

Rewarding and Promoting Creativity

New Approaches, Old Realities

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Abstract

Awards and prizes are designed to encourage creativity. They help stimulate and promote it among professionals and members of publics-at-large. This article focuses on ex-post accolades. It argues that, although these honours promote old and new approaches to creativity, it is the old approaches that tend to dominate in the international ex-post reward system, especially in the sciences. The Nobel Prizes, and particularly the Nobel Museum, serve as the article's case study, with an analysis of the exhibition Cultures of Creativity illustrating its argument.

Keywords reativity, accolades, ex-post awards and prizes, Nobel Prizes, Nobel Museum

Introduction

Creativity is a multifaceted and complex phenomenon that involves an array of processes and practices. Drawing on Beadle-Darcy's (n.d.) and Welsch's (1980) definitions, creativity is understood in this article as any divergent approach to a situation through which existing entities are transformed into different ones. Awards and

prizes are among many instruments that encourage creativity. They help drive it either by stimulating innovation to achieve pre-defined goals (in the case of ex-ante accolades), or by recognising and showcasing model or successful approaches to creativity (in the case of ex-post accolades).

This article focuses on ex-post honours and the ways in which they help to promote and encourage creativity. These accolades have had a “stunning rise” over the last 200 years (English, 2005, p. 1). Societies – especially developed, western ones – that are preoccupied with recognition, credentialing and status (Best, 2011) increasingly use these instruments to evaluate creativity. However, these accolades have been under-researched in this area, with existing studies only noting that they help encourage innovation or output. Hence, this article asks: what kinds of creativity do ex-post accolades help foster?

The article first describes the relationship between accolades and creativity, explaining the difference between ex-ante and ex-post honours and how both types of accolade help to nurture creativity. It also outlines the current limitations in knowledge in this area. Using Montuori and Donnelly’s framework (2013), it then discusses the old and new approaches to creativity that ex-post awards and prizes can communicate to societies. Next, the tensions and problems inherent in ex-post accolades’ promotion of creativity are discussed. Specifically, as the article explains, old approaches tend to prevail in the international reward system, especially in the sciences, even though accolades promote both approaches. The article’s argument is illustrated through a case study of the Nobel Museum, focusing on its exhibition *Cultures of Creativity*.

Accolades and Creativity

Ex-post and ex-ante accolades stimulate creativity in different ways. Ex-ante awards and prizes, offered for explicitly stated tasks, are presented once those tasks have been accomplished (Morley, 2008). They are also known as ‘innovation’, ‘inducement’ or ‘targeted’ (Scotchmer, 2004) accolades, because they elicit breakthroughs in response to specific problems. Examples include the prize offered by Spain’s King Philip II in 1567 to the person who could develop a method of finding longitude at sea (claimed in 1773 by James Harrison, the inventor of the marine chronometer), and, more recently, a

\$2 million prize offered by the United States' Defense Advanced Research Projects Agency (DARPA) for the first robotic vehicle to complete a course from California to Nevada in under 10 hours (claimed by the Stanford Racing Team in 2005) (Kamenetz, 2008).

Research is increasingly and empirically demonstrating that ex-ante accolades often spur creativity. For example, in the field of technological development, research and design, scholars have found that these accolades have helped lift the quality of products submitted for competitions (Brunt, Lerner and Nicholas, 2011), motivated individuals to develop innovations over and above what was expected of them (Kay, 2011), and prompted the design of innovations that have significantly advanced whole industries, such as aircraft manufacture (Davis and Davis, 2004). In the field of economics, finance and business, incentives such as prizes have been found to help motivate individuals who seem to be less creative or averse to risk and ambiguity, as well as helping to foster creative attitudes within cooperative corporate cultures (Charness and Grieco, 2013).

Ex-post accolades recognise accomplishments and are determined either on the basis of concrete outcomes or on the basis of opinion. Honours given for concrete outcomes include laurels won at sporting contests (such as the Olympic Games), while examples of opinion-based accolades include the Pulitzer Prizes and BAFTAs. A key criticism of opinion-based honours is that many are decided subjectively, by a jury of experts or by a public vote. As a result, they are often seen to be arbitrary or biased (Axelrod and Cohen, 2000). These honours do not function as incentives, like their ex-ante counterparts. Rather, they provide feedback or praise, rewarding achievements perceived to be excellent. In doing so, they "create and establish role models [and] distribute information about successful and desirable behavior" (Frey and Neckermann, 2009, p. 76). By signalling to others that particular work is valuable (Wijnberg, 2011), ex-post accolades highlight successful or model creative practices that others can themselves then adopt or adapt. This exemplary work is highlighted through publicity that communicates individuals' or groups' achievements widely. Publicity can take simple or complex forms; for instance, it can be achieved through (simple) announcements published in newspapers or on websites, or through (complex) events and multimedia, such as elaborate ceremonies or exhibitions.

Research confirms that ex-post accolades often do encourage creativity by publicising creative behaviour that can be admired or emulated (Duguid, 2007). However, significantly fewer studies have been undertaken in this area. Moser and Nicholas (2013) have found that ex-post honours awarded for high-quality innovations help to encourage future innovation. Rose (2011) also argues that these rewards can improve employees' output, as well as increase their engagement and motivation, by recognising their work and achievements. According to Mokyr (1990, p. 177), all types of rewards – from pensions to medals – have provided individuals throughout history with the stimulation needed to “keep up a high level of inventive activity”. Although these existing studies, together, recognise that accolades encourage output or innovation, they do not indicate what types of creativity they help to foster.

Ola and New Approaches to Creativity

Montuori and Donnelly's (2013) framework is useful for understanding the different approaches to creativity that ex-post accolades highlight and promote. In their wide-ranging review of literature about creativity, the authors argue that it is understood and practised differently now, in the 21st century, than it was in past centuries. Creativity used to be reserved for eminent, highly educated individuals: for 'lone geniuses', such as Van Gogh, Mozart or Einstein. It was a process seen to arise inside this sort of individual, leading to significant breakthroughs or “Eureka!” moments, and producing revelatory, earth-shaking insights and products. Also, the arts and sciences were perceived to be the preserve of creativity.

In the 21st century, however, these longstanding paradigms have been challenged or even overturned. Creativity is not reserved just for distinguished, solitary geniuses; it is a relational, collaborative process, in which anyone can engage. It occurs not just in special, isolated contexts, leading to major breakthroughs, but also in everyday, ordinary settings, involving mundane activities. It is a basic human capacity that everyone can nurture and use to some degree. It is not limited to the arts and sciences, but rather occurs in a wide variety of fields. Also, it is characterised by paradoxes or incompatibilities that must be navigated; these include forces such as order and disorder, rigour and imagination, and work and rest. Finally, it is an unpredictable, emergent process

arising from the constantly changing systems with which individuals interact (Montuori and Donnelly, 2013). Figure 1 summarises these different understandings.

| Old Conceptions | New Conceptions |
|---|-------------------------------------|
| 1. Lone geniuses | 1. Universal |
| 2. Occurred inside individuals | 2. Relational and collaborative |
| 3. Resulted in special breakthroughs | 3. Occurs in mundane activities |
| 4. Earth-shaking insights | 4. A basic, everyday human capacity |
| 5. Occurred mainly in the arts and sciences | 5. Occurs in a variety of fields |
| | 6. Involves paradoxes |
| | 7. Unpredictable |

Figure 1. Old and new approaches to creativity as identified by Montuori and Donnelly (2013)

While this framework helps conceptualise changing approaches to creativity, it has limitations. It can be argued that the old dimensions are still relevant. Creative achievements today are often individualistic, ground-breaking, and realised by remarkable individuals. For example, many Academy Award categories, such as “Actor in a Leading Role” or “Actress in a Supporting Role”, must necessarily recognise individual talent. Also, Montuori and Donnelly’s two dimensions need not be mutually exclusive; outstanding performances and products can be both collectivistic and individualistic, and recognised as such. Elite sports demonstrate this; the FIFA World Cup Awards, for instance, are presented to both teams and individual team members.

Tensions in Promoting Creativity

The promotion of these varying creative approaches is problematic. On a global or macro-level, old notions of creativity tend to dominate ex-post awarding systems, because of the way in which accolades have been designed. In other words, old dimensions have been locked into the regulations governing many honours. As English (2005) notes, many accolades have been modelled on the Nobel

Prizes. The Nobels feature specific characteristics that have been adopted in other accolades. For instance, the rules governing the Ellen Richards Prize, established by the Association to Aid Women in Science, were modelled on the Nobel Foundation's (Rife, 2007). Other such examples include the Canada Gairdner International Award, the Shaw Prize and the Lasker Awards (Houghton, 2013). The statutes governing the Nobel Foundation stipulate, among other things, that the prizes can only be awarded after the nominees' achievements have been found to be of "outstanding importance" by experts, and that a prize can never be shared by more than three people in any year (Nobel Foundation, 2006 [1900]).

This last restriction has been particularly contentious. Researchers, especially in the sciences, have been driven to disputes with colleagues when they have been excluded from receiving recognition. Memorably, the physicist Oreste Piccioni unsuccessfully sued the two physicists who had won the Nobel for discovering the antiproton, claiming that he had been wrongfully overlooked in receiving the prize (Quinn and Nir, 2008). Meyers (2012) similarly recounts that the scientist Candace Pert wrote a letter to the Lasker Awards committee, commenting that she felt upset to have been excluded from that year's award. More recently, the scientist Michael Houghton declined the 2013 Canada Gairdner International Award because the honour omitted two of his five colleagues. Reflecting on his decision, Houghton (2013) commented that it is "inherently unfair" for awarding organisations to insist that accolades be limited to no more than three recipients per topic per year, especially as "knowledge and technology grows exponentially around the world ... with an increasing need for multidisciplinary collaborations to address complex questions and problems".

A corollary to this "overemphasis on individual achievement" (English, 2005, p. 86) is that many accolades foster exclusivity by esteeming some while disesteeming others. Zuckerman (1996 [1977]) confirmed this phenomenon in her classic study of Nobel Prize-winning scientists in the United States, noting the existence of a 'scientific elite' in that nation: a stratum of scientists standing apart from the rest of the scientific community. Nobel winners, she also argued, tend to come from elite colleges and universities. This exclusivity has significant implications for the promotion and encouragement of creativity. In professional contexts – such as corpo-

rations, universities and government agencies – the presentation of divisive accolades can foster cultures of individualism and competitiveness, as well as discourage collaboration and group-based innovation (Stevenson in Sinoway, 2012). This spirit of competition reaches members of publics-at-large, too. As Moeran and Christensen (2013, p. 35) point out, individuals have a growing awareness – thanks to media – of major, high-level honours such as the Oscars and Nobels, and of the eminent individuals who triumph over others in winning them.

The Nobel Museum and Creativity

The Nobel Museum provides an excellent case demonstrating the problematic relationship between ex-post accolades and creativity. Established in 2001, the Stockholm-based museum collects “stories about creativity, determination and individuals who through their work have conferred great benefit upon mankind [sic.]” (Nobel Foundation, 2013, p. 30). In this respect, the *Museum’s Cultures of Creativity* exhibition is particularly noteworthy. Launched in 2001, and timed to coincide with the centenary of the Nobel Prizes, the exhibition comprised two goals: showcasing the prizes and their 100-year history, as well as exploring the idea of creativity in relation to the Nobel Laureates and the milieus in which they lived and worked. A permanent version opened at the museum in Stockholm that year, and a travelling version concurrently began to tour the globe, travelling for six years through fourteen major cities (Nobel Museum, n.d.a). By 2005, approximately two million visitors had seen it (Lindqvist, 2006 [2005]). The exhibition consisted of short film presentations of laureates and their creative work, as well as short films of creative milieus around the world, in addition to artefacts belonging or relating to laureates, a history of the life-story of Alfred Nobel, and explanations of the Nobel organisations (Nobel Museum, n.d.b).

Both the exhibition and the museum in general demonstrate that ex-post accolades are promoting creativity in multifaceted ways. The museum is highlighting successful, prize-winning approaches to creativity and encouraging individuals to think about, and implement, those approaches. It also creates spaces – whether in the travelling or permanent versions – for publics-at-large, innovators, professionals and researchers to engage more deeply with creative

practices. To that end, for example, the museum launched a programme in 2010 for business professionals called *The Spark of Creativity* (Nobel Museum, n.d.c).

However, the museum and its flagship exhibition are problematic. They reflect the tensions in promoting creativity discussed in the previous section. Specifically, while they demonstrate that both old and new understandings of creativity are now promoted by awarding organisations, it is still the old dimensions that appear to be dominant.

Textual Analysis and Discussion

An analysis of the exhibition's official companion catalogue, *Cultures of Creativity*, by Ulf Larsson (2006), was undertaken to substantiate these insights. The catalogue was chosen for analysis because it captures the exhibition's contents in one comprehensive publication that can be readily accessed by individuals worldwide (as opposed to the permanent exhibition itself, which is only accessible to those visiting Stockholm). A non-frequency content analysis was conducted on the catalogue. This involved identifying the presence or absence of content characteristics (George, 2009), which, in this case, were the tensions lying at the heart of ex-post accolades, and the new and old approaches to creativity.

The catalogue is divided into several sections. Two forewords written by the former museum director are followed by an introduction and two sections that provide an overview of "Alfred Nobel and His Times" and "The Nobel System". Next comes a section about "Individual Creativity" that features biographical sketches of fifty selected Nobel laureates and explanations of the ways in which they engaged in creativity. "Creative Milieus" follows; this section describes fifteen locations in which the laureates worked, and explores the ways in which creativity operated in these locations. A list of Nobel laureates from 1901 to 2005, references, and publication details close the catalogue.

New approaches to creativity, as identified by Montuori and Donnelly (2013), were readily evident in the text. The complex nature of creativity was identified in the introduction, which noted that "[c]reativity is many-faceted and difficult to capture" and asked: "How is creativity achieved? Through wild rebellion against the establishment? A quiet walk away from the well-trodden paths?"

(Larsson, 2006, p. 13). A range of old and new conceptions of creativity were then explored, highlighting the museum's consciousness of the many paradoxes that feature in creative processes:

The inspiration for some revolutionary advances seems to appear from nowhere, while in other cases only a hard-fought battle will turn the status quo upside-down. Creativity is sometimes the fruit of consequential, goal-oriented work, but at other times coincidence seems to be the source of a groundbreaking discovery. (p. 13)

The presentation of new understandings of creativity continued through the portraits of individual laureates. For example, the collaborative nature of creativity was emphasised in the biographical sketch of Ahmed Zewail, who, "[l]ike most scientists today ... finds his surroundings and colleagues of great importance" (p. 63). The ordinariness and mundanity of creativity were evident in the profile of Barbara McClintock, whose research simply "began out in the field, among cornstalks" (p. 67).

At the same time, old conceptions of creativity were evident throughout the catalogue. For instance, a key focus of Ernest Hemingway's description was of his solitary life (p. 85). This notion of the lone genius was also evident in Max Perutz's research, which "required the collection of huge amounts of data, gigantic calculations, and relentless analysis" (p. 97). This was echoed in the description of Peyton Rous, who "lived a long life filled with patient, habitual work. He began and ended his workday by writing" (p. 133). The description of Fridtjof Nansen's "broad, groundbreaking activity and his stubborn, ingenious work" also correlated with old understandings of creativity.

A scan of the book's contents page immediately gave the overall impression that old notions of creativity seemed to be dominant. Of the catalogue's fifty laureates listed on the contents page, only four were partners or colleagues: Irene Joliot-Curie and Frederic Joliot, and James D. Watson and Francis Crick. Two pairs, and no teams, were presented. The very presence of the section "Individual Creativity" also underscored old approaches to creativity marked by individualism. Additionally, the creative milieus presented in the exhibition publication reflected the tensions at the heart of the re-

warding system. Of the fifteen locations, four were specialist or academic institutions (the Basel Institute for Immunology, the Pasteur Institute, CERN, The Chicago School of Economics), while four more focussed on such institutions, though were not directly mentioned in the section titles (the Bohr Institute for Theoretical Physics in relation to Copenhagen, the Cold Spring Harbor Laboratory in Cold Spring Harbor, Berkeley Laboratory in Berkeley, and the University of Cambridge in Cambridge). This indicated a heavy focus on academia, research and scholarship as sites of creativity. The exclusiveness of these institutions also entailed elitism, again emphasising the tensions at the heart of the ex-post rewarding system.

Of course, one could ask: is it fair to subject an exhibition that was developed around 2000/2001 to a typology of creativity that was developed in 2013? Given that a good deal of the literature on which Montuori and Donnelly (2013) drew dates back to the 1990s, 1980s and earlier, it does not seem unreasonable to use these authors' framework.

Conclusion

Ex-post accolades can encourage creativity by highlighting innovative ideas and practices that others can then adopt or adapt. These honours publicise both the old and new conceptions of creativity – often in mutually inclusive ways – identified by Montuori and Donnelly (2013). Old approaches include lone geniuses, special breakthroughs, and earth-shaking insights, while new approaches are everyday, mundane, popular, relational, paradoxical and unpredictable.

Although awards and prizes promote both dimensions of creativity, it is old approaches that tend to prevail in the international ex-post reward system, particularly in the sciences. This is due to the fact that many accolades are modelled on the Nobel Prizes, which are governed by rules set over a century ago. The Nobel Museum and its exhibition *Cultures of Creativity* reflect this; despite showcasing both approaches to creativity, the exhibition gives the overall impression that old approaches are dominant.

As the international rewarding system grows, and as accolades continue to proliferate, the ways in which creativity is recognised and promoted will become increasingly important. Many approaches to creativity – old and new – can be encouraged by both ex-post

and ex-ante accolades. Awarders, then, need to be aware of how they promote creativity, and how their awards are designed. Do they encourage new modes of creativity, or are they publicising old approaches? It could be argued that current, constrictive rules should be redesigned to allow for more collectivistic approaches to be rewarded, or that another set of Nobel Prizes be founded to recognise collectivistic achievements.

The research leaves open a number of avenues for further study. Analyses of other Nobel Prize-related communications and events could be undertaken to test whether this study's findings are widely applicable. Also, other ex-post accolades' communications could be analysed to understand whether they encourage old or new approaches to creativity. These sorts of studies would help to better understand the diverse roles that awards and prizes play in encouraging greater and more varied engagements with creativity worldwide.

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