

Reply to the referee reports on

Marina Bianchi (2014). The Magic of Storytelling: How Curiosity and Aesthetic Preferences Work. Economics Discussion Papers, No 2014-23, Kiel Institute for the World Economy. <http://www.economics-ejournal.org/economics/discussionpapers/2014-23>

The referees have made a number of points that deserve to be addressed in my paper. I thank them for their suggestions and critiques.

The most important among them are these:

1. The reasons we engage in and enjoy storytelling are more complex and varied than the ones I discuss.
2. The findings on curiosity and aesthetic preferences that come from recent experimental psychology may be interesting but the relevance they have for economists is an issue not really engaged in my paper.

The first point is the central issue for the first referee who argues that, while the Berlyne/Scitovsky model of arousal/joy as properties of (creative) goods is a candidate explanation of why we like stories, there are other explanations, particularly of an evolutionary theoretical sort, that are not mentioned in the paper.

It is true that the literature on storytelling that comes both from cognitive and evolutionary psychology (and from the literary world) has increased enormously in recent years. And it is also true that I did not address the problem of the adaptive value of stories.

I was not wholly unaware of these other approaches, but in this paper I wanted to focus specifically on the variables of goods and activities that trigger a hedonic response. I focused on why we like stories and not on why stories make us fitter. For this reason I did not discuss either the evolution of aesthetic preferences, and the contributions that come from works such as that of Kaplan and Kaplan 1989 (whose experimental findings of the variables responsible for preferences among landscape types are discussed in the paper though not in terms of why and whether these variables might have evolved the way they did). Nor did I mention Dutton 2009 or Dissanayake 2000 who address exactly this problem. Relevant too is also the recent work of Zaidel et al. (2013), which focuses on the neural correlates of art and aesthetics and seeks archaeological and neurobiological evidence that could account for the evolution of aesthetic appreciation.

Comparable attention to the evolution of preferences for stories is present also in the literature on narratives. The problem is nicely framed by Gotschall as the riddle of fiction, which is part of a larger biological riddle, the riddle of art. Evolution, he notes, is ruthlessly utilitarian. How, then, has the seeming luxury of fiction not been eliminated from human life? (Gotschall 2012: 24).

I am aware of several explanations that have been advanced. According to the social-improvement hypothesis, narrative strengthens human abilities such as empathy and other social skills, since it provides a model of the social world of people's intentions and their interactions (Mar and Oatley 2008, Oatley 2012; Dunbar et al. 2010).

According to the self-improvement hypothesis, the simulated world of fiction allows us to identify with characters in situations that are not experienced in everyday life and for this reason they can promote personal change (Oatley 2011: 23).

For still others the biological advantage of stories is also due to their specific cognitive function. Stories equip us with workable templates for problem solving (Pinker 2009), create patterns and meaning that reduce disorder (Gazzaniga 2014; Bruner 1986; Gottschall 2012) or, as Boyd 2009 says: "Art prepares minds for open-ended learning and creativity": 209.

Even if I shall not be able to discuss the merits and demerits of the different explanations of the evolutionary role of narratives, I concur with the first referee that they deserve to be mentioned in the revised version of my paper. I remain convinced, however, that we are attracted to stories not because of their adaptive role but because, as I argue in my paper, of the way they are specifically constructed. This point is clearly made by Bruner. For him, after a lifetime's devotion to the art of narrative, tales are instruments of the mind for meaning making (1996: 41). Human beings make sense of the world by telling stories about it - by using the narrative mode to construct reality (ibid:130; 1990: 76-7). Yet it is not just the content of these stories that grips us, but their narrative artifice (1996 40). And narrative artifice is generated by creating some canonical expectation as to how a particular action will play out in the world, in the face of setbacks or obstacles (2001: 211). See in this context also Freytag's dramatic arc (1900), and Paul Zak's *How stories change the brain*. (2013 http://greatergood.berkeley.edu/article/item/how_stories_change_brain).

Narrative, in other words, is different from other forms of communication and means of meaning making, because it plays on conflicts between the expected and the realized, the known and the experienced, and it is precisely this specific structure that captivates us.

Anyway, the more extensive literature is full of illuminating insights on the positive externalities in terms of learning abilities, education, and social skills that stories/creative goods might generate. Making some of it explicit really complements my own purpose and I thank the referee for having forced me to incorporate them in some degree.

The second point that I wish to address is stressed mainly by the second referee. In fact two sets of issues are raised. One is that there are relevant works by economists which are not cited in my paper. Singled out are some of Schelling's work, that of Elster, and the collective contributions that come from behavioral economics. The second set of issues is that it is not clear what contribution my paper makes to the economic analysis of behavior.

I am glad to have been reminded that Thomas Schelling does indeed refer to the emotional dimension of storytelling. He does it by telling a personal story. When he and his wife had seen the Hitchcock movie *Psycho*, they were so affected that they decided to return home in the same car, though they had used two to go to the movie theater. Yet for Schelling the sensations of risk, surprise and suspense excited by stories differ from the feelings that other states of mind, such as daydreaming or fantasizing, generate, because

in stories these feelings are strictly controlled. Even the self-deception to which we voluntarily expose ourselves in stories is disciplined and only partial. Stories in all their forms for Schelling are an example that we as consumers live in our minds; and often they capture our mind, engage it, occupy and preoccupy it (1984: 328). This view of stories that engage our mind with their disciplined fantasy and controlled suspense makes Schelling seem very close to the insights of the recent and not so recent psychological literature that I chose to discuss.

But Schelling is not an isolated example among economists. To name two others, Akerlof and Shiller have also recognized the value of stories (2009). For them, stories are part of animal spirits, taking their place alongside confidence, fairness, corruption and money illusion. As they see it, humans think in terms of narratives, and can form their identities through the stories of their lives. Movements in the economy too, and importantly the recent crisis, are also partly due the changing shared stories about the nature of the economy.

Stories, however, can be deceptive and manipulative. In financial crises, according to Tuckett 2012, the diffusion of positive cover stories contributed to reduce the sense of reality of agents fostering their wishful thinking. (It is interesting to note how the mechanism just described is similar to the one studied by Elster 1999: agents alleviate the conflicts between desires and beliefs by bypassing the stage of information gathering and instead shaping reality in the form of their desires, see Bianchi 2001).

I have not addressed the risk of deception that stories may generate but will do so in the revised version.

Is all this discussion of stories and aesthetic preferences relevant to economics? Obviously I strongly believe that it is, for reasons already spelled out in the paper and that I shall try to make still clearer in the revised version.

There are three main reasons. The first is practical. In an economy where the fastest growing sector after the service sector is the creative economy, it behooves economists to try to understand why creative goods and activities are produced and consumed. What I have been discussing about storytelling and aesthetic preferences extends to all creative goods that have, over and above their functional and instrumental properties, in different degree, some formal characteristics that are enjoyed per se. It is thanks to these self-rewarding features that memories, anticipations, and surprises are created and enjoyed. And it is through them that curiosity is excited, and learning and an ongoing process of discovery set in motion.

The second reason is theoretical. Since its inception economics has been concerned with motivations in both their individual and social dimension. It has been the great merit of Tibor Scitovsky to have brought to the fore in modern economics the analysis of motivations that have “no antecedent of pain” – though Adam Smith offered a similar analysis of pleasure as such, both men also recognizing the positive externalities of the arts in terms of the avoidance of individually and socially destructive behaviors where they are neglected. Because of this “pleasant in and of themselves” quality of creative goods, and as the invited reader of my paper notes, creative goods are strictly related to knowledge and skills, and this shift of focus has stimulated new research on the role of education and the various dimensions of wellbeing.

The third reason is methodological: I strongly believe that interdisciplinary research is what enriches us. Behavioral economics has started to break some disciplinary boundaries between economics and psychology, but there are other “psychologies”, as well as other fields of research, that can help us understand human behavior and choice.

I am well aware that by invoking the findings that other disciplines we can perhaps neglect to ask how our economic models can be effective to similar ends. But, as Albert Hirschman said, what we lose in parsimony we can gain in complexity.

There are additional interesting suggestions that are made by the both the referees and the invited reader. These I do not discuss here, but I shall address them in a revised version of the paper.

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