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GUEST EDITOR'S PERSPECTIVE

Crowdsourcing: A revised definition and introduction to new research

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> The shipper who earns his living from using otherwise empty or half-filled journeys of tramp-steamers, or the estate agent whose whole knowledge is almost exclusively one of temporary opportunities, or the arbitrageur who gains from local differences of commodity prices, are all performing eminently useful functions based on special knowledge of circumstances of the fleeting moment not known to others. (Hayek, 1945, p. 80)

In economics, the distribution of such contextual knowledge is referred to as the *local knowledge problem*. It suggests that the information required for rational economic planning is spread across individual actors, and unavoidably exists outside the knowledge of a central authority (e.g., the firm, government bureaucracy, central bank). In the past, notable attempts have been made to tap into this distributed knowledge. For example, in 1714, the British government offered a monetary award—known as the Longitude Prize—for the best way to measure a ship's longitudinal position. Likewise, in 1916, Planters Peanuts ran a public logo-design contest via which Mr. Peanut was created. In 1936, the Toyota logo was devised by means of a similar contest, as was the architecture of the Sydney Opera House in 1955. Despite these crowdsourcing successes, most early campaigns were limited by (1) organizers' inability to reach large populations, (2) difficulties of participants to collaborate, and (3) pure inertia. As a result, managers could access only a fragment of local knowledge, and the vast majority of distributed contextual knowledge remained untapped.

About a decade ago, a number of technological developments significantly reshaped how knowledge could be accessed and disseminated. In 2006, Google bought the then one-year-old video sharing startup, YouTube, for $1.65 billion (Associated Press, 2006). The same year, Twitter was founded and Facebook opened to the public. These platforms immediately changed how people could connect with each other and communicate with firms. Introduction of the iPhone in 2007 and the subsequent diffusion of smart mobile devices revolutionized how people accessed and provided real-time data on the go. In only two years, the web changed fundamentally: it became both social and mobile. Amid the excitement of location-based services, user-generated videos, posts, and tweets, these important technological developments also significantly impacted the local knowledge problem.

Different types of platforms—such as Wikipedia (established 2001), Freelancer.com (established 2004), Amazon's MTurk (established 2005), InnoCentive (spun out from Eli Lilly, 2005), oDesk (established 2005 and now called Upwork), and even American Idol (established 2002)—invited people to participate in organizational decision-making processes. Howe (2006, p. 1) labeled these ventures *crowdsourcing*, which he defined as "taking a function once performed by employees and outsourcing it

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to an undefined (and generally large) network of people in the form of an open call.'' Given the huge technological, organizational, and social changes that have taken place since this definition was introduced, I suggest that it is time to revisit and update this definition. Six changes stand out:

1. Crowdsourcing no longer refers to ''a function once performed by employees.'' In fact, crowdsourcing can include functions that never were considered by firms, let alone performed by employees (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). For example, Galaxy Zoo calls on hundreds of thousands of amateur astronomers to map the obscure corners of the universe. Likewise, FieldAgent pays regular people to provide local information—for instance, from the supermarkets they visit—to the firm's clients.

2. Crowdsourcing also no longer refers to an ''undefined (and generally large) network of people.'' Today, crowdsourcing campaigns are often very focused and invite members of highly defined networks of people. Some crowdsourcing efforts, like Google's reCaptcha, are wide open and everyone is invited. Others are more narrowly defined. The BarclayCard Ring campaign, for instance, invited only existing credit cardholders to participate by narrowing down and voting on the terms and conditions associated with the credit card (Marquit, 2013).

3. Crowdsourcing is no longer an endeavor that is solely external to organizations (Prpić, Shukla, Kietzmann, & McCarthy, 2015). Indeed, it now used as readily with employee populations as it is with outsiders. For example, when the U.S. Army launched ArmyCoCreate, a platform to canvas ideas for its Rapid Equipping Force, it specifically invited soldiers active in the field (Moore, 2014). At other times, new crowd-based business models challenge the traditional understanding of clear organizational boundaries, making the distinction between employees and non-employees somewhat artificial.

4. Crowdsourcing is no longer restricted to people. Some of the more interesting crowdsourcing endeavors combine human and non-human actors. For instance, the community-based GPS navigation software Waze allows people to report complementary map data and traffic information (e.g., accidents, police speed traps) and collects anonymous information directly from users' devices—including their speed, location, and direction of travel.

5. Crowdsourcing research has definitively illustrated that Howe's ''generally large network of people'' can include the formation of proprietary in-house platforms—such as Dell's Ideastorm or Starbucks' My Starbucks Idea—to form crowds. Crowds may also now be accessed for a fee via crowd platforms like InnoCentive, Kaggle, and CrowdFlower, or through social network platforms such as Facebook, Twitter, and Reddit (Boudreau & Lakhani, 2013).

6. Crowdsourcing can now be accessed through application programming interfaces (APIs). This generates new affordances for crowdsourcing, both as a standalone process and as a part of other business processes.

Clearly, a lot has happened since Howe offered his definition in 2006, and an updated and usable definition of crowdsourcing needs to reflect these trends. It also needs to be broader, rather than more restrictive, to allow for current and future developments of crowdsourcing. In order to recognize the emerging business models built on the continuing prominence of social media and the agency that powerful mobile devices have assumed in our social networks, we can define crowdsourcing as:

> *The use of IT to outsource any organizational function to a strategically defined population of human and non-human actors in the form of an open call.*

The articles in this special issue are built on this revised definition of crowdsourcing.

- The first article—by Fedorenko, Berthon, and Rabinovich—discusses crowdsourcing from the perspective of participants, rather than the firm. It centers specifically on how managers can structure crowdsourcing initiatives so as to maximize value for participants in terms of self-identity construction.

- The second article—by Brunswicker, Bilgram, and Fueller—focuses on the use of crowdsourcing to solve wicked problems in the context of civic innovation.

- The third article—by Paschen—discusses crowdfunding as a way for start-ups to acquire monetary and non-monetary resources. A framework is provided for choosing the optimal crowdfunding type in different start-up life cycle stages, and advice is given on best practices in crowdfunding.

The next six articles address how firms can benefit from crowdsourcing in different ways, while the last article outlines some of the risks associated with engaging crowds.

- The fourth article—by Brown, Boon, and Pitt—discusses how established organizations have begun to use crowdfunding websites not only as a source of finance, but also as marketing platforms to ensure a full product pipeline, to boost brand image, and to gain support for brand-related causes.

- The fifth article—by Dabirian, Kietzmann, and Diba—discusses the topic of employer branding, and how the question of whether an organization is a great place to work is today determined by the masses on crowdsourced employer-branding platforms such as Glassdoor. The authors use IBM's Watson to analyze tens of thousands of reviews left by employees, and arrive at a conceptualization of the types of value propositions that matter to employees today.

- The sixth article—by de Beer, McCarthy, Soliman, and Treen—discusses how and why organizations manage intellectual property issues when engaging in crowdsourcing activities. Examples are presented demonstrating how companies have applied legal and strategic concepts to various crowdsourcing initiatives, and recommendations are given for managers and other practitioners.

- The seventh article—by Bal, Weidner, Hanna, and Mills—examines the literature on crowdsourcing and brand community, and makes a series of propositions regarding this rich marketing arena.

- The eighth article—by Flostrand—compares the Delphi technique and its reliance on polling the opinions of experts with crowdsourcing and its focus on aggregating the opinions of many non-experts. The article notes differences and similarities, and provides a decision tool for executives regarding whether to employ Delphi, crowdsourcing, or a combination of both.

- The ninth article—by Täuscher—investigates how firms can leverage crowdsourcing to design entirely new business models. Discussed are practices and tactics to manage such crowd-based business models successfully by identifying the crowd's value, developing a compelling value proposition to the crowd, and sustainably capturing value from the crowd.

- The tenth and final article—by Wilson, Robson, and Botha—reminds us of the risks and 'dark side' of crowdsourcing.

I hope that those who care about building organizational value through crowdsourcing will enjoy the articles in this special issue. Thanks to everyone who provided submissions, including those authors whose work I was unable to publish. My sincere appreciation to the reviewers and to the past and current editor of *Business Horizons*, Marc Dollinger and Jeffery McMullen, for their patience and support.

References

Associated Press. (2006, October 10). *Google buys YouTube for $1.65 billion*.

Boudreau, K. J., & Lakhani, K. R. (2013). Using the crowd as an innovation partner. *Harvard Business Review, 91*(4), 60—69.

Hayek, F. A. (1945). The use of knowledge in society. *The American Economic Review, 35*(4), 519—530.

Howe, J. (2006). The rise of crowdsourcing. *Wired, 14*(6), 1—4.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons, 54*(3), 241—251.

Marquit, M. (2013, December 3). Crowdsourced credit card terms? Barclays gives it a try. *Quizzle Wire*. Retrieved from http://blog.quizzle.com//12/crowdsourced-credit-card-terms-barclays-gives-try/

Moore, J. (2014, February 5). Army taps crowd for rapid, tactical tech solutions. *GCN*. Retrieved from https://gcn.com/articles//02/05/armycocreate.aspx?admgar-%20ea=TC_EmergingTech

Prpić, J., Shukla, P. P., Kietzmann, J. H., & McCarthy, I. P. (2015). How to work a crowd: Developing crowd capital through crowdsourcing. *Business Horizons, 58*(1), 77—85.