblen later identifies as a “leisure class” in his *opus magnum* (1899b).

Institutions as groups with shared rules

In Veblen’s understanding, the very same “leisure class” represents an institution (Veblen 1899b: 22) and he equally counts “ownership” and “money” as institutions (1899b: ibid, 1899a: 405). From this, it becomes obvious that institutions in a Veblenian reading are not restricted to formal organisations. For Veblen, an institution refers to the sharing of a specific rule by a group of

stable size where the rule may be considered “the dominant economic and legal feature of the community’s life” (1899b: 117). In the case of the leisure class, “consumption for status” is the shared behavioural rule, for ownership the social rule of “respecting property”, and for (fiat) money the cognitive rule of “trade goods against paper”. In essence, Veblen’s understanding of institutions follows a population approach.

Evolution of rules as innovation and adaptation

A witness of the industrial revolution, Veblen was sceptical about the contemporary neglect of technological progress in economic theory: to assume that “the state of the arts remains unchanged, [...] is [...] an exclusion of the main fact” (Veblen 1899a: 421–2). Veblen also specifies the “locus of change” in the process of evolution: “The physical properties of the materials accessible to man are constants: it is the human agent that changes—his insight and his appreciation of what these things can be used for is what develops” (1898b: 387–8).

In Veblen’s understanding, behavioural rules in large part are “handed down from the past” (1899b: 191). During this process, however, rules may become subject to change through adaptation, and such change potentially causes further change:

The growth of culture is a cumulative sequence of habituation, and the ways and means of it are the habitual response of human nature to exigencies that vary incontinently, cumulatively, but with something of a consistent sequence in the cumulative variations that so go forward—incontinently, because each new move creates a new situation which induces a further new variation in the habitual manner of response.

(1909: 628)

Veblen only hints at some of the mechanisms through which rules are changing:

Not only is the individual’s conduct [...] directed by his habitual relations to his fellows in the group, but these relations [...] vary [...]. The wants and desires, the end and aim, the ways and means, the amplitude and drift of the individual’s conduct are [...] of a highly complex and wholly unstable character.

(1909: 629)

The behaviour of agents, thus, is seen to depend on the social context, which—in turn—is subject to change. This interdependency lies at the heart of what Veblen sees as a path-dependent process:

The economic life history of the individual is a cumulative process of adaptation of means to ends that cumulatively change as the process goes on, both the agent and his environment being at any point the outcome of the past process.

(1898b: 391)

Limitations

Veblen’s work has been criticised for being “an economics [...] without theory” (Langlois 1986: 5). While he employs the concept of rules (habits) and rule populations (institutions) in a consistent way, it is true that he did not spend much effort on generalising his findings. Consequently,

Veblen's works may be disappointing to the reader looking for explicit theoretical and analytical guidance.

In spite of these limitations, contemporary rule economics is much indebted to Veblen in two respects. First, Veblen's voice was among the early scholarship questioning the appropriateness of single-rule theorising. Through his qualitative empirical work on the development of societies, he impressively documented the emergence of a behavioural rule which has largely replaced "profit maximisation" in growing layers of society: status. Secondly, his analyses of change in individual agents and of the historical development of societies represent important groundwork for the endogenisation of the processes of rule adoption and diffusion.

Nelson–Winter routines building on behavioural rules

In their own words, Nelson–Winter's "real concern is with organisations" (1982: 72). And indeed these scholars are known for their groundbreaking research on the behaviour of organisations. Importantly, however, their understanding of organisational routines builds on an analogy to individual behaviour:

We propose that individual skills are the analogue of organisational routines, and that an understanding of the role that routinisation plays in organisational functioning is therefore obtainable by considering the role of skills in individual functioning.

(1982: 73; *similar* 2002: 30)

Nelson–Winter's use of the term "skill" is particular and slightly differs from its common use: "skills [are] considered as units of purposive behaviour" and are "programmatically", in the sense that they involve specific procedures. This exactly corresponds to the definition of "behavioural rules" in current discourse.

To understand why Nelson–Winter only sparsely and rather accidentally¹ use the term "rule" for designating recurring patterns of individual behaviour, reflecting on their situation in the early 1980s is helpful. As is the case with every new theorising, Nelson–Winter were carefully developing their language. In fact, "rule" was not even a candidate in their list of alternative denominations: "plan", "script", "habit",² "routine" and "program" (1982: 74). At that time, the term "rule" had two predominant uses: as a near equivalent to "law and regulation" in the studies of constitutional political economy (see, for instance, Brennan and Buchanan 1985), and for designating the process quality of decisions through the compound noun of "decision rule". In fact, Nelson–Winter conform to the latter use in their discussion of evolutionary modelling and growth theory, and to the former when discussing policy.

Multi-dimensional heterogeneity in behavioural rules

Drawing on Alchian (1950), Nelson–Winter see *imitation* as one important route for the adoption of behavioural rules. They hold that in the presence of tacit knowledge, the effectiveness of *instruction* will be significantly limited (1982: 77). Recurring operations based on behavioural rules then enable their retention, or, in Nelson–Winter's more succinct words, prevents the skill from becoming "rusty" (1982: 124). The set of skills, that is, of behavioural rules, which an agent has adopted and retains for operations, is defined in Nelson–Winter as the "repertoire" of an individual (1982: 98). Naturally, every agent acquires an individual repertoire which leads to acknowledging "between-agent" heterogeneity.

With Michael Polanyi, Nelson–Winter share the view that behavioural rules might be followed subconsciously (1982: 78). Nelson–Winter even argue that “the choice among behaviour options that takes place in the exercise of a skill typically involves no deliberation and it is a constituent of the capability that the skill represents” (1982: 82). These arguments are in line with the empirical findings from research on consumers who frequently have difficulty in explaining their choices. Nelson–Winter see behavioural rules as being “context-dependent in various ways” and hold that their effectiveness “is particularly dependent upon detailed features of the social context” (1982: 87). They also observe that the use of rules for operations depends on a spatial dimension: “It is the differences between the environment in which a skill (and associated terminology) is developed and a relatively novel environment in which it is exercised that highlight its operational (and semantic) ambiguities” (1982: 91). In essence, this implies two more dimensions of heterogeneity: rules chosen for operations differ between agents in different environments, and even *within* individual agents depending on the respective situational social context.

Nelson–Winter then propose that the aggregate of the skills of individuals makes for organisational capabilities. This, they argue, poses important coordination problems (1982: 124–6). Organisations are countering these by using control tools such as “selection, modification, monitoring and adaptation” (1982: 114). As will be discussed later, a contemporary approach to understanding these control tools relies on conceptualising them as *social rules*.

Dynamics

In contrast to their initial conceptualisation of organisational routines that strongly builds on individual skills, Nelson–Winter do not draw on behavioural rules for theorising about evolution. In their works, the modelling of innovation refers entirely to organisational routines aimed at achieving technological progress (see 1982: 14; 2002). In Nelson–Winter’s view, innovation is one possible reaction to “changed market conditions”, with changes in prices serving as their predominant example (1975: 163; 1982), the other possible reaction being “routinised response”. For describing “the variety of processes, mostly intentional but some not, by which rule changes take place”, Nelson–Winter use the term “search” (1982: 171). In their view, search is equally conducted according to rules. As I will discuss later, such “innovation rules” are conceived as second order rules in contemporary rule-based economics. With Schumpeter, Nelson–Winter hold that “reliable routines of well-understood scope provide the best components for new combinations” (1982: 131).

Limitations

Nelson–Winter’s reasoning about rule innovation is strongly guided by two concerns: the intent to position their theorising against orthodoxy; and their focus on analysing the evolution of rules in organisations. Consequently, their work contains no substantial cues about the processes of change in rules retained by individuals such as the behavioural rules discussed here. In essence, behavioural rules in Nelson–Winter merely serve as a building block for their reasoning about organisational routines in terms of decision rules.

Regardless of these limitations and of some definitional issues, Nelson–Winter’s concept of “skills” contains important clues for our understanding of behavioural rules. Firstly, behavioural rules are seen as units of programmatic behaviour that consciously and subconsciously guide economic operations. Secondly, in rule-based economic theory, there is multi-dimensional heterogeneity: the *repertoire* of rules retained differs between agents, and the

choice of rules for operations by an individual agent differs depending on the social context and a spatial dimension. And most importantly, the *repertoire* of individual agents is subject to change, that is, it evolves.

Elinor Ostrom's conceptual legacy

Elinor Ostrom is best known for her analyses of common-pool resources. In her *opus magnum* *Governing the Commons* Ostrom uses case studies as “an empirical basis for learning more about the effects of institutions on behaviours” (1990: xv) and aims to provide “more relevant theories of institutional change for policy analysis” (1990: 191). When it comes to criticising economic orthodoxy, Ostrom is less outspoken than Nelson–Winter—let alone Veblen—typically giving implicit reference only: “Where behaviour and outcomes are substantially different from the predicted, are there behavioural regularities that can be drawn upon in the development of improved theories?” (Ostrom, Gardner et al. 1994: jacket).

Definitions

In her 1986 presidential address to the Public Choice Society, Ostrom noted: “Rules, as I wish to use the term, are potentially linguistic terms that refer to prescriptions” (1986: 5). With policy design as one of her main research subjects, it is not surprising that her understanding of rules at that time closely corresponds to that of scholars in constitutional political economy. In her later writings, however, Ostrom pledges for a broad application of the concept of rules:

Contemporary scholarship tends to focus on rules that are formally prescribed by a national government, but we must understand the process of rule change at a community level as well, even when the rules-in-use are not formally written by those using them to structure their daily interactions.

(2011: 322)

Such broad understanding of the rules has important consequences for empirical research: “the rules affecting much of our behaviour are relatively invisible, which challenges our ability to identify and measure them” (2011: 318). From this follows the need for extensive qualitative fieldwork in inquiries of complex rule systems: “One needs to examine a full rule configuration, rather than a single rule” (Ostrom et al. 1994: 77).

With Veblen Ostrom shares the understanding of institutions as resulting from rules “commonly known and used by a set of participants to order repetitive, interdependent relationships” (Ostrom 1986: 5). Thus, by referring to “sets of participants”, Ostrom implicitly endorses Veblen's population approach to the definition of institutions.

Ostrom's rules are for organising individuals

Arguably owing to her research focus on local communities, Ostrom holds that rules always exist for a social purpose: “All rules are the result of [...] efforts to achieve order and predictability among humans” (1994: 38). In Ostrom's view, behavioural rules are thus always pertaining to the social behaviour of agents. Rules exist for the plain purpose of defining a system design. In these designs, social behaviour features as the *object* of rules. Accordingly, rules pertaining to individual agent behaviour as a *subject* are not considered in Ostrom's approach.

Her empirically developed framework for the analysis of rule systems consists of seven “classes” (1994: chapter 2), or “types” (2011: 323–4) of rules:

- position rules describing conditions and rights for a position in a social system,
- boundary rules regulating entry to and exit from the system,
- choice rules prescribing choice conditions for specific positions,
- aggregation rules specifying voting processes,
- information rules indicating transparency levels for specific positions,
- pay-off rules controlling the distribution of rents, and
- scope rules specifying quantitative limitations of operations where monitoring of actions is difficult.

With all these types of rules referring to the agent as an object, Ostrom’s understanding of rules closely resembles Nelson–Winter’s organisational routines. As is shown through her empirical studies of common-pool resource systems, this framework is powerful for mapping the functioning of complex social organisations.

Ostrom’s agent: implicitly heterogeneous and individually rational

Ostrom does not explicitly argue that agents in a community may be heterogeneous. However, she implicitly acknowledges analytically significant differences between agents. This becomes obvious where she states the necessity to distinguish “subsets of appropriators”, that is, of agents in her empirical analyses of common-pool resource systems (1990: 210).

In a similarly implicit manner, Ostrom hints at differences in the set of rules adopted by individual agents where she comments on some of the difficulties in her empirical work: “Rule following or conforming actions are not as predictable as biological or physical behaviour explained by physical laws” (1994: 40).

The only type of heterogeneity that Ostrom explicitly acknowledges refers to a spatial dimension. Thus subscribing to a localist approach (see also Blind 2012a), Ostrom calls for “specialized rules that apply to localities” (1990: 214). Note that this type of heterogeneity again does not refer to individual agents but to agent communities.

In contrast to Nelson–Winter, Ostrom sees agents as being entirely conscious of their rules and rule-following. In her view, this results from a need to “formulate” rules (1994: 40). If agents eventually act unconsciously, then they follow what Ostrom refers to as “internalised norms” (1990: 193). In Ostrom’s view, however, both cases are still in line with “a general conception of rational action” (1990: *ibid*).

Ostrom’s “defence of rationality” continues in her interpretation of yet another empirical observation. Studying the development of rule systems she observes that the choice criterion in many agents is sufficiency, rather than optimality: “if individuals find rules that work relatively well, they may have little motivation to continue the costly process of searching for rules that will work even better” (1990: 211).

Evolution of rule system as a semi-conscious search process

In Ostrom’s view, the need for theorising about change in rule systems arises from the simple observation that “rules can be changed while physical [...] laws cannot” (1986: 6). With Nelson–Winter, Ostrom shares a critical stance where it comes to explaining change in rule systems by means of orthodox theory:

Profit maximisation is a useful theoretical tool for predicting behaviour in static market situations; it does not enable a theorist to predict which firms are most likely to survive or to predict innovative technological or institutional changes [...] It is thus not a judicious theoretical strategy to presume that choices about rules are made to maximise some single observable variable.

(Ostrom 1990: 207)

Ostrom's opinionated statement builds on her general understanding of rule configurations as complex systems with feedback mechanisms: "Change in one rule affects the working of others" (1994: 77). As another feature of such complexity, Ostrom points to different layers of rules active in a configuration: "A theory of self-organisation and self-governance of smaller units within larger political systems must overtly take the activities of surrounding political systems into account in explaining behaviour and outcomes" (1990: 190).

In conceptualising the potential origins of change in rule systems, Ostrom relaxes the "consciousness condition" that she upholds for rule action: "Rule changes may result from self-conscious choice or may evolve over time" (1994: 77). In her late writings one finds explicit notion of change in rule configurations "as a result of many self-conscious or unconscious mechanisms" (2011: 325). Notably, the latter are seen to "include forgetting" (ibid: 326).

In the course of change in rule configurations, Ostrom identifies "variables that are most likely to affect decisions about continuing or changing rules", citing "expected benefits, expected costs, internalised norms, and discount rates" (1990: 192–3). The first two of these obviously reduce to the net benefit of a discrete change in rules and are entirely operational. Equally, discount rates reflect a single cognitive rule, namely the rule of preferring current over future pay-offs. From the perspective of contemporary behavioural rule economics, her notion of "internalised norms" is key. These norms represent cognitive rules of normative content that govern the individual behaviour of agents. For the adoption and retention of this class of rules Ostrom identifies "internal psychic and external social cost" (1990: 206) as the main influencing factors. Unfortunately, Ostrom only devotes but a single page on this in the exposition of her inductively derived theoretical framework (1990: chapter 6).

Limitations

Ostrom's inductively derived theoretical framework is only general to the analysis of common-pool resource systems. While it may be extended to cover other systems of social rules as well, it remains highly specific in its contribution to a rule-based economics. In essence, Ostrom's work is essential to the scholar concerned with the design and enforcement of rules for governing the *social* behaviour of agents. It is, however, much less instructive in explaining the evolution of rules.³ Also, Ostrom's work hardly contributes to understanding the rules guiding agents' *individual* behaviour.

Adding to her empirical focus on common-pool resource systems, one can identify Ostrom's preoccupation with game-theoretic argument as explaining the origin of these limitations. Game theory—for all its merits—hardly allows for quality and heterogeneity to be accommodated. It is only in her reasoning about rule choice and rule innovation that Ostrom briefly departs from the track of game theory. In essence, this means that most of her work remains loyal to the single (behavioural) rule dogma of orthodox economics: self-interest.⁴

In spite of these limitations, her work represents a groundbreaking step towards a theory of rule-based economics. First, because she has demonstrated how "reasoning with rules" allows for obtaining superior empirical results. Second, and likely even more importantly, because her work

delivers strong argument supporting the cause of heterogeneity in economic theorising. This becomes evident where she argues that a rule-based economics should strive for “a framework rather than a model [...] because one cannot encompass (at least with current methods) this degree of complexity within a single model” (1990: 214).

Reflections and synthesis

One finds hardly any explicit reference to Veblenian thought in the works of Nelson–Winter and Ostrom. While the former derive much inspiration from Schumpeter’s writings, their *opus magnum* does not mention Veblen a single time (see Fagerberg 2003: 128).⁵ Equally, Ostrom’s *Governing the Commons* does not relate to Veblen at all. This finding also extends to both Nelson and Winter’s and Ostrom’s other works.

For understanding such absence of explicit references, it may help to reflect on the intentions of Nelson–Winter and Ostrom. Through their corresponding works, they aimed at diffusing radically new ideas into a wider audience in economics. In pursuing this objective, they have avoided overtly making reference to scholarship discredited in the view of many economists, such as Veblen’s.⁶ Put simply, these authors may have consciously avoided referencing Veblen (see also endnote 2) for the sake of propagating their own ideas more effectively.

However, the absence of such manifest linkages has little—if any—significance for the existence of implicit commonalities. At closer inspection, one finds important linkages between the works of Veblen and those of Nelson–Winter and Ostrom. Nelson–Winter share with Veblen two fundamental convictions. First, they acknowledge Veblen’s view that economic agents act according to a multitude of rules in contrast to the singular rule world purported in much of received economic thinking. Second, they share Veblen’s understanding that rules do not represent a *fixum*, but that they evolve. Ostrom, in turn, endorses Veblen’s understanding of institutions as a community of rule followers. Thus, commonalities refer to the heterogeneity of agents and agency, of the historicity of economic development and of institutions as rule populations.

As another observation from the study of the works of Nelson–Winter and Ostrom, cross-references between these contemporaries are scarce and of a rather general nature. This absence may be seen as a “side-effect” of the strong focus on their respective research areas: large organisations (Nelson–Winter), and resource governance systems (Ostrom). As a consequence of such focus on very complex phenomena and the analytical depth of their models, producing an integrated theoretical approach to the study of rules governing economic behaviour in general was but a secondary objective to them.

Late in her career, Elinor Ostrom addressed the need for such generalisation: “If we are to make headway in understanding how rule systems change, and develop a general theory of institutional change, we must widen our view and study a much more diverse set of rule systems” (2011: 335). For furthering that purpose, she designates Dopfer and colleagues’ deductively derived theoretical framework (Dopfer 2001; Dopfer 2004; Dopfer 2005; Dopfer and Potts 2008; Dopfer 2012) as a “very interesting approach” (2011: 333).

A unified rule taxonomy

Continuing the quest for a common terminology in rule-based economics (see Ostrom 1986: 4) Dopfer has developed a unified concept of rules. His rule-based approach (RBA), Dopfer argues, may be referred to as a “Schumpeter–Veblen program” (Dopfer 2012: 157) and unites the essentials of the works introduced here.

The RBA proposes a taxonomy of four classes of rules (Dopfer and Potts 2008: 6–10): cognitive, behavioural, social and technical. As a mutually exclusive and collectively exhaustive concept, this taxonomy allows for fully capturing the diversity of economic phenomena and helps to resolve definitional issues such as Veblen’s “mental habits” (see 1898b; 1919a: 40), Nelson–Winter’s “decision rules” and Ostrom’s distinction of strategies from rules (2011: 321–2), which may all be more aptly understood of as cognitive rules. In a similar vein, Nelson–Winter’s “organisational routines” and “control mechanisms” as well as Ostrom’s “information rules” (2011: table 2), pertain to the category of social rules. And prominently, Nelson–Winter’s skills and Ostrom’s “internalised norms” correspond to the behavioural rules discussed here. Appendix 11.1 specifies these commonalities.

The RBA captures evolution as a diffusion process of a novel rule during which an increasing number of agents adopts that novel rule; potentially at the expense of a pre-existing rule. In that context, Veblen’s understanding of a “leisure class” and of “ownership” as institutions (Veblen 1899b: 22), mirrors the RBA reading of institutions as rule populations with stable adoption rates. To provide another example, consider the problem of the reach of rules coded in law from the introduction to this article. By the theoretical concept of populations of agents retaining a rule, the RBA conceives of “abiding to law” as a rule in itself.⁷

Adding to the distinction of rule classes, the RBA introduces *three orders of rules*, similar but fully general to Nelson–Winter’s hierarchy of rules (1982: 18). They help to understand the different ways in which rules are active in the economic system. At the centre of orders, “1st order operational rules” provide the direct base for operations and represent a direct equivalent to Ostrom’s earlier “operational rules” (Ostrom 1990: 50) including her “choice”, “position” and “pay-off rules” (Ostrom and Basurto 2011: table 2). In turn, rules controlling the overall functioning of an economy are designated as “0th order constitutive rules”. They represent the constituent basis on which all economic activity takes place and define the “opportunity space of permissible 1st order operations” (Dopfer and Potts 2008: 9). In Ostrom’s writings, this order of rules is referred to as “constitutional choice rules” (1990: 50) and as “boundary rules” (2011: table 2). Finally, there are rules pertaining to change and innovation in a social system. Nelson and Winter refer to these as “search rules” (1982: 20). In Ostrom, we find examples of this order of rules where she refers to “collective choice rules” (1990: 50). The RBA restates these mechanisms in a more general terminology by denoting as “2nd order mechanism rules” any rule that impacts on the propensity to create, adopt and retain new rules. Appendix 11.2 summarises these correspondences.

Beyond this helpful unification of terminology, the RBA generalises an important number of further phenomena. For instance, it makes explicit the distinction between rules and corresponding operations that is still partly implicit in both Nelson–Winter’s and in Ostrom’s writings. It also fully generalises processes of change and employs heterogeneous agents open to learning. It thus represents a fully general framework to “the study of the evolution of human societies” as envisioned by Ostrom (2011: 333).

Back to the field: the RBA in empirical research

As the RBA itself does not include practical guidance on how it can be used for developing hypotheses in empirical research, and on how the analysis can be operationalised, I have elsewhere developed a corresponding methodological template (Blind and Pyka 2014). We propose a four-stage methodology that starts with setting a response rule population, an investigation period (owing to historic time), as well as a spatial delimitation (owing to the susceptibility of agents to the social context).

In the second stage, we establish the ensemble of rules potentially influencing the size of the response rule population that Ostrom refers to as “rule configuration”. To identify these rules, we suggest that the extant theoretical work in economics should be connected to that of other disciplines, and to include insights derived from interviews of experts, as well as of rule adopters and rejecters.

The third stage commits to the extraction of those rules from the configuration that have effectively caused change in the response rule populations. In essence, this represents an *ex ante* significance test. To effect this test, we propose to assess all rules in the configuration against two criteria for identifying instances of change during the investigation period: (a) change in the size of the respective rule populations, and (b) change in the strength of influence on the response rule population. Rules, for which either or both criteria are different from zero, qualify as part of a changing sub-system, that is, as part of the causal core of the model of change.

Finally, in the fourth stage we develop and test corresponding hypotheses pertaining to causal relationships between factor rules and the responses. To do so, we suggest that the subgroups of agents should be distinguished in the response rule population, an approach that has already been successfully employed by Ostrom.

A number of recent empirical investigations have built their inquiries on Dopfer and Potts’ RBA (Blind 2012b; Grebel 2013; Wäckerle 2013). For example, in a study of entrepreneurial attitudes in contemporary Japan (Blind 2012b), the RBA was instrumental for conceiving of such attitudes as a 2nd order cognitive rule. Relying on the methodology sketched above, it was also possible to quantitatively evidence the sustained influence of a rule pertaining to the status of self-employment, or in Veblen’s words “employment proper to the several classes” (1899b: 1).

Conclusion and outlook

For a long time, orthodox preconceptions have prevailed as the dominant cognitive rule that has effectively hindered the furthering of economic theory. Veblen was one of the early observers of this phenomenon: “having once been accepted and assimilated as real, though perhaps not as actual, it becomes an effective constituent in the inquirer’s habits of thought, and goes to shape his knowledge of facts” (1899a: 422). The reasoning about behavioural rules in Veblen, Nelson–Winter and Ostrom presented here has documented their respective contributions to the project of liberating economic theory from these preconceptions.

“Diversity and change” may serve as common label for the empirical work of Veblen, Nelson–Winter and Ostrom. Veblen’s stance is representative of this: For him, each society and each stage of society has its own set of habits. Here, the “set of habits” encompasses “diversity”, and the “stages of society” result from “change”. In turn, Nelson–Winter have used firms for an integrated analysis of both phenomena. Arguing that firms have different “search processes”, they posit that change will occur, and that it will occur in diverse ways. Among the three contributions discussed here, it is Ostrom’s work that relies most strongly on empirical observation for (inductive) theoretical reasoning. Employing a less general concept of discrete heterogeneity—through agent subgroups—she arrives at a fully operational framework for dynamic studies of common-pool resource systems. Recently, Dopfer and Potts have achieved systematic synthesis of the main theoretical postulates of Veblen, Nelson–Winter and Ostrom in their *General Theory of Economic Evolution* (Dopfer and Potts 2008).

While Ostrom once argued that “no one can legislate a language for a scientific community” (1986: 5), Dopfer and Potts have offered the heterodox community a common terminology for accommodating the theoretical body of Veblen, Ostrom, Nelson–Winter and Schumpeter. At the same time, the RBA represents what Ostrom had asked for: an analytical framework, rather

than a theory. Combined with an appropriate empirical methodology (e.g., Blind and Pyka 2014), this promises to become an influential device in the adjustment process of some prevailing “preconceptions”, which—as Veblen holds—happens “only tardily and concessively” (1925: 49).

Notes

- 1 Compare, for instance, phrases like “the distinction (and relationship) between a behavioral routine or rule and a particular action” (1982: 42).
- 2 Note the missing citation of Veblen’s corresponding concept.
- 3 The theoretical contribution describing factors likely to enhance rule innovation in terms of “institutional innovativeness” spans less than one page in her *opus magnum* (1990: 211).
- 4 Note how even the adoption of norms (rules guiding individual behaviour) enter her model in terms of “internal psychic and external social cost” (Ostrom 1990: 206).
- 5 In spite of both Veblen and Winter holding a Yale PhD!
- 6 For instance, Lionel Robbins’ 1932 *Essay on the Nature and Significance of Economic Science* contains a representative judgment on Veblen’s work: “In the history of applied Economics, the work of a Jevons, a Menger, a Bowley, has much more claim on our attention than the work of, say, a Schmoller, a Veblen, or a Hamilton. And this is no accident. The fruitful conduct of realistic investigations can only be undertaken by those who have a firm grasp of analytical principle and some notion of what can and what cannot legitimately be expected from activities of this sort” (compare p. 116 of Robbins’ 1945 extended and revised 2nd edition).
- 7 The extent to which this latter rule has been adopted and retained in a society also aptly explains the existence of “institutional voids”.

Bibliography

- Alchian, A. (1950). Uncertainty, evolution, and economic theory. *Journal of Political Economy*, 58, 211–21.
- Ault, R. W. & Ekelund, R. B. (1988). Habits in economic analysis: Veblen and the neoclassicals. *History of Political Economy*, 20(3), 431–45.
- Blind, G. D. (2012a). Culture and Economic Explanation: Economics in the US and Japan. By Donald Katzner. *Journal of East Asian Studies*, 12(1), 150–3.
- Blind, G. D. (2012b). Investigating entrepreneurial spirit with the rule approach: Why self-employment is on the decline in Japan. *Evolutionary and Institutional Economics Review*, 9(1), 183–98.
- Blind, G. & Pyka, A. (2014). The rule approach in evolutionary economics: A methodological template for empirical research. *Journal of Evolutionary Economics*, 24(5), 1085–105.
- Brennan, G. & Buchanan, J. M. (1985). *The Reason of Rules*. Cambridge: Cambridge University Press.
- Dopfer, K. (2001). *Evolutionary economics: Framework for Analysis*. K. Dopfer. *The Evolutionary Foundations of Economics*. Boston, Dordrecht, London: Kluwer Academic, 1–44.
- Dopfer, K. (2004). The economic agent as rule maker and rule user: *Homo Sapiens Oeconomicus*. *Journal of Evolutionary Economics*, 14, 177–95.
- Dopfer, K. (2005). *Evolutionary economics: A theoretical framework*. *The Evolutionary Foundations of Economics*. K. Dopfer. Cambridge: Cambridge University Press, 3–55.
- Dopfer, K. (2012). The origins of meso economics. *Journal of Evolutionary Economics*, 22(1), 133–60.
- Dopfer, K. and Potts, J. (2008). *The General Theory of Economic Evolution*. London: Routledge.
- Fagerberg, J. (2003). Schumpeter and the revival of evolutionary economics: An appraisal of the literature. *Journal of Evolutionary Economics*, 13(2), 125–59.
- Grebel, T. (2013). On the tradeoff between similarity and diversity in the creation of novelty in basic science. *Structural Change and Economic Dynamics*, 27, 66–78.
- Langlois, R. (1986). *The new institutional economics: An introductory essay*. *Economics as a Process: Essays in the New Institutional Economics*. R. Langlois. Cambridge: Cambridge University Press, 1–25.
- Nelson, R. R. & Winter, S. G. (1975). Factor price changes and factor substitution in an evolutionary model. *Bell Journal of Economics*, 6, 466–86.
- Nelson, R. R. and Winter, S. G. (1982). *An Evolutionary Theory of Economic Change*. Cambridge MA: Harvard University Press.
- Nelson, R. R. & Winter, S. G. (2002). Evolutionary theorizing in economics. *Journal of Economic Perspectives*, 16(2), 23–46.

Ostrom, E. (1986). An agenda for the study of institutions. *Public Choice*, 48(1), 3–25.

Ostrom, E. (1990). *Governing the Commons*. Cambridge: Cambridge University Press.

Ostrom, E. and Basurto, X. (2011). Crafting analytical tools to study institutional change. *Journal of Institutional Economics*, 7(3), 317–43.

Ostrom, E., Gardner, R. & Walker, J. (1994). *Rules, games, and common-pool resources*. Ann Arbor: University of Michigan Press.

Veblen, T. (1898a). The instinct of workmanship and the irksomeness of labor. *American Journal of Sociology*, 4(2), 187–201.

Veblen, T. (1898b). Why is economics not an evolutionary science? *Quarterly Journal of Economics*, 12(4), 373–97.

Veblen, T. (1899a). The preconceptions of economic science. *Quarterly Journal of Economics*, 13(4), 396–426.

Veblen, T. (1899b). *The Theory of the Leisure Class: An Economic Study of Institutions*. New York: Macmillan.

Veblen, T. (1909). The limitations of marginal utility. *Journal of Political Economy*, 17(9), 620–36.

Veblen, T. (1919a). The intellectual pre-eminence of Jews in modern Europe. *Political Science Quarterly*, 34(1), 33–42.

Veblen, T. (1919b). Why is economics not an evolutionary science? *The Place of Science in Modern Civilization and Other Essays*. T. Veblen. New York: Russell & Russell: 56–81.

Veblen, T. (1925). Economic theory in the calculable future. *American Economic Review*, 15(1 Suppl.): 48–55.

Wäckerle, M. (2013). On the bottom-up foundations of the banking-macro nexus. *Economics: The Open-Access, Open-Assessment E-Journal*, 7(2013-40), 1–45.

Appendix 11.1: Rule classes in Veblen, Nelson–Winter, Ostrom and Dopfer–Potts

<i>Classes of rules</i>				
	<i>Subject rules</i>		<i>Object rules</i>	
Dopfer–Potts	Cognitive	Behavioural	Social	Technical
Veblen	Mental habits	Instincts (e.g. of workmanship); ideal of conduct	–	–
Nelson–Winter	Decision rules (e.g., investment rule)	Skills	Organisational routines; capabilities; control mechanisms	Technology
Ostrom	Strategies	Internalised norms	Information rules	–

Appendix 11.2: Orders of rules in Veblen, Nelson–Winter, Ostrom and Dopfer–Potts

<i>Orders of rules</i>			
Dopfer–Potts	0th order Constitutional rules	1st order Operational rules	2nd order Mechanism rules
Veblen		Habits	
Nelson–Winter	“Institutional matters” (e.g., property rights, contracts)	Procedure rules	Search rules
Ostrom	Constitutional choice rules	Operational rules; position rules; pay-off rules	Collective choice rules; information rules