

## A NEW WAY TO OUTSOURCE ACTIVITIES

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### ABSTRACT

*The goal of this research project is to foreshadow the development of an activity specific to human resources that take part in crowdsourcing efforts, specifically in microtasking. This new type of market is progressively utilized in the United States. Also, the great potential of this extremely efficient form of outsourcing is the reason why we focused on the human resources implicated.*

*The research took place in July-August 2013 and it involved 177 survey participants randomly chosen from the microtasking marketplace Amazon Mechanical Turk, which makes the data gathering portion crowdsourced. The findings of this research illustrate opportunities for companies and individuals to make use of this easily accessible, inexpensive and virtually unlimited resource.*

**KEYWORDS:** *cost reduction, crowdsourcing, human resources management, microtasking.*

**JEL CLASSIFICATION:** *M10, M12, M13, M16*

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### 1. INTRODUCTION

What is *crowdsourcing*? The term crowdsourcing was coined by journalist and author Jeff Howe in 2006 and defined by him as “*the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call*” (Howe, 2006. p.19). The Financial Times Lexicon defines it as “*A business model or function that relies on a large group of users as third parties for outsourcing certain tasks. The popular use of the Internet makes communication and coordination progressively cheap: tasks that would have been impossible to communicate and coordinate before have become extremely easy to set up and coordinate*” (<http://lexicon.ft.com/Term?term=crowdsourcing>). Determining the definition of crowdsourcing was even the topic of an article published in the Journal of Information Science in 2012, where the authors concluded as the most appropriate definition the following: “*Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage that what the user has brought to the venture, whose form will depend on the type of activity undertaken.*” (Estellés-Arolas et al., 2012, pp.29-31).

The idea of tapping into a large audience to outsource a specific function in bringing a product or service to market existed before the *Internet*. Reader’s Digest has been inviting readers to submit short, humorous stories and jokes for decades. The posters “Wanted: Dead or Alive” that we now see in movies didn’t need the Internet to convey the message. But the Internet plays a vital role in unleashing the power of crowdsourcing (Klososky, 2011, p.27). The crowd is larger than you

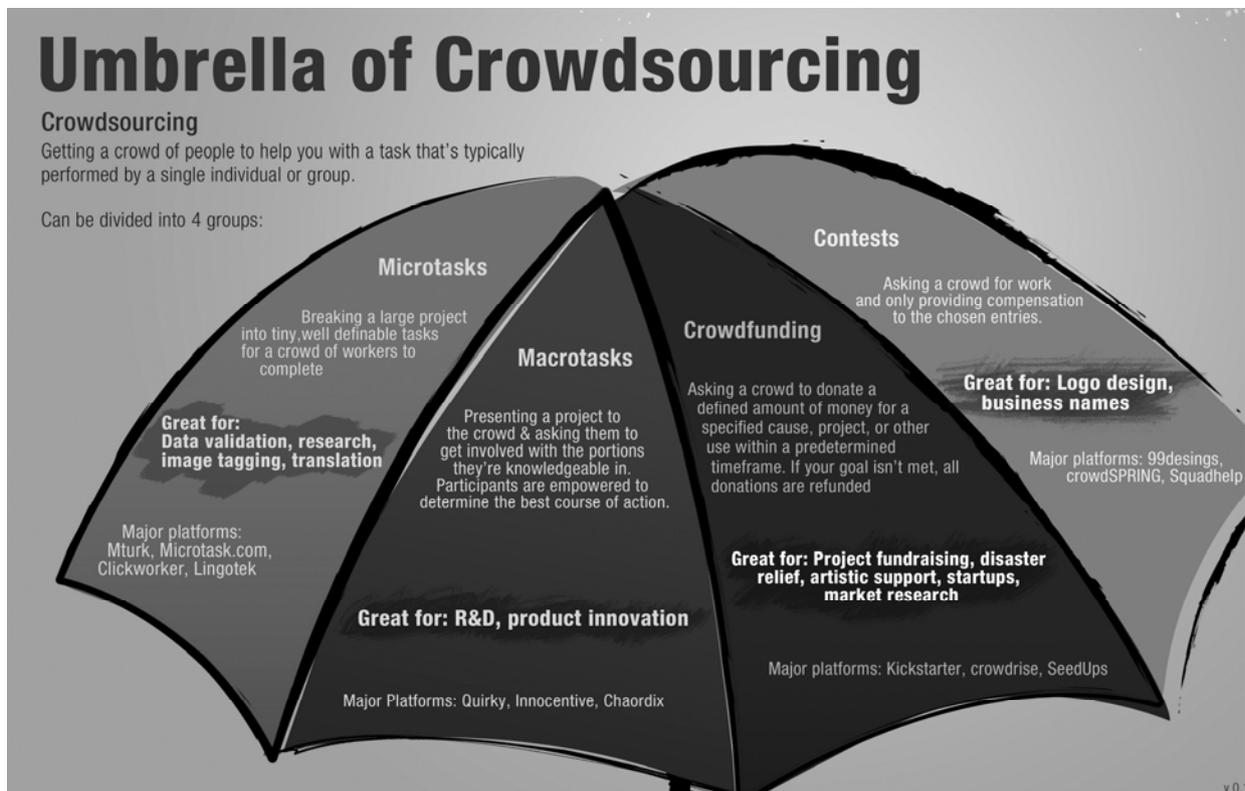
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probably think it is, and is still in its infancy.

The Pew Research Center recently conducted a survey of nearly nine hundred experts from the fields of science, business, technology, and journalism, concerning the future of the Internet. (Anderson & Rainie, 2010, p.25). The experts predicted that by 2020, advances in bandwidth and software development will make global connectivity easier than ever before. 72% of the experts surveyed expect that innovative forms of online cooperation will result in significantly more efficient and responsive governments, businesses and non-profits (Anderson & Rainie, 2010, p.26). An enterprise can and should have its research and development department participate in a customer/consumer collaboration and idea-generating program; the power of both the connected consumer and the outside community can play a strong role in shaping the direction for new products and services (Fieldman, 2013, p.14). As an example, Starbucks launched mystarbucksidea.com, which is an online forum that invites coffee shop patrons to share any idea that might improve customer relations or product lines. (Klososky, 2011, p.31).

The Daily Crowdsourc, the # 1 crowdsourcing news outlet, illustrated and explained clearly in the image below, the different sub-categories that fall under the umbrella of crowdsourcing:



**Figure 1. Sub-categories of crowdsourcing**

(Source: <http://dailycrowdsourc.com/crowdsourcing/infographics/viewdownload/1-infographics/11-umbrella-of-crowdsourcing>)

It is proven that outsourcing activities can be used as a form of making organizational management more efficient and profitable as well as constitute a source of income for the people involved. This context determined the focus of this research study on *microtasks*, which are the activities that don't require that the workers completing the tasks possess defined skills, the tasks being distributed to human resources all over the globe via different websites that facilitate the exchange. The base model of *microtasking* consists in breaking down big projects into *small individual tasks* (referred to as *microtasks*) and distributing them to be completed by workers all over the globe through many *websites that act like marketplaces for this exchange*. These workers can work to complete the tasks simultaneously and efficiently, making it possible for a task that could take months to complete by

utilizing a finite pool of workers such as the company's employees to be completed in a matter of minutes.

The typical *microtasks* are in the field of content management (check links, check for inappropriate language), database creation (find phone numbers), data management (categorize information, add tags and metadata, check photographs), text creation (create catalogue descriptions, transcription), translation, search engine optimization (add tags, test changes in search results from content changes), testing (usability) (Dawson & Bynghall, 2011, p.35).

Microtasks like the translation of short text can be achieved very efficiently by combining machine translation with crowdsourcing. The party that needs the translated text can ask, via crowdsourcing applications, native speakers to edit the machine translated version (what the author calls Googlish) of the text and therefore obtaining the translation quickly and economically. (Miettinen, 2011, p.38).

**Table 1. Microtask platform options**

Amazon Mechanical Turk	Mechanical Turk Dominates the microtask landscape. It is the longest established platform, draws a huge labor pool, and has advanced APIs (Application Programming Interfaces). It describes microtasks as Human Intelligence Tasks (HITs). The platform can only be used by project owners with a US-based bank account.
Other microtask platforms	For non-US based project owners and those looking to tap other worker pools there are a variety of other platforms including Clickworker, Microtask, ShortTask and Samasource.
Service marketplaces	Some employers choose to post what are effectively microtask projects on the larger service marketplaces, but here you will need to individually manage providers or teams.
Niche platforms	Some niche platforms such as Jana (for research consumer insights) cover specific types of microtask work.
Aggregators and managed services	Aggregators provide a managed service and platform usually as a layer on top of Mechanical Turk. They help break more complex projects into microtasks and can also help with hitting certain quality objectives.

(Source: Dawson & Bynghall, 2011, pp.37-38)

Some innovators and idea platforms of *crowdsourcing* also feature philanthropic and social challenges. For example, *Samasource* is a *microtask* platform designed to create opportunities for those in developing countries to earn a realistic living wage. *Ushahidi* is a non-profit technology company which provides a quickly deployable open source platform for gathering data in crisis situations for example in the Japan earthquake.

In 2011, 33% of workers on *Amazon Mechanical Turk* were at the time located in India. But only 6% of Indian households have a PC and *Internet* connection. (Miettinen., 2011, p.41). This is one of the reasons why we extended the research to find out more about the *human resources involved in completing microtasks*.

## 2. RESEARCH MOTIVATION, PARTICIPANTS AND RESEARCH HYPOTHESES

As companies develop more ways of tapping into the global workforce and as more people gain access to the Internet and laptops or mobile devices, we believe that the market for *microtasking* will expand. This is particularly important as it is believed to have a transforming effect on all entities: businesses, non-profit organizations, governments, universities etc. This particular activity is the next step in cost reduction (after automation and outsourcing to overseas companies) allowing entities to have activities that couldn't be automated and completed by computers and therefore are usually assigned to human beings in the form of employees to now move them from "in-house" to "crowdsourced". By using this method, the *crowdsourcer* entities reduce cost but also tap into a virtually unlimited, low-maintenance, flexible and available real-time workforce that could be utilized in many ways to the crowdsourcer's advantage. It is therefore essential to understand who the people that are part of the workforce that is available to complete these tasks are and what motivates them. Employers are always interested in understanding what, other than financial, rewards the workers find important. As a consequence, we focused our research on identifying the categories of *human resources* interested in completing *microtasks*.

The research hypotheses are:

**Hypothesis 1:** The male/female ratio of workers completing microtasks is above 1

**Hypothesis 2:** Most subjects are not highly educated (highest degree: high school)

**Hypothesis 3:** The majority of microtaskers are mainly motivated by the rate of pay per task. In this context, obtaining consistent income is a supplemental motivation for their involvement in completing microtasks

**Hypothesis 4:** The secondary motivation for the individuals surveyed is the flexibility offered by the option of working from anywhere and making their own schedule

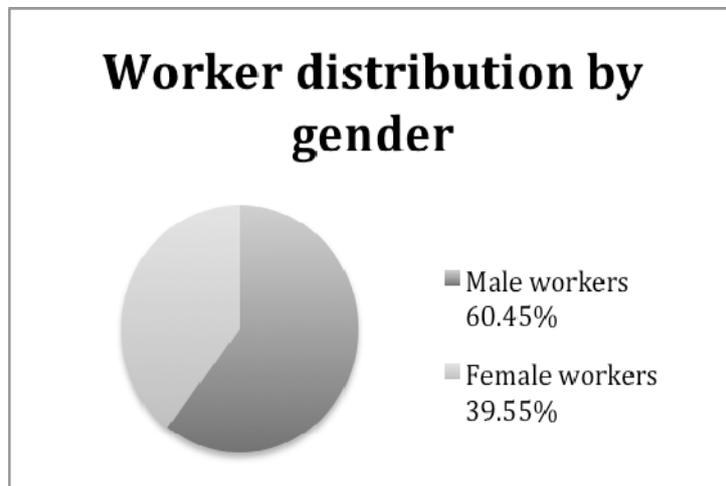
Literature review helped us choose Hypotheses 3 and 4. Horton and Chilton (2010) have recently shown, while referring to workers that participate in crowdsourcing, that "Individual workers will make labor supply decisions by comparing the costs and benefits of working, and although workers have to think rationally about their preferences, they do not have to think strategically. In short, we do not need a game theory of crowdsourcing but rather a price theory of crowdsourcing"

As our research method, we used a structured survey on the platform that dominates microtasking, Amazon Mechanical Turk (mturk.com) through which we gathered data about the human resources engaged in microtasking: their age, gender, education, household income, financial and non-financial motivation, etc. The goal was to find out more about the individuals that participate in these activities and to find out more about what motivates them.

## 3. RESEARCH RESULTS

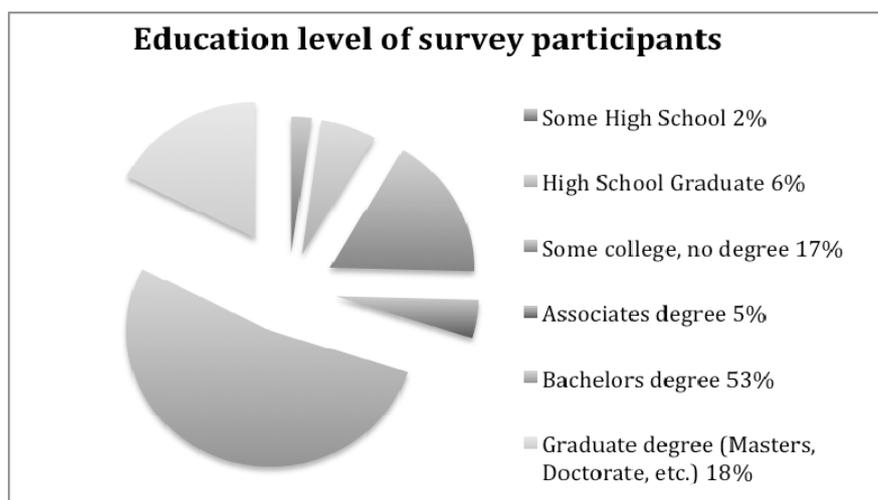
The research was conducted via a questionnaire that was posted the most popular microtasking platform, Amazon Mechanical Turk, as a HIT (Human Intelligence Tasks) also known as a *microtask* in different batches and at different prices per HIT to make sure that we reached all the audience available. We also removed the condition that the participants had over 95% approved HITs historically (we had to turn the option off as it is on when you create it on mturk.com by default) for the same reason, to make sure that we don't exclude any possible survey participants. 220 participants responded. Some responded multiple times, so we went through the raw data to remove multiple responses by the same participant. After excluding the multiple responses, we had 177 unique responses left.

After analysing the data, we found that hypothesis 1 is true, the gender distribution of our “crowd” being 60% male and 40% female. However, we found it an environment inclusive of females, where there is no possible gender discrimination since the employer has no access to gender information about the workers.



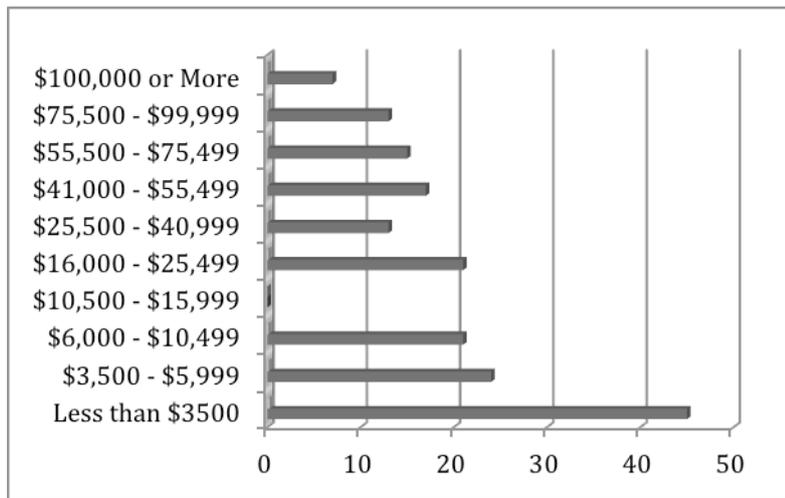
**Chart 1: Gender distribution**  
(Source: Created by author)

While we continued to test our hypothesis number 2, the one that portrays to the education level of the participants to the microtasking workplace, we were surprised to find that hypothesis number 2 turned out to be false. We started from the supposition that only individuals that aren't highly educated would volunteer to complete tasks that don't require specialized skills but we found out that 71% of our survey participants said that they hold either a bachelor's degree or higher. 18% revealed that they hold either a masters or a doctorate degree. We believe that this is very valuable information for the prospective employers that might consider utilizing this pool of educated individuals for various projects.



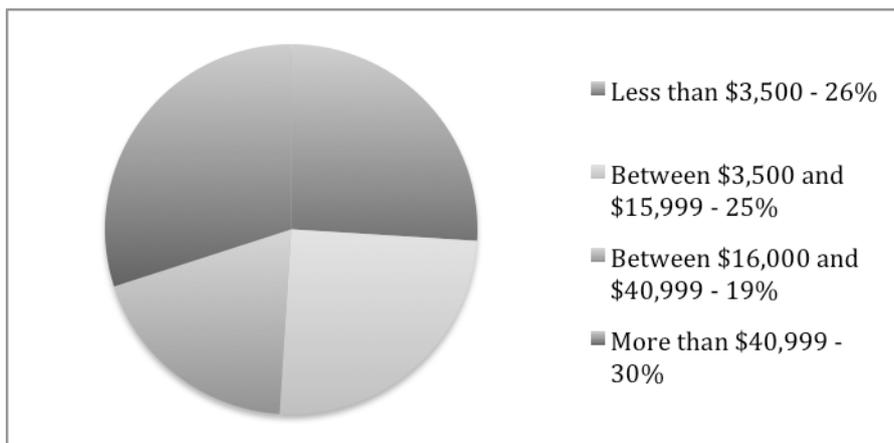
**Chart 2: Survey participants by education level**  
(Source: Created by author)

Surprised by our findings regarding the education level of the participants, we continued by analysing what the participants responded when asked about their household income.



**Chart 3: Number of workers per yearly household income level**  
 (Source: Created by author)

We were surprised to find out that 26% lived in households with yearly incomes of \$3,500 or less but also to see that even a higher percentage, 30%, lived in household with yearly incomes of over \$41,000. To put this in perspective, that would place them at or above the level of the median income in the United States.

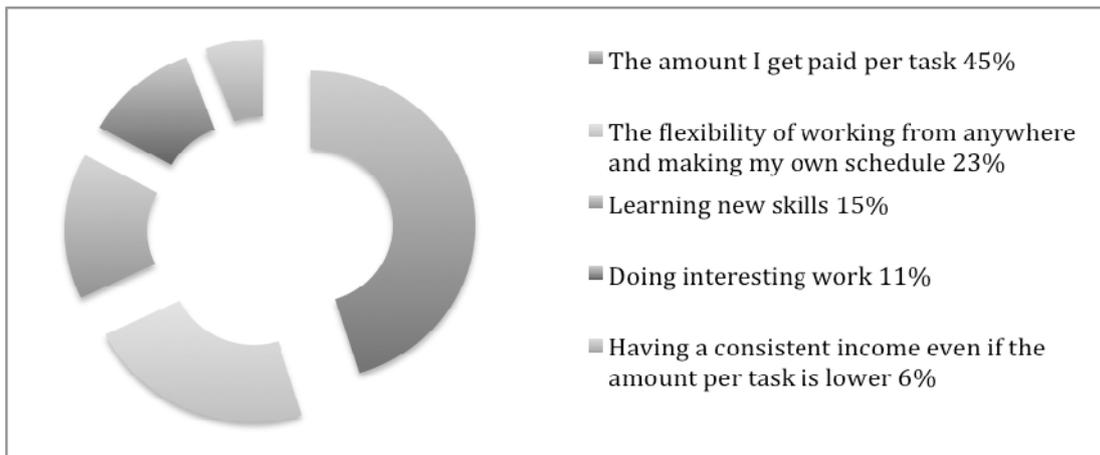


**Chart 4: Percentage of participants by yearly household income level**  
 (Source: Created by author)

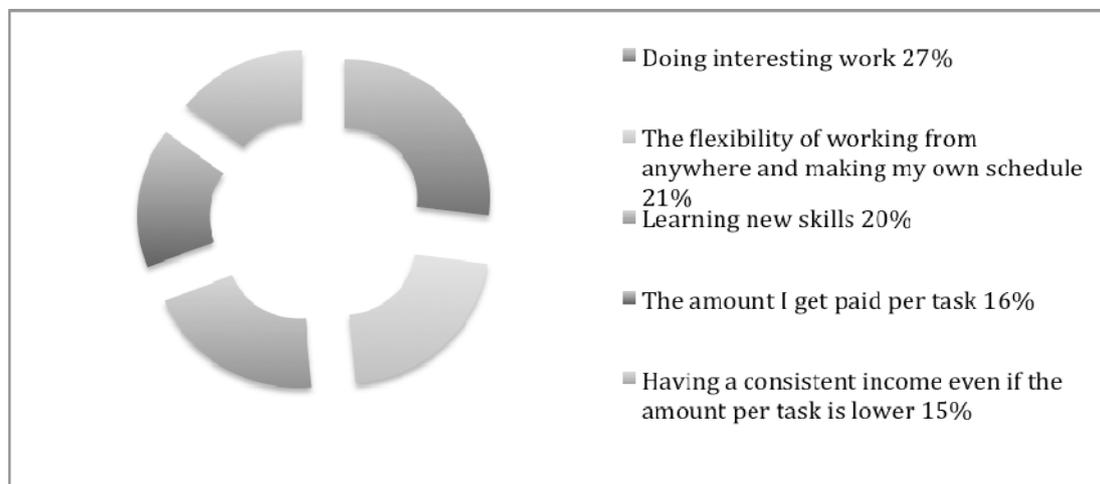
Our hypothesis 3, as illustrated in Chart 5, is true: most workers are mainly motivated by the rate of pay per task and find that the economic incentive is the main motivation for their participation in the activities on the crowdsourcing platform.

As shown in Chart 6, our hypothesis 4 is only true in part. The survey respondents cited as their secondary motivations the following: doing interesting work (27%) and the flexibility of working from anywhere and making their own schedule (21%). The motivation of learning new skills came as a close third (20%). This gives us some insight into how, if we were to find an efficient way, we can keep the workers motivated and tap into this extraordinary resource.

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**Chart 5: Primary motivation for completing microtasks online**  
(Source: Created by author)



**Chart 6: Secondary motivation for completing microtasks online**  
(Source: Created by author)

#### 4. CONCLUSIONS

*Microtasking* and the platforms that facilitate it form a formidable environment allowing everybody (individuals, small and medium enterprises, large corporations, governments etc.) to tap into a *global, very large human resource very easily*. This has the potential to fundamentally change activities in all industries throughout the globe. Currently, this resource is mainly being utilized to have tasks completed by a human being as inexpensively as possible. Usually this results in substantial cost savings for the companies that replace the cost of having these tasks completed in house by their employees with the lower cost of making them available to be completed by the “crowd”.

Our study proves that the “crowd” that participates in microtasking has the potential to perform more valuable assignments. We believe that all organizations should be interested in developing and better utilizing this extraordinary human resource. We pointed out the fact that this group of individuals could, in addition to the rate of pay, be motivated by interesting work and the potential of learning new skills. These individuals are ready to work on activities more suitable for highly educated individuals (as our study shows, 71% hold a bachelors degree or higher) and organizations, by determining ways to engage with this “crowd”, can further profit from the opportunities that may arise.

This easily accessible, inexpensive and virtually unlimited resource has the potential of revolutionizing the work environment all over the world. In addition to creating opportunities for

organizations, this new employment method also brings opportunities for individuals, regardless of their age, gender or education level, to supplement their income. As organizations continue to find ways of making use of this new form of employment, we anticipate the emergence of revolutionary ideas.

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