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On the role of intentionality in evolutionary economic change

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ABSTRACT

One important challenge to evolutionary economics consists of tackling the paradoxical relationship between purposeful human action and the 'blindness' of evolutionary processes. We argue that the theoretical treatment of intended action is a prerequisite for venturing beyond the phenomenological explanation of evolutionary processes. If so, evolutionary processes are not (at least completely) 'blind'. Of course, not every change in a society is a consequence of purposeful action. However, even if not every action were intended and not every novelty were the consequence of pursuing particular goals, the evolution of individual intentions and pursued goals (micro-level) is a key process in explaining economic change. In this context, an evolutionary efficiency criterion is proposed.

> Carrying out a new plan and acting according to a customary one are things as different as making a road and walking along it. (Schumpeter, 1934 [1983], p. 85)
>
> In the beginning there was a plan. (Loasby, 1999, p. 112)

1. Introduction

One important challenge to evolutionary economics consists of tackling the paradoxical relationship between purposeful human action and the 'blindness' of evolutionary processes. Several recent papers have insisted on these issues. This is the case of Vanberg (2006) discussing Witt's position on the role human intentionality plays in the explanation of evolution in economics. Vanberg has highlighted certain problematic aspects of the relationship between individual intentionality and the 'blind' nature of social evolutionary processes. In Witt's words, 'culture, institutions, technology, and economic activities evolve according to their own regularities' (Witt, 2004, p. 132). Moreover, 'humans have sufficient intelligence and incentives to anticipate and avoid selection effects. The selection metaphor may therefore divert attention from what seems crucially important for economic evolution—the role played by cognition, learning, and growing knowledge' (Witt, 2004, p. 4fn). Because it is driven by intentional human actions, Witt concludes that cultural (and economic) evolution cannot be adequately analyzed in Darwinian terms.[1]

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[1] It is because of the special emphasis a Darwinian approach places on the 'blindness' of variation that Witt (and others) find it inappropriately applied to the socio-economic or cultural realm where intelligent human beings act on insight and pre-meditated plans. However, Hodgson (2004,

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In the presence of systematic feedback between selection and variation, as is the case of economic evolution, the distinction between them, which is a fundamental premise of the neo-Darwinian theory, is no longer valid because purposeful human action introduces an element of 'directional change' (Witt, 2003, p. 29fn). Thus, a paradoxical relationship arises between purposeful action and 'blind' social processes.

Despite Vanberg's attempt to make both positions compatible (Witt's position and neo-Darwinism) and the fact that his analysis is quite close to our own position,[2] the approach proposed in this paper may offer an explanation to the paradox. Contrary to biological evolutionary theories (mainly Darwinian), we agree with Witt in that (socio)economic evolutionary change involves human creativity and cognition and that the driving force of recombinatory search for novelty here is human endeavour (Witt, 1999). This is the case of Schumpeter who stressed the entrepreneur's role in explaining economic dynamics: the entrepreneur is a 'creator personality' (Schumpeter 1932 [2005]) that gives rise to 'new combinations' and, when trying to carry them out, he transforms the economic system.[3] Schumpeter also insisted that major innovation requires a basic motivation or powerful ambition: entrepreneurship requires a tendency towards a transforming goal – which we have called 'innovative intentionality' (Cañibano et al., 2006).

The fact that humans respond in a deliberate and planned manner to the problems they face is perfectly compatible with a view that emphasizes the conjectural nature of their problem-solutions and the open-endedness of the process in which the validity of their conjectural solutions is tested. Thus, new goals may arise, the hierarchy of agents' goals may change, objectives that have been reached may be removed from plans and goals that have not been reached may be replaced with others, etc. This implies learning processes and the emergence of new actions that cannot be explained only as a mere consequence of knowledge acquisition; they produce special connections between new goals and new actions-means. Beliefs, actions, plans, goals, etc. are intentional categories of human action (Searle, 2001).

Although important contributions have been made to the challenge facing economic and social theory through the consideration of intentionality (e.g. Malle et al., 2001; North, 2005; Searle, 1983, 2001; Simon, 1983; Penrose 1959 [2009]) and, therefore, the formulation of goals and plans in the explanation of evolutionary processes, it is our opinion that a more comprehensive theoretical framework is needed. In this paper, we address this problem by applying the concept of *action plan* (Rubio de Urquía, 2005; Encinar and Muñoz, 2006): a theoretical concept that connects micro and meso analytical levels and allows us to consider the role of intentionality in the explanation of human action. Based on this concept, the paper addresses the logical relationships between goals, means, connections and intentionality in order to shed light on the apparently paradoxical relationship between individual intended action and the 'blindness' of economic processes. We argue that the theoretical treatment of intended action is a prerequisite for venturing beyond the phenomenological explanation of evolutionary processes.

The paper shows how intentionality of human action is a key factor for explaining evolutionary processes of economic change. Thus, using the action plan approach, we introduce the role of purposeful action or intentionality. Intentionality becomes apparent in agents' action plans, plans that interact (meso level) and are evaluated by agents in terms of performance. Depending on performance, action plans are revised, renewed, or simply abandoned. Renewed variety fuels emergent orders and intentionality thus shapes emergent orders. If we are right, evolutionary processes are not (at least not totally) blind.

The paper is organized as follows. In Section 2, we present the analytical structure of action from the action plan concept (micro level). This section introduces intentionality. Section 3 shows how the interactive deployment of individual plans is at the base of socioeconomic dynamics (meso level). In this section, we also propose an evolutionary efficiency criterion. The paper finishes with concluding remarks on the role of intentionality and goal dynamics in evolutionary processes.

2. Intentionality and action plans (micro level)

Some of the writings that analyse the foundations of evolutionary economics describe economic evolution as the process of the growth of knowledge (Dopfer and Potts, 2004; Loasby, 1999, 2002). For instance, Metcalfe and Foster (2004, p. xi) point out that the knowledge acquired by agents, together with the interaction of that knowledge, is at the base of economic evolution and the complexity of economic processes. The evolutionary literature argues that knowledge is the foundation of capabilities and is structured in routines (Becker, 2004; Nelson and Winter, 1982), cognitive, behavioural, social and technological rules (Dopfer and Potts, 2008) and organizational frameworks, etc. However, insufficient consideration is given to the goals pursued by agents (individuals or organizations), the dynamics of their own evolution, which affects the connections between them, their hierarchy and content, and the agents' intentionality. Only recently has consideration been given to the role and consequences of

p. 175) claims that 'at the core of Darwinism are presuppositions concerning causality and causal explanations' and 'contrary to widespread belief, these presuppositions do not downgrade or ignore human intentionality.' See also Hodgson (2010) and Hodgson and Knudsen (2006a,b,c, 2007) and Nelson (2006, 2007). For a discussion on the ontological implications of this debate, see Vromen (2008).

[2] Vanberg's analysis is also based on the hypothesis that human actors seek *what they consider success* and they use their accumulated knowledge to come up with strategies – plans which, we could say, they expect to be successful. In this sense, there is no doubt that deliberate human problem-solving is always *looking ahead*; and such 'looking ahead' should not be confused with pre-adaptedness.

[3] Schumpeter's concept of entrepreneurship explicitly excludes invention. However, both invention and entrepreneurship are loci of novelty (see Arthur, 2007). The main difference between inventors and entrepreneurs is that an inventor, as such, does not play an economic role on his own insofar as he does not mobilize resources into new production lines. If he does, then, by functional definition, he becomes an entrepreneur.