

revenues from music licensing and moved the music licensing sector closer to the music industrial epicentre. The one thing that is certain is that technological development will continue to shape the evolution of the music economy, and that the music industry of the future will be very different than the music industry of today.

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Exploring Creativity in Crowdsourcing

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Where can we get good ideas with low cost? Recent researchers (e.g., Brabham 2008; Cardoso and Ramos 2009; Chanal and Caron-Fasan 2008; Kleemann and Günter 2008; Leimeister et al. 2009; Ramos et al. 2009; Schenk and de Strasbourg 2009) probably would suggest “the crowd.” Indeed, crowdsourcing (derived from the Chinese proverb: “two heads are better than one” [Yu and Nickerson 2011]) has increasingly been the easiest and most inexpensive method to gain creative/innovative ideas. With the current or potential shortage of R&D resources, firms are encouraged to rely on the collective and distributed intelligence disseminated in the crowd for future competitiveness. Numerous innovation requesters have either hired a third-party information system vendor and/or designed their own websites to connect with the crowd in order to earn un(der)paid ideas (Kleemann and Günter Vofß 2008). However, are the ideas snatched from the crowd radically innovative and entrepreneurial enough that they can bring surplus values to firms and/or markets?

In order to answer this question, this paper blends the literatures of entrepreneurship and innovation management to explain crowdsourcing (e.g., Oswick et al. 2011). First, entrepreneurship literature suggests that the crowd does not have the motivation of an entrepreneur (the consistent pursuit of profit) (Schumpeter 1961a). Therefore, the crowd is not “alert” (Kirzner 1997) enough to create radical ideas and to make substantial opportunities. Second, innovation management literature suggests that creativity needs prior domain knowledge (for example, market expertise) (Shane 2000). In many cases, domain knowledge is something largely missing from the crowd. Hence, ideas from the crowd may neither be motivated, nor have sufficient domain knowledge, to create radical ideas.

Crowdsourcing

Crowdsourcing, first used by Howe (2006), is the act of outsourcing tasks traditionally performed by an employee or contractor, to an undefined, large group of people or community (that is, a crowd), through an “open call.” Individuals in the crowd, in most cases, are slightly rewarded (e.g. Mechanical Turk) or unpaid (e.g. CitizenScience). Many innovation requesters—individuals or organizations—are using the crowd online for creative ideas or even for real innovations (like formally written programming scripts).

With the advantages of low cost and easy access, crowdsourcing has quickly spread worldwide. Due to the large capacity of the crowd, innovation requesters (firms or individuals) have been utilizing the crowd’s wisdom via online platforms. For example, Mechanical Turk, 99designs, and CrowdSpring are online platforms designed by a third party for requesters to outsource tasks to the crowd. Alternatively, companies including Half Bakery, Threadless, MicroSoft (ImagineCup), and Dell (IdeaStorm) have conducted crowdsourcing campaigns through their own websites. In China, thousands of innovation requesters have been posting their requests for creative ideas from the crowdsourcing website: Task.cn. It is so popular that a new word 威客 (*weike*) has even been created: to refer specifically to those who take on tasks from crowdsourcing websites.

Furthermore, the encouragement from academia with regard to crowdsourcing has accelerated the practice’s pervasion in the practitioners’ arena. For example, Chanal and Caron-Fasan (2008) suggest that, due to the common lack of resources for innovation in small and medium sized enterprises (SMEs), a service capable of involving the crowd in large networks (filled with useful and reachable knowledge) is crucial to the future competitiveness of crowdsourcing.

Specifically, many researchers have started to draw attention to the motivations of crowd members. For example, Hars and Ou (2002) have examined the motivations of programmers contributing their effort to an open call for open-source software. Their motivations can be identified as forming two general categories: internal (for instance, intrinsic motivation, to have fun, and so on) and external (direct or indirect monetary compensation, and recognition by others, and so forth). Others (Xu et al. 2009) have empirically supported the idea that the reputation gained, and skills learned, from open-source software project participation may help programmers with future work opportunities. In addition, in two case studies, Ren (2011a) has identified four stages of crowdsourcing: identifying, requesting, evaluating, and retaining the crowd. She also confirmed the motivations just mentioned and eliminated possible new motivations of the crowd. That is, the crowd in her case studies is neither interested in monetary rewards, nor cares about intellectual property rights for ideas it has submitted to innovation

requesters.

In summary, the rationale behind the pervading phenomenon of crowdsourcing can be explained as “two heads are better than one.” The more ideas that are submitted from the crowd, the more creativity is expected from the submitted ideas. However, the question remains: in order to add new values and disrupt the current market layout, can these ideas be radical and entrepreneurial enough?

Entrepreneurship literature

Entrepreneurship literature can answer this question, since ideas generated by entrepreneurs are actually radical. As the pioneers who economically advance the society (Schumpeter 1961a), entrepreneurs create unique ideas. These ideas can be a novel combination of five possible innovations (that is to say, a new good, a new market, a new method, a new source of supply, and a new organization) (Schumpeter 1961a). The combination is so radical that it can trigger market resistance in the short term and then bring new values to new ventures (and their markets) in the long term.

Even for the minds of the ever-motivated entrepreneurs, radical ideas are difficult to create and need concentrated alertness (Kirzner 1957). They pursue entrepreneurial profit. “Entrepreneurial profit... a (significant) surplus over costs” (Schumpeter 1961a: pp.128), drives entrepreneurs to create values destructive of the existing economic equilibrium (Schumpeter 1961b): “new businesses are continually arising under the impulse of the alluring profit” (pp.131). The new value, to be destructive, cannot be incrementally new. It has to be radical: at least, radical enough to earn entrepreneurial (significant surplus) profit. “Without (creative) development (upsetting the norm) there is no (significant surplus) profit, without profit no development” (Schumpeter 1961a, pp.154). Simply put, the motivation of pursuing entrepreneurial profit is elementary and crucial to creating radical ideas.

However, the crowd, in sharp contrast to entrepreneurs, rarely desires monetary rewards. Mostly, those concerned want to either show their values in helping others, or kill time via online activities, or continue their hobbies, and so on. For example, a participant in the crowdsourcing setting once told Ren (2011a) during their interview: “I still want to do it (participating in the crowdsourcing project) without any monetary reward.” Even if the crowd were to desire to get rich, crowdsourcing is definitely not a good way to go about it—the reason being that crowdsourcing websites always underpay the crowd or exploit their intelligence for free. Revised from Schumpeter’s phrase, the above arguments can be summarized as: without the motivation of earning entrepreneurial profit, radical ideas can rarely be expected from the crowd.

In the setting of crowdsourcing, some ideas involve the implementation of existing technical invention, such as advertising electronic cars. Prior knowledge, for example related to electronic cars, whether developed from work experience, education or other means, will influence people's abilities (Roberts 1991) to comprehend, interpret and exploit opportunities in a way lacking that prior knowledge cannot replicate. In short, if a person doesn't understand the structure and strength of electronic cars, how can s/he possibly come up with a radical slogan, and accordingly change potential buyers' perception of electronic cars?

The crowd mostly consists of individuals who don't have domain-related expertise. Therefore, they cannot discover entrepreneurial opportunities and create radical ideas. Even for open source software communities (the crowd with a certain level of expertise), their voluntary collaboration can probably advance the software incrementally, but not radically, since they don't have the motivation to pursue entrepreneurial profit.

Therefore, in order to earn significantly beyond average profit, entrepreneurs by definition need to generate new ideas/innovations themselves and accordingly create opportunities destructive of the existing economic equilibrium (Schumpeter 1961b). Any lack of prior knowledge would let these money-earning opportunities slip away. "Each person's idiosyncratic prior knowledge creates a knowledge corridor that allows him/her" (Shane 2000, pp. 452), not others, to discover entrepreneurial opportunities. Therefore, the crowd may not be programmed to create radical and entrepreneurial ideas.

Innovation management literature

Innovation management literature can also help explain the original question, in that it suggests that radically innovative ideas (as opposed to incrementally innovative ideas) require significant resources, capabilities and knowledge, and consequently incur high uncertainty and disagreement. However, crowd members in general don't acquire those resources, capabilities or knowledge. Therefore, their ideas tend not to be radical.

As in entrepreneurship literature, radical ideas need domain-relevant skills. Similarly, innovation management literature suggests that these skills are one of the three components leading to creativity (Amabile 1983, 1996), and that these skills represent "the ability to learn and apply certain types of domain-specific knowledge" (Taggar 2002, p.316). In order to gain these skills, an individual can accumulate familiarity with the domain in question through "memory of factual knowledge, or technical proficiency" (Taggar 2002, p.316). Diverse as the crowd can be, it's hard to locate a few individuals in it who have acquired

domain-relevant skills. Complementary to the entrepreneurship literature's argument that lack of knowledge impedes the crowd from creating ideas based on existing technical inventions, innovation management literature suggests more. That is, prior knowledge can not only inspire new thinking about existing technical invention, but it is also the pathway to new inventions, and further to radical innovations. Imagine: if Mark Zuckerberg (the founder of Facebook) hadn't acquired superior programming skills and understood the mechanisms of other networking tools (e.g. MSN), he wouldn't have created Facebook (which was an extremely radical/creative idea that revolutionized people's living styles). In contrast, although there are a few crowds (for instance, communities of open source software enthusiasts) with prior knowledge of their domain of interest, the general crowd does not possess this attribute. Therefore, normally, the general crowd (unlike knowledgeable individuals) can only advance the existing innovation incrementally (for example, by combining two existing technologies or products). Therefore, without prior domain knowledge, creative innovations or radical relevant ideas can rarely be created from the crowd.

Blending the two literatures

By blending the two literatures (e.g., Oswick et al. 2011), this paper aims to explain why ideas created from the crowd may not be radical/creative enough to create a substantial surplus profit. Entrepreneurship literature indicates that in order to create radical ideas, the idea providers need to have prior knowledge (Shane 2000) to acquire keen insight into the idea domain and also to be motivated for entrepreneurial profit (Schumpeter 1961a), so that entrepreneurs can be alert to the creation of radical ideas. Moreover, innovation management literature echoes the importance of domain-relevant skills (Amabile 1983, 1996) for generating radical ideas (Rogers, 2000). In sum, the two literatures suggest that radical ideas can be generated only if idea generators, firstly, are motivated for entrepreneurial profit and, secondly, have domain knowledge.

Comparison: idea creativity from entrepreneurs versus that from the crowd

According to the monetary desires and expertise levels as discussed, idea providers can be categorized as, firstly, entrepreneurs; secondly, high-expertise crowds (very few in number); and, thirdly, low-expertise crowds (see *Figure 1*). Entrepreneurs, who consistently pursue entrepreneurial profit (Schumpeter 1961a) and are usually experts (Shane 2000) in some domains, are motivated and able to create radical ideas. Since the number of entrepreneurs is usually small compared to the crowd size, radical ideas are unlikely to be many. Open source software communities, which can be labeled high-expertise crowds, on the other

hand, are able to provide radical ideas. Nevertheless, aiming to develop and continue their hobbies (e.g., Ren 2011a) and to get involved in related online activities, these software developers are generally not motivated enough to stay alert and to create radical ideas. Instead, the ideas they make public tend to advance the existing software and are for the most part incrementally innovative, rather than radical.

In contrast, due to the lack of prior knowledge and desire for entrepreneurial profit, the low-expertise crowd is rarely able to provide radical ideas. Nonetheless, for some low information asymmetry products (Brush and Artz 1999; Nelson 1970), such as chairs, desks, and lamps, the crowd can gain relevant knowledge through daily consumption. In such cases, it is possible for members to provide incrementally innovative ideas based on their increasing demands of these products (Ren 2011b). However, like software enthusiasts, the low-expertise crowd (for instance, “turkers,” or participants from Mechanical Turk) is not motivated to stay alert and create radical ideas.

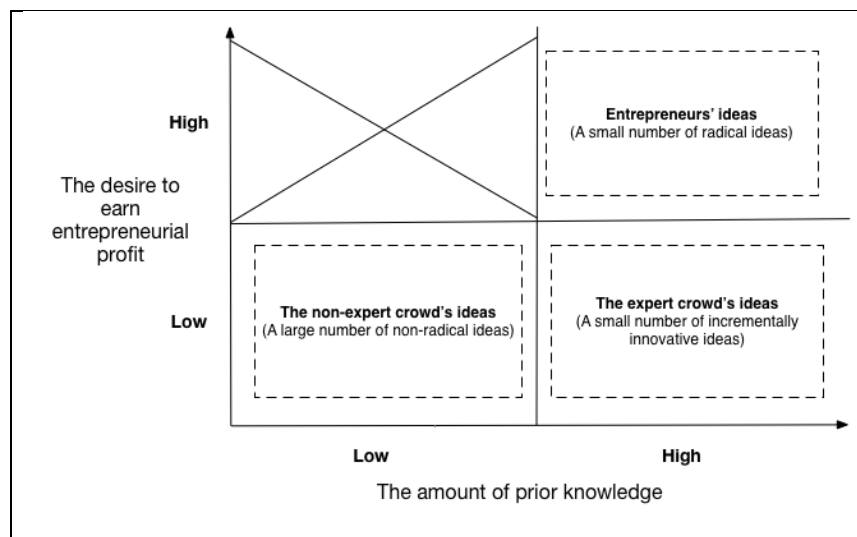


Figure 1: Comparison of idea creativity from entrepreneurs versus that from the crowd

Conclusion

This paper doesn't deny the obvious benefits of crowdsourcing. Instead, it suggests that researchers and practitioners, who use the crowd for innovative outputs, should leverage the crowd more strategically. First, due to the shortage of R&D resources, SMEs can acquire inspiration from the crowd's distributed and collective intelligence for incrementally improving their current products and services. Because of the large capacity in the crowd, a huge number of ideas can be expected from the crowd. For example, through the crowdsourcing web portal, “My

Starbucks Ideas,” Starbucks has been using its current and potential customers to gain thousands of ideas for improving its existing products and services.

Although the black box of how entrepreneurs create radical ideas hasn't been illuminated, innovation requesters, especially researchers, can design human/computer interactive systems that would leverage inexpensive and collective human intelligence for radical ideas. However, the algorithms of such systems must leverage the diverse backgrounds of crowd members. For example, with specified instructions to combine, change and/or criticize existing ideas, crowd members can be trained to acquire some domain knowledge (Ren et al. 2014). Then the capacity of the crowd may be increased for more creative ideas. As long as innovation requesters are motivated for entrepreneurial profit, they may stay alert and select radical ideas from this large pool of ideas submitted from the crowd.

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Anthropology: Moving Beyond Companies' "Creative" and "Innovative" Toolkit

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2014 was a big year in sports. The two biggest events with a global audience were probably the Winter Olympics in Russian Sochi and the Soccer World Cup in Brazil. Preparing for such events starts years in advance for an athletic gear company. In one of these companies, management decided to use 2014 as a platform to launch a whole new generation of "creative" and "innovative" offerings to capitalize on the increased worldwide attention. Having such a focus on your product category is simply an opportunity that cannot be missed. In early 2012, this particular company started to brief designers and marketers on how to make 2014 a record year. Their mission was to show the world the best the company could offer and to discover new dimensions of what an athletic gear company could provide sports fans.

During this time period, management produced a flurry of so-called "product briefs" that were distributed throughout the company. These 2-page long briefs described the problem to be solved, the likely solution, the intended target audience, and so on. There were briefs on team jerseys, on football shoes, on gym shoes, on footballs and more.

Let's take a look at a typical example—a brief for a gym shoe. It reads like this: "The shoe should exhibit the idea of breathability in the Upper combined with Midfoot support during dynamic strength