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A "Democratization" of Markets? Online Consumer Reviews in the Restaurant Industry

Kevin Mellet*, Thomas Beauvisage, Jean-Samuel Beuscart, and Marie Trespeuch

Abstract

This article examines the promise of market democratization conveyed by consumer rating and review websites in the restaurant industry. Based on interviews with website administrators and data from the main French platforms, we show that review websites contribute to the democratization of restaurant criticism, which first started in the 1970s, both by including a greater variety of restaurants in the reviews, and by broadening participation, opening restaurant reviewing to all. However, this twofold democratic ambition conflicts with the need to produce fair and helpful recommendations, leading review websites to seek compromises between these two dimensions.

Key words: market; valuation devices; reviews; online consumer reviews; democratization; restaurant industry

In recent years, the Internet has given rise to many forms of user participation. These user contributions are usually voluntary, and result in the production of freely available public information goods (encyclopedias, video or photo databases, news, expertise, etc.). Consumer rating and review systems such as Amazon's and TripAdvisor's are examples of participatory devices that have met increasing success over the past decade and are now extremely widespread. This way of assessing the quality of products takes various forms, depending on the design of the websites, but it has established a

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central and relatively standardized device: the so-called "online consumer review" (OCR), which comprises a rating and an associated written review. OCR systems allow any Internet users to offer their opinions on a broad range of products and services based on their personal experiences, and to thereby guide consumers' choices. Nowadays, these systems cover a wide variety of goods and services, including cosmetics, hotels and restaurants, appliances, and cameras as well as mechanics, funeral services, banking services, etc. (Beauvisage et al. 2013).

The emergence of a new consumer voice is part of a broader movement towards "empowerment" and "democratization" associated with the Internet. Such, at least, is the explicit discourse of the founders and managers of OCR websites. For instance, the head of Yelp, a consumer reviews website dedicated to local businesses, asserts that "consumers are *empowered* by Yelp and tools like it: before, when they had a bad experience, they didn't have much recourse. They could fume, but often nothing else other than tell their friends. Now the consumer has a lot more power."[1] As for the founder of TripAdvisor—a website that collects ratings and reviews of hotels, restaurants, and tourist sites—it says that "online travel reviews have hugely changed the way the travelers can plan their holidays—they add an independent view of where to go and stay giving another level of assurance that their hard-earned travel Euro is spent wisely. . . . That's the positive power of Internet *democracy* in action."[2]

What do website managers mean when they say that they are contributing to the democratization of the market? What framings do they operate to give materiality to the ideology and rhetoric of democratization? Are they able to give substance to these democratic and consumerist claims in practice? In other words, how much credit should be given to these claims?

The purpose of this article is to describe the production of evaluation by OCR websites and to gauge their claims about being part of a democratization movement. This study focuses on the restaurant industry, which offers a particularly interesting subject with which to complete this agenda. Indeed, it is in this sector, along with the hotel industry, where the effects of consumer reviews, and controversies they generate, are the most important (see Jeaclee and Carter 2011; Luca 2011; Anderson and Magruder 2012; Scott and Orlikowski 2012; Cardon 2014). On websites that specialize in the evaluation of local businesses, such as Dismoiou, Qype, or Yelp, restaurants are the most extensively reviewed category (Nomao 2012). Symmetrically, websites dedicated to reviewing restaurants, such as LaFourchette in France, get high audience ratings. Finally, the

[1] Jeremy Stoppelman, CEO of Yelp, in *The Guardian*, 05/06/2013. Emphasis added.

[2] Stephen Kaufer, CEO of TripAdvisor, in *Actualizado*, 20/10/2011. Emphasis added.

extension of consumer reviews has caused a stir among professionals: for example, the introduction of consumer reviews on the French version of the Michelin website in 2012 sparked an outcry from some of the greatest French chefs, who deplored an impoverishment of culinary expertise.

The above-mentioned website managers explicitly refer to a democratization movement associated with the Internet, which they claim to be part of. In his seminal work on the democratizing effect of the Internet, Benkler identifies and differentiates two types of effects: "The first is the abundance and diversity of human expression available to anyone, anywhere, in a way that was not feasible in the mass-mediated environment. The second, and more fundamental, is that anyone can be a publisher, including individuals" (Benkler 2006, 214). The first dimension of Internet democratization stresses access to information and the multiple opportunities that arise as a result, while the second one focuses on the ability of individuals to be active participants in the public sphere. These two dimensions are also emerging from research interested in the integration of democratic ideology into the economy and the market—including the restaurant industry (see Ferguson 1998; Johnston and Baumann 2007). Zukin (2004) describes the history of American consumption as a process of democratization. Her analysis of the formation of shopping as an institutional field shows that technical innovations and lower prices have systematically contributed to expanding access to consumer goods. The work of Gould (1989, 2004) follows another direction, this one grounded in political philosophy. She argues that democratic decision-making should apply not only to politics but also to economic and social life. This approach "bases the requirement for democracy on the equal rights of individuals to participate in decisions concerning frameworks of common activity defined by shared goals" (Gould 2004, 163). To sum up, we can identify two different conceptions of democratization associated with markets and with the Internet. The first one is expressed in terms of access to the market and refers to the "economic" definition of democratization: online review sites allow a much greater number of consumers to benefit from reviews on a wider range of restaurants. We can speak here of democratization-as-inclusion. A second form of democratization, highlighted in the words of TripAdvisor's and Yelp's managers, involves the opening of the public sphere to the expression of new players, namely "ordinary" consumers. Let us call this second form democratization-as-participation.

By confronting these regimes of democratization with respect to the production of lay reviews—that is, examining not only the rhetoric of OCR website managers, but also their concrete achievements—we can estimate the strength of the democratic claims made by OCR websites. In contrast to the economic fiction according to which price

summarizes all available information about a product or service, economic sociology has sought to describe the concrete devices that build product quality and guide consumer choice. In the restaurant industry, consumers are likely to rely on gourmet guides (Karpik 2000; Bonnet 2004) and newspaper and magazine reviews (Naulin 2012), but they may also be influenced by word of mouth or by various forms of marketing and advertising. In this context, online review sites constitute *prima facie* an innovative calculative agency (Callon and Muniesa 2005). They especially seem to escape existing descriptions of valuation devices. Thus, compared to the typology proposed by Karpik in *Valuing the Unique* (2010), these sites combine aspects of personal judgment devices (i.e., organizing people's raw expressions) and features from impersonal devices (i.e., building a score and a unique ranking of restaurants). Similarly, in his sociology of reviews,[3] Blank (2007) distinguishes between "connoisseur" reviews—where consumers trust the expertise of a qualified individual, the critic—and "procedural" reviews—where trust is based on impersonal techniques of objectification of qualities, such as the types of technical tests for hi-fi equipment or appliances that are at the centre of consumerist expertise (Mallard 2000). Review sites today do not build up recommendations based on the expertise of a few individuals, nor on rigorous objectification procedures.

As noted by Blank, reviews "are produced by institutions with institutional memory and standard procedures" (2007, 7). These institutions, which he also called "systems," "can be thought of as the short answer to the question 'why is this assessment credible?'" (Blank 2007, 28). This definition invites us to observe in detail how assessments are built, their format, and the type of ranking they produce. It is the construction of review sites as (young) credible institutions that we focus on here. As suggested by Orlikowski and Scott (forthcoming), these valuation devices can be understood as "material-discursive practices," and the outcome of the valuation process depends strongly on the material specifications of the systems. By positioning the OCR websites as extensions of other institutions that equip the market (gourmet guides and food critics in particular), by observing how they are structured and the procedures and formats they put in place, and by noting also the tensions at work between different ways of materially constructing the reviews, we will be able to understand the nature of the agency these sites build, and to define how they produce value. Our perspective complements the work of Scott and Orlikowski (2012), who are interested in understanding how accountability is exercised online on an OCR website (TripAdvisor)

[3] Blank defines reviews as "public summaries and evaluations that assist readers to be more knowledgeable in their choice, understanding, or appreciation of products or performance" (Blank 2007, 7). Blank focuses primarily on reviews produced by professional experts.

and overflows offline in organizational practices. We evaluate the extent to which, and the means by which, the specific accountability exercised by these websites can be qualified as "democratic" or as "more democratic" than other forms of ranking and other accountability practices.

In this article, we build upon three types of empirical materials. First, we investigate the ways in which specialized market intermediaries have built devices dedicated to the aggregation and display of restaurant reviews by ordinary consumers. We list the most important websites involved in customer reviews in the French market: Cityvox, L'Internaute, Dismoiou, Nomao, Yelp, TripAdvisor, and Michelin. Assuming that the construction of OCR devices affects the type of democratization promoted by OCR websites, we first undertook an overview of their features. We reported, for example, if the website suggested particular items to be assessed, such as "food quality" or "value"; if there was a place for free comments; how the average score was calculated; if the website spotlighted intensive reviewers, etc.

Second, we used the results of this systematic exploration to create interview guidelines, which we then used to conduct in-depth interviews with the website managers. These were conducted between July and September 2012 with French managers of five websites: Cityvox, Dismoiou, LaFourchette, Nomao, and Yelp. All the interviews were recorded and transcribed. We asked questions about the history of the websites, how the algorithms were constructed, whether the websites had incentive policies to encourage reviews, how the valuation items were chosen, and whether the restaurants were selected by the website, among other things. We also attended professional meetings and roundtables dedicated to social recommendations on the Internet and analysed most of the professional press and market studies produced by the industry during a two-year period (from mid-2011 through mid-2013). The analysis of these qualitative data was a good start in describing the history, the constraints, and the strategies of the OCR websites dedicated to restaurants. It also allowed us to put the industry's democratic claims into perspective.

Third, we collected extensive empirical material on the evaluation practices in the restaurant industry: on how traditional gastronomic guides and web users assess restaurants, how many and which restaurants are rated, and what scores they receive. We developed dedicated web crawlers to gather this information from online resources: major French OCR websites—general purpose (Cityvox, Qype, TripAdvisor) and restaurant-focused (LaFourchette, L'Internaute)—as well as online versions of traditional gastronomic guides (Michelin, Bottin Gourmand, Gault & Millau). The online version of Michelin's guide publishes both its own (professional)

reviews and (ordinary) Internet users' ratings and reviews. Online data were gathered between April 2012 and March 2013; the resulting data set consists of the list of restaurants, their average rating and number of ratings, and the details of the evaluation: score, written review, and contributor identification (Table 1). Based on detailed ratings, we also reconstructed basic information on contributors: number of reviews, ratings, and reviewing history.

Table 1. Basic OCR website data.

Website		Retrieval date	Number of restaurants	Number of ratings
Consumer reviews	Cityvox	04/2012	41,152	208,222
	LaFourchette	07/2012	6,799	642,549
	L'Internaute	07/2012	68,752	480,495
	Qype (restaurants)	01/2012	70,304	88,881
	TripAdvisor (restaurants)	07/2012	32,213	338,722
	Michelin—Internet users	03/2013	18,454	67,679
Professional reviews	Michelin—official reviews	03/2013	4,180	NA
	Bottin Gourmand	03/2013	5,254	NA
	Gault & Millau	03/2013	3,318	NA

The article is structured as follows. The first section depicts the history of gastronomic evaluation before the Internet and identifies two distinct movements of democratization within culinary criticism: inclusion and participation. The second section shows how the development of OCR websites extends these two movements, by achieving inclusion and by systematizing participation. The third section examines in greater detail the functioning of this assessment system. We highlight two features common to all websites: the unequal distribution of contributions, and the homogeneity and high level of average scores. These rating characteristics are constraints that platforms have to deal with, because they are in conflict with the aim of building fair and effective recommendations. The fourth section describes the different types of compromise set up by websites in order to articulate the participation of all users and the effectiveness of the recommendations. This requires either weakening the goal of democratization-as-inclusion or emphasizing a model of participation that favours intensive contributors to the detriment of the principle of equality (of contributors).

Before the Internet: An Effective but Moderate Movement of Democratization

A democratization movement has been affecting the gastronomic segment of the restaurant industry since the 1970s. This movement takes two different, although concomitant, forms, which correspond to the two conceptions of democracy defined above: democratization as market inclusion and democratization as participation. The first dimension entails the expansion of the market by including a growing number of consumers and producers. The second one involves the participation of consumers in evaluating the quality of restaurants and producing hierarchies within that sector. These two movements directly affect the devices, criteria, and procedures used to evaluate the quality of goods and services. Our purpose in this first part is not to recount the history of the restaurant industry as a whole (which is beyond the scope of the article), but rather to examine the transformation of the valuation devices that organize the market. By focusing on their material organization, we try to assess the extent to which their socio-technical organization enacts the two dimensions of the democratization process. Before examining them individually, it is worth recalling briefly the central place occupied historically by food critics and guides in the restaurant industry.

The Pivotal Role of the *Michelin Guide*

Many sociological studies provide evidence of the pivotal role played by food critics, and especially by the *Michelin Guide*, in the emergence, organization, and maintenance of the value of so-called gastronomic restaurants in France (Karpik 2000), the United Kingdom, and Germany (Lane 2013), and to a lesser extent in the United States (Johnston and Baumann 2007; Ferguson 2008).

Gastronomic guides rely on experts, professional food critics, who are responsible for producing judgments of taste and thereby assessing the quality of a restaurant following specific criteria and evaluation standards (Bonnet 2004). Born in the early twentieth century, the *Michelin Guide* (also known as the "Guide Rouge") has specialized in restaurants since 1993, and has introduced two quantitative assessments: a rating from one to three stars, representing the quality of the food, and a five-point ("fork and spoon") rating representing the level of comfort and reception (Karpik 2000).[4] These scores are accompanied by a written comment. The assessment takes a relatively stable form—which is also used by the OCR devices—articulating and combining two opposed operations: commensuration (transforming

[4] The other restaurant guides follow, with, among others, the *Gault & Millau*, rating the restaurants on a scale of 20—5 chef's hats since 2010—and the American equivalent of the *Michelin Guide*, the *Mobil Travel Guide*, founded in 1958 and later known as the *Forbes Travel Guide*, which adopts a rating of 5 (stars).

qualities into quantities) and "singularization" (highlighting the unique and thus immeasurable dimension of the product).

The expert evaluation of Michelin relies on a single scale of quality —directed towards fine dining—with two effects. First, the guide determines and publishes a ranking of gourmet restaurants, and thus helps to guide production by explaining the dominant quality conventions within the market. The *Michelin Guide* has accompanied the transformation of the market, dominated successively by "classical cuisine" (and the figure of the restaurateur), which emerged in the early nineteenth century and experienced its golden age between 1930 and 1960, and by "nouvelle cuisine" (and the figure of the chef) that emerged after May 1968 (Ferguson 1998, Rao et al. 2003). Second, the guide is very selective and thereby contributes to the dualistic structuring of the restaurant industry: on the one hand, the segment of gastronomy, consisting of hundreds to thousands of restaurants; on the other hand, a wide group involving tens of thousands of restaurants, independent or belonging to chains, which are not deemed worthy of evaluation.

To sum up, the *Michelin Guide* marks the incorporation of gastronomy into a fundamentally elitist model, where access to the market is restricted to a limited pool of consumers. The latter have enough economic capital to afford the starred restaurants' bills, as well as the necessary cultural capital to allow the expression of judgments of taste and the purely aesthetic appreciation of the pleasures of the table (Bourdieu 1984). It was in opposition to this elitist model, or at least a detachment from it, that a process of democratization of gastronomy started in the 1970s. The dynamics of this democratization are diverse, but they will always be based on offering printed guides that come as alternatives to Michelin and its emulators.

Democratization as Inclusion: Restaurants and Guides for All

Democratizing the market means, first, expanding it to include more consumers and restaurateurs. This movement is promoted by guides and critics that introduce themselves as alternatives to Michelin. It consists on the one hand of allowing new generations of consumers with limited purchasing power access to restaurants and, on the other, of pluralizing the evaluation of gourmet food to include restaurants that do not refer to the canon of traditional French cuisine.

In the first category, we can find the editorial production of culinary or travel guides, aimed at a penniless audience, which differs from the Michelin readership. The *Guide du Routard*, whose first edition was published in 1972, embodies this alternative. The guide is selective and also focuses on the quality of the food and hospitality, but it introduces budget constraints. In doing so, as explained by its founder Philippe Gloaguen, Routard immediately addressed a generation of broke young travellers. "The idea behind the Routard was to travel

cheaply, by meeting people: we were searching for attractive and friendly places rather than the old buildings and museums. We have always kept this in mind. . . . The Routard came at the right time. Charter flights had started a few years earlier (1967). People with little money were travelling with cheap tickets and were looking for affordable hotels and restaurants."[5] Nearly three decades later (1997), the *Michelin Guide* itself would eventually fit into this logic by introducing the "Bib Gourmand" selection, which rewards moderately priced restaurants (Barrère et al. 2010).

Democratization as inclusion is also associated with the "pluralization" of expert judgments. This movement accompanies the evolution of elite cultural practices into a more eclectic and omnivorous consumption. It has the effect of opening market access on the supply side this time. In the field of gourmet food, Johnston and Baumann (2007) draw attention to this movement by observing the emergence of new valuation frames in gourmet food journalism in the United States in the early 2000s. Some magazines, such as *Bon Appétit* and *Food and Wine*, started to criticize the unique value scale that puts French haute cuisine at the top of the culinary hierarchy. They introduced new frames, authenticity and exoticism, pointing at them as legitimate cultural options. Johnston and Baumann interpret this shift as a way of managing the contemporary ideological tension between democracy (inclusive logic) and distinction (exclusive logic). In the context of the United States, where democratic ideology is associated with market culture and consumerism, "democratic ideology fuels the omnivorous notion that arbitrary standards of distinction based on a single, elite French notion of culture are unacceptable, and that multiple immigrant ethnicities and class cuisines possess their own intrinsic value" (Johnston and Baumann 2007, 173). In France, *Le Fooding* guide, launched in 2000, fits these dynamics of pluralizing expert judgments perfectly. It includes in its selection exotic food or even "trendy" tables. Its founder, Alexandre Cammas, was led by "the desire to cross swords with a certain idea of 'unique good taste,' and to open up a more libertarian voice in the world of French gastronomy."[6]

Whether it makes cultural consumption accessible to the masses or renews the repertoires of critics whose reviews are intended for the socio-economic elites, the dynamics of democratization as inclusion maintain the centrality granted to selective guides, and especially to the figure of the expert.

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[5] "Guides de voyage: 40 après, le routard est une institution," *AFP*, 22/02/2013. http://www.afp.com/fr/professionnels/services/news/838624/sitemap/. Our translation.

[6] "Le Fooding célèbre ses 10 ans," *L'Hôtellerie Restauration*, 16/11/2010. http://www.lhotellerie-restauration.fr/journal/restauration/2010-11/Le-Fooding-celebre-ses-10-ans.htm. Our translation.

Democratization as Participation: Zagat

Things go differently with another dynamic of market democratization, one that requires the active participation of consumers in the valuation of goods. Ordinary consumers are invited to contribute to the making of a collective opinion on the goods and services they have experienced. This lay judgment results from the aggregation of individual judgments of multiple consumers, as opposed to expert judgments, which are assumed to be incomplete, opaque, biased, or even corrupt.[7]

Historically, the participatory logic was not completely absent from guides based on the work of experts. It was mainly based on customer feedback, in the form of letters and e-mails. Such contributions are often encouraged by guides. The Routard rewards feedback from its readers—and they are numerous; according to Lane (2013), Michelin receives 45,000 letters and e-mails in Europe each year. However, even if they are sometimes thanked at the end of the book, the consumers are not presented as contributors or reviewers. Consumer judgments are recognized only to the extent that they rectify omissions or report on developments that have occurred since the visit of the official critic.[8]

Democratization as participation requires, more radically, the disappearance of the expert.[9] The aim is to depart from "expert" judgments by appealing to the judgment of ordinary consumers. This relies on the implementation of specific procedures: voting on the one hand, and the multiplication and aggregation of experience accounts on the other. These actions are at the heart of the editorial project of the Zagat Survey, established in 1979 by Tim and Nina Zagat in New York: "The publishers kept saying that people don't want to hear from people like them, they want to hear from experts. It's sort of amazing when you look back on it now."[10] The Zagat Survey gives voice to ordinary consumers: restaurant rating is entrusted to a group of amateur critics that has continued to expand from 200 in 1979 to more than 30,000 in the early 2000s. The rating of each restaurant is the average of individual ratings given by reviewers. Publishers

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[7] As stated by Raymond Postgate, founder of the *Good Food Guide* in the UK in 1951, "you can corrupt one man. You can't bribe an army." http://www.thegoodfoodguide.co.uk/news/the-good-food-guide-is-60.

[8] This is, for example, what Lane observes in her analysis of the *Michelin Guide*: "The Michelin Guide actively encourages responses from diners but still uses inspectors' judgment as the main criterion for the classing of restaurants. The considerable customer feedback . . . is said to provide useful indications but is never considered a substitute for the work by inspectors in the field" (2013, 351).

[9] Even though, according to Bonnet (2004), gourmet critics must be able to put themselves in the *average* consumer's shoes.

[10] Nina Zagat, *New York Times*, 14/11/2010.

compile consumers' written comments and summarize the opinions expressed in the form of quotes.

While some authors emphasize the important innovation that Zagat's format represents (Blank 2007), others have stressed the artificiality of its procedures, which would basically suggest a sham democratization (Shaw 2000; Davis 2009). Shaw denounces multiple breaches of democratic principles and procedures set out by managers. Year after year, the base of evaluators grows, but it is the editors—Tim and Nina Zagat—who produce: i) an average score (out of 30), while the rating of an individual is either 0, 1, 2 or 3; and ii) a survey of verbatim accounts they have received, allowing the editors to prompt consumers to say what they, the editors, want them to. In addition, the questionnaire is sent once a year and respondents do not have to document their entitlement to vote (i.e., by providing receipts). In other words, the democratic procedures fail.

Other guides before Zagat had taken parties to dine to establish the quality of a restaurant on the basis of the collective assessments of consumers rather than just the enlightened judgment of one or two experts. This was the case, for example, in the *Good Food Guide*, first published in 1951. This guide is affiliated with the British Consumers' Association and it produces a ranking of restaurants by combining ordinary consumer reviews (25,000 in 2010) and those of professional experts working anonymously. But, as pointed out by C. Lane, "it is not clear . . . how much weight is accorded to each source of judgment, nor how many inspectors are employed" (Lane 2013, 356).

The participatory process driven by consumerist associations or entrepreneurs seeks to allow lay judgments to emerge. However, printed guides do not quite make the role of the expert—or at least the active mediation of the publisher—disappear. Indeed, by multiplying judgments on the same restaurant, the question of their synthesis appears: with Zagat, it remains the output of an editorial work; OCR websites will make a difference by giving this synthesis digital and algorithmic foundations.

Online Consumer Reviews: The Second Phase of Democratization

The History and Positioning of Web-Based Platforms

We focus now on the emergence and dissemination of websites that collect and publish consumer reviews in the restaurant industry. This movement began in the late 1990s, continued during the next decade (Table 2), and led to the establishment and spread of the standardized form of "rating + written review" that is now found in many retail sectors (Beauvisage et al. 2013).

Although Amazon was a pioneer in the field of online customer feedback—the online bookstore began collecting and publishing reviews in 1996, two years after its launch—the online assessment of restaurants is also relatively old. It was initially driven by "first generation" city guides, such as CitySearch in the United States (started in 1995, but ratings and reviews start from 2000), its French equivalent Cityvox (1999), as well as the entertainment and events section of web portal L'Internaute (2000). At the same time, in France, several specialized guides in the form of web pages published by enthusiastic amateurs appeared. These initially relied on a limited pool of testers and critics and then gradually expanded to "all users," in the image of Restoaparis.fr (1999) and Resto.fr (2000).

Table 2. OCR in the restaurant industry—historical marks.

	USA	**France**
City guides	CitySearch (1995, *rating* + *reviews* from 2000)	Cityvox (1999) L'Internaute (2000)
Specialized websites	Zagat online (1999; acquired by Google in 2011, content becomes freely available)	Restoaparis.fr (1999) Resto.fr (2000) iTaste (2008) Michelin (2012)
Booking services	Opentable (1998)	LaFourchette (2007)
Online urban guides (2nd generation)	TripAdvisor (2000) Yelp (2004)	TripAdvisor (2005) Dismoiou (2007–08) iTaste (2007) Qype (2008), bought by Yelp in 2012 Yelp (2010)
Search engines, aggregators, directories	Google Maps and Google Places then Google+ Local (2005, 2006)—includes Zagat reviews (2011) YellowPages—rating and reviews from CitySearch since 2010.	Google Maps and Google Places then Google+ Local (2005, 2006) Nomao (2007–08) PagesJaunes (rating and reviews from 2010)

With the wave of Web 2.0 innovations, a new generation of websites dedicated to local searches has emerged. Yelp was launched in the San Francisco Bay Area in 2004; it took the place left vacant on the web by

Zagat[11] and differs from the first generation of city guides in that it provides more space for contributors. The site is a local directory and each "place" can receive more or less detailed information, a rating out of 5, and reviews. The site focuses on the community of contributors by developing social features, including member pages that give members visibility and allow them to connect to one another, reward systems (badges) for the most prolific contributors, and dedicated communication tools for members. The site expanded internationally after 2009, arriving in France in 2010. The European equivalent of Yelp, Qype (contraction of "Quality" and "Hype") was launched in 2006 in Germany and arrived in France in 2008.[12] Dismoiou (2007), iTaste (2007), TripAdvisor (2005 for the French version), and the booking site LaFourchette (2007) all appeared at around the same time and offer similar design and features.

Some "historical" players, finally, converted later to online consumer reviews. This is the case of the directory Pagesjaunes.fr, which, since 2010, has allowed users to submit ratings and reviews of listed professionals, with the exception of regulated trades such as doctors and lawyers. In the field of gastronomic guides, the *Michelin Guide*, which is facing a decline in sales of its printed version,[13] launched a free online version in 2012. The latter integrates two major innovations: the inclusion of restaurants not listed in the paper guide, and the possibility for Internet users to rate and review restaurants.

In sum, many websites invite ordinary consumers to evaluate restaurants. The sites differ from each other, of course, because of their particular histories, design, and positioning. However, we observe that, in general, the Internet continues and deepens both democratization movements identified previously: economic democratization and an inclusive logic on the one hand, participatory logic and the empowerment of ordinary consumers on the other. These two dimensions are now examined in turn.

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[11] The guide, published annually in print, went online in 1999, thanks to the acquisition of the family-owned company by the investor General Atlantic. Access to content is limited, for fear of cannibalizing print sales. As a logical consequence, the website is poorly referenced and gets low audience scores. This model is an economic failure—although the print version remains very profitable—and leaves room for other free sites, starting with Yelp. In September 2011, Zagat was acquired by Google—who had offered $500M in 2009 to buy Yelp, without success. From that moment, the content became free and was made available on Google Maps and Google+ Local services.

[12] Qype is close in design to its American equivalent, Yelp. The latter acquired Qype in October 2012 for an estimated $50M.

[13] The drop in sales is massive: in French bookstores, sales of the *Michelin Guide* have fallen from 500,000 units in 1996 to 107,000 in 2010 ("Tout juste lancé, le site Michelin devra convaincre internautes et restaurateurs," *Le Monde* 06/03/2012).

Restaurant Reviews: From Selectivity to Inclusion

Online consumer reviews represent an important extension of the field of taste-making. While printed guides are based on the critical work of experts and operate on a highly selective logic, websites open up reviewing to a very wide range of restaurants. Printed guides such as *Le Routard* and the *Michelin Guide* produced a dual world, clearly separating a small collection of restaurants that meet their specific quality criteria from the vast array of other restaurants, which were excluded and ignored by evaluation. In contrast, OCR websites open up a world of lay reviews, where each platform integrates a large number of restaurants that fall under varied quality scales: on TripAdvisor, for example, three-star (Michelin) restaurants are reviewed side by side with kebab houses.

It is possible to quantify the magnitude of this movement of inclusion. Considering the number of listed restaurants, we observe that the official guides are typically ten times smaller than OCR websites (Table 3).

Table 3. Number of listed and rated restaurants on a selection of websites—online version of printed guides and OCR websites.

Category	Guide / Website	Listed items	Rated items
Printed guides (online version)	Michelin—experts	4,180	4,180 – 100%
	Bottin Gourmand	5,254	3,860 – 73%
	Gault & Millau	3,318	3,318 – 100%
OCR Website (lay reviews)	Cityvox	41,152	25,223 – 61%
	LaFourchette	6,799	4,200 – 62%
	L'Internaute	68,752	61,782 – 90%
	Michelin—consumers	18,454	14,260 – 77%
	Qype	70,304	29,672 – 42%
	TripAdvisor	32,213	31,999 – 99%

The 2012 Michelin Guide includes expert evaluations for 4,180 restaurants, both in its printed and online versions. On the website, however, more than 18,000 restaurants were reviewed by Internet users.[14] Meanwhile, TripAdvisor listed more than 32,000 French restaurants, most of which had received at least one user review. On the online portal L'Internaute, it is possible to scroll through more than

[14] This measurement was taken in March, 2013, exactly one year after the launch of the website.

68,000 restaurant pages, 9 out of 10 of which are subject to at least one rating. LaFourchette is the only exception to this inclusive logic: this selective website only lists restaurants that use its booking service and get an average rating higher than 6.5 out of 10. "Only" 6,800 restaurants were listed, of which 4,200 were rated, which is similar in number to the printed guides.

One can interpret the extension of the field of evaluation as an achievement of the democratization-as-inclusion movement born in the mid-1970s: all restaurants, even the smallest, are subject to review. Moreover, even the most poorly rated restaurants are listed online, whereas printed guides listed only the best. Thus, online guides not only point at the best restaurants, but also at the worst. This becomes apparent when examining the price ranges of the restaurants listed by each guide (Table 4).

Table 4. Price range and distribution of restaurants.*

Guide		– €15	€15–€30	€30–€60	€60–€90	€90+	*Total*
Paper	Michelin—experts	0%	10%	71%	14%	5%	*100%*
	Gault & Millau	1%	14%	59%	19%	7%	*100%*
	Bottin Gourmand	3%	32%	52%	10%	4%	*100%*
OCR	Michelin—consumers	4%	44%	45%	5%	2%	*100%*
	TripAdvisor	14%	51%	23%	10%	2%	*100%*
	L'Internaute	16%	76%	7%	1%	0%	*100%*

* Price ranges are based on a predetermined classification for L'Internaute, and with an average of the price brackets for other guides and websites, when such information is available. The filling rate of this information is 21% for TripAdvisor, 80% for the Bottin Gourmand, 85% for L'Internaute, 89% for Gault & Millau, and 95% for Michelin.

Traditional expert guides studied here are focused on the high-end range of restaurants. In terms of price, they are focused on restaurants in the €30–€60 range (between 50% and 70% of listed establishments), and to a lesser extent on the €60–€90 range (between 10% and 20%). Inexpensive restaurants (less than €15) are virtually absent from traditional guides. In contrast, almost 15% of establishments listed on L'Internaute and TripAdvisor belong to this category. The majority of listed restaurants belong to the €15–€30 range. As a symbol of this economic democratization movement, at Michelin there is a division of labour between the professional inspectors, who focus on more than 4,000 restaurants in middle and

high price ranges, and Internet users, who review more than 18,000 restaurants in the lower-priced segment.

Power to the Internet Users

Along with this movement of economic democratization, websites continue and deepen the participatory process that was initiated by printed guides such as the *Good Food Guide* and *Zagat*. The movement is progressive, going through a complete outsourcing of editorial work and the stabilization of a judgment device supposed to reflect the collective opinion of consumers about restaurants. The review sites have not so much invented the participation of Internet users in making judgments about goods and services (such opinions were already being expressed in online forums, for example), but an algorithmic form to synthesize them. This synthesis relies on a digital objectification of quality: the score given by an individual is not only the synthesis of his or her opinion, but also the implementation tool of democratization-as-participation, through the algorithm and calculation.

The recent history of websites dedicated to consumer restaurant reviews is marked by a progressive disengagement of the editorial and content production roles. This is well documented in the historical analysis of Cityvox by Weygand (2009). Launched in France in 1999, the site relied immediately on the contributions of users to enrich its content. This did not prevent the young start-up from recruiting, in June 2000, 75 employees assigned to the editorial team to provide content for the various local versions of the site. The company had around 120 employees at the end of 2001, before downsizing its staff to about 15 employees later in the decade. In addition, control over consumer reviews has remained strong, as each submitted review is always moderated by an employee before being posted, and contributors see their reviews published only after they have written three. This dissuasive logic reflects moderate distrust in the voice of Internet users, who must remain strictly controlled by the site's editorial team.

With the emergence of the second generation of city guides, there has been a disengagement of all editorial roles. Websites such as Dismoiou, Qype, and Yelp buy local business directories, which they publish online. Information about the listed businesses, which may initially be scant and sometimes even incorrect, can be corrected and enriched by the traders themselves; the websites encourage them to do so by arguing that richer information provides better rankings, and thus greater visibility, in search engine results. It is also possible to add places that had not yet been listed. Users can then, once registered, leave ratings and written reviews about the businesses, which can be published immediately. Moderation work is delegated to the algorithms responsible for identifying fraudulent behaviour—such as

many reviews published at the same time from a single IP address or for a single business, for example—and also to users who may flag suspicious published reviews. Internal teams, meanwhile, focus their activity on the technical management of the platform, the running of the "community" of contributors, and the sale of advertising space.

Disengagement of the editorial work involves the enrolment of users. Fulfilling the movement of democratization-as-participation also requires the establishment of democratic assessment procedures. Websites have relied on existing "rating + review" systems to build collective opinion, by recording, aggregating, and publishing ratings and reviews produced by online contributors. In the restaurant industry, the device imposed itself on all players, even lately to market intermediaries that are not directly involved with lay assessment (such as the PagesJaunes website and especially the Michelin website). The combination of a rating and a written review follows the format established by the *Michelin Guide* in 1933. The first difference with the printed version is that the rating of the restaurant is made from the average of all ratings given by individual contributors. The analogy with the vote is enhanced by a systematic display, next to the rating, of the number of individual scores assigned to the restaurant: "voter turnout" reflects the quality of democracy-in-action.[15] The second difference is the way the written review contributes to the making of an objective judgment on the quality of the restaurant. In the case of the *Michelin Guide*, the objectivity of the review is guaranteed by its anonymity and its (supposed) conformity to strict and codified assessment procedures (Blank, 2007; Ferguson, 2008). In contrast, lay consumers can unleash their subjectivity in their written reviews. Indeed, it is the accumulation and proliferation of subjective narratives, which the user is free to browse, that guarantees the formation of an objective judgment.

This setting is common to all OCR platforms. However, it may be amended at the margin, in various ways, by site managers. Thus, on Cityvox, ratings published more than two years before are not included in the average rating—it is one year on LaFourchette. On Dismoiou, an elaborate algorithm seeks to moderate the effect of extreme ratings:

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[15] The unequal distribution of ratings distorts the evaluation of different restaurants. Indirectly, it provides a second assessment metric, based on popularity. Website managers believe it is used as an indicator of second ranking, which provides information on the reliability of the rating. Similarly, Luca (2011) shows in an econometric study that the positive impact of a rating on the income of a restaurant is even stronger when this rating is made of a large number of individual ratings. The platforms are not immune to the "Zagat effect" criticized by Shaw (2000), according to whom the supposedly democratic rating is primarily a proof of popularity.

> We consider that negative and isolated ratings are not necessarily . . . well, when there are few ratings, there is an algorithm that brings up the average rating a little bit, we hope in the smartest way possible, but the goal is not explicitly to raise the rating, the goal is to try to mitigate the risk of competitors or people giving a very poor appraisal when it is an isolated case. When assessments are numerous, the average is quickly built, but when there are few assessments, we have something in the recommendation algorithm that will minimize extremes. But it is also true for very good ratings; if there is only one, it will not appear. . . . Basically, the algorithm flattens the extremes when there are few ratings, be they good or bad. (Dismoiou)

The publication of written reviews may also vary from one site to another. By convention, the most recent reviews are always displayed first; but more or less sophisticated filters allow users to select reviews or browse them according to different criteria: language, contributor's status, associated rating, consumption context, etc. The main issue is to ensure that reviews result from actual consumption experiences and are therefore genuine—and this is the issue that was the focus of discussions in the AFNOR working group, aimed at producing a certification of online consumer reviews in 2012 and 2013. Despite websites' efforts to ensure the authenticity of ratings and reviews, deceptive reviews akin to misleading advertising or denigration slip through the net—in proportions that are impossible to assess. For example, on Yelp, 16% of reviews are identified by the filtering algorithm as fraudulent; the proportion of fraudulent reviews actually published, however, is unknown (Luca and Zervas 2013).

Taste-Making Through Public Opinion

By broadening the array of reviewed restaurants, OCR websites have achieved the democratization as inclusion in the restaurant industry; in addition, they have developed a model of consumer contribution to this evaluation. Now we examine in greater detail the operation of this model, and characterize the nature of the rankings produced by the device. If OCR devices are indeed produced by "anonymous and distributed consumers using informal, variable and individual criteria grounded in personal opinions and experiences" (Orlikowski and Scott, forthcoming, 1), they do not produce very heterogeneous and unstable valuations.

In this section, when data processing involves contributors (not restaurants), we had to partially restrict the scope of analysis because it was impossible in some cases to connect a review to a single contributor.[16] Thus, analyses of contributors (in particular, assessment

[16] Indeed, among the six platforms studied, some do not require their contributors to create a profile page, or they otherwise allow them to remain anonymous. To exclude these cases, we isolated identifiable generic evaluators, for example, those without real or login names on L'Internaute ("Philippe", "Patrick C."), the "Anonymous User" on LaFourchette, and "A reviewer from Facebook" on TripAdvisor.

of the intensity of their activity) include 95% of retrieved reviews from LaFourchette, 90% from TripAdvisor, and 54% from L'Internaute.

A Heterogeneous Distribution of Participation

At first sight, synthetic participation rates on OCR websites appear to be moderate (Table 5): between 1.5 and 3 reviews per contributor on average, and an average number of reviews per restaurant between 3 (Qype) and 10.6 (TripAdvisor)—with the notable exception of LaFourchette, with more than 150 reviews per restaurant on average. There are two explanations for this. First, as a restaurant booking service, LaFourchette sends diners an e-mail asking for a review after each and every reservation. Second, as a selective guide, LaFourchette works with a smaller but active established group, in contrast to the extensive logic favoured by its competitors.

Table 5. Average rating activity.

	Number of rated restaurants	Number of ratings	Average number of ratings per restaurant	Average number of ratings per contributor
Cityvox	25,223	208,222	8.3	2.8
LaFourchette	4,200	642,549	153.0 *	2.2 **
L'Internaute	61,782	482,407	7.8	1.5
Michelin—consumers	14,260	67,679	4.7	1.8
Qype	29,672	88,881	3.0	2.9
TripAdvisor	31,999	338,722	10.6	1.9

* 40% of these ratings contain a written reviews, 60% are made of a simple score.

** On LaFourchette, the average number of reviews per contributor is probably underestimated because the base of restaurants is constantly evolving. We consider only the reviews of restaurants listed in our extraction and skip the reviews of restaurants that were previously on the site.

However, as is the case in almost all participatory platforms on the web, the observed behaviour does not follow normal distributions but power laws, and the averages reflect only imperfectly behaviour. Thus, many restaurants have few reviews, and few restaurants have many (Table 6): between 20% (L'Internaute) and 44% (Qype) of rated restaurants have received a single review, a third have two or three, and a tiny fraction have received more than 50 reviews. LaFourchette is an exception: its rating system does not list reviews for establishments that have fewer than two ratings, and the site also has a

strong ability to generate feedback following reservations, so that 40% of the restaurants on this site have more than 50 reviews.

Table 6. Distribution of rating activity over restaurants.

	Number of ratings received by restaurants					
	1	2–3	4–9	10–49	50+	*Total*
Cityvox	27%	25%	25%	21%	2%	*100%*
LaFourchette	0%	3%	18%	36%	43%	*100%*
L'Internaute	20%	24%	31%	24%	1%	*100%*
Michelin—consumers	36%	30%	21%	12%	0%	*100%*
Qype	44%	32%	20%	4%	0%	*100%*
TripAdvisor	20%	23%	28%	26%	3%	*100%*

As far as contributors are concerned, the general shape is similar. On the basis of usable contributor data, between 50% (Cityvox) and 81% (L'Internaute) of contributors have left only one rating, and only between 1% and 5% have written more than 10 reviews (Table 7).

Table 7. Distribution of the number of ratings per contributor.

	Number of ratings per unique contributor					
	1	2–3	4–9	10–49	50+	*Total*
Cityvox	50.3%	32.4%	13.6%	3.4%	0.2%	*100%*
LaFourchette	66.4%	21.1%	9.7%	2.7%	0.1%	*100%*
L'Internaute	80.9%	14.0%	4.1%	0.9%	0.0%	*100%*
Michelin—consumers	71.9%	19.6%	6.9%	1.5%	0.0%	*100%*
Qype	65.8%	18.4%	10.7%	4.8%	0.4%	*100%*
TripAdvisor	67.6%	22.5%	8.3%	1.6%	0.0%	*100%*

Therefore, the active minority weighs heavily in the total production of reviews: overall, 20% of the most active contributors generate half of the reviews, and the 1% who are most active (between 300 and 2800 Internet users according to the website) have written between 10% and 20% of the reviews (Table 8).

Table 8. Proportion of ratings made by the x% of most active contributors.

	The x% most active…			
	20%	10%	5%	1%
Cityvox	56.2%	42.4%	31.6%	14.8%
LaFourchette	56.6%	42.1%	30.1%	12.0%
L'Internaute	47.0%	34.4%	25.4%	11.4%
Michelin—consumers	51.1%	37.8%	27.1%	11.2%
Qype	66.2%	52.9%	40.3%	19.2%
TripAdvisor	51.1%	37.1%	25.8%	10.2%

An active minority thus produces the majority of evaluations. Should we conclude that all assessments are biased? In the context of participatory platforms, it is necessary to examine whether each contributor "weighs" the equivalent of its content creation activity (here, ratings). Yet, individual ratings are not displayed as such; they are aggregated into average scores, which are used to determine the rankings. As a consequence, individual ratings can be more or less diluted in the average score depending on whether the restaurant has received many or few ratings. Thus, a contributor who has given only one rating would see it buried in the average if it concerned a very popular restaurant, while that contributor would instead be the sole judge if the restaurant had received only his or her rating. In other words, it is important to examine whether intensive contributors weigh as much in the mean scores of restaurants as the less active ones. To check this out, we split the contributors' database into five groups according to their reviewing activity (from 1 rating to 50 and more). We compared the groups in terms of their share in the total number of ratings, and their weight in the restaurants' average evaluation (each rating of a restaurant is divided by the number of evaluations the restaurant has received) (Table 9). For instance, in the case of Cityvox, the contributors that had posted only one rating produced 18% of the overall ratings and accounted for 21% in the final average evaluation of the restaurants.

Table 9. Contributors' weight in restaurant evaluation regarding their activity.

Contributors' activity	% of ratings	Weight (%)
1 rating	18%	21%
2–3 ratings	29%	25%
4–9 ratings	26%	23%
10–49 ratings	21%	21%
50 or more	6%	10%

Cityvox

Contributors' activity	% of ratings	Weight (%)
1 rating	30%	46%
2–3 ratings	22%	21%
4–9 ratings	24%	18%
10–49 ratings	20%	12%
50 or more	5%	3%

LaFourchette

Contributors' activity	% of ratings	Weight (%)
1 rating	42%	41%
2–3 ratings	20%	21%
4–9 ratings	16%	16%
10–49 ratings	11%	12%
50 or more	10%	10%

L'Internaute

Contributors' activity	% of ratings	Weight (%)
1 rating	40%	44%
2–3 ratings	25%	24%
4–9 ratings	21%	19%
10–49 ratings	14%	12%
50 or more	1%	1%

Michelin—consumers

Contributors' activity	% of ratings	Weight (%)
1 rating	40%	44%
2–3 ratings	25%	24%
4–9 ratings	21%	19%
10–49 ratings	14%	12%
50 or more	1%	1%

Qype

Contributors' activity	% of ratings	Weight (%)
1 rating	32%	30%
2–3 ratings	25%	24%
4–9 ratings	21%	24%
10–49 ratings	12%	15%
50 or more	10%	8%

TripAdvisor

Results are similar for the six OCR websites: whatever the level of activity, the weight in the production of reviews is quite similar to the weight in the establishment of average scores (+/- 3 points). In other words, the assessment of restaurants clearly reflects the activity of all members of each platform. The democratization of gourmet judgment brought about by online ratings and reviews is a double trigger: any Internet user can participate in the evaluation, and its weight in the ratings will reflect the user's level of contribution.

3.2. A Lenient and Very Homogeneous Rating

Contrasting strongly with the heterogeneous distribution in the number of reviews given by Internet users and received by restaurants, average scores fall within a narrow and moderate range. Moreover, they are generous. This characteristic of online consumer rating is noticeable on all of the platforms: a majority of restaurants get an average rating of 4/5 (Table 10).

Table 10. Average and median rating of restaurants.

	Average	Median	Mode	Standard deviation
Cityvox	3.75	3.83	4.00	0.78
LaFourchette (/10)	7.94	8.00	7.90	0.61
L'Internaute	3.63	4.00	4.00	0.84
Michelin—consumers	3.98	4.00	4.00	0.72
Qype	3.70	4.00	4.00	1.03
TripAdvisor	3.81	4.00	4.00	0.84

This property is very consistent from one platform to another. The average of (average) scores of restaurants is between 3.63/5 and 3.98/5 (for LaFourchette, which gives scores out of 10, it is 7.94). On all websites, the mode is 4. It is therefore a property independent of the characteristics and features of different websites: in general, Internet users' ratings produce a mild score centred on 4 out of 5. As a consequence, the distribution of scores is Gaussian (Figure 1): most restaurants have a rating closer to the average, which is also the median (4/5). In contrast, few restaurants have a very good or a very bad score.

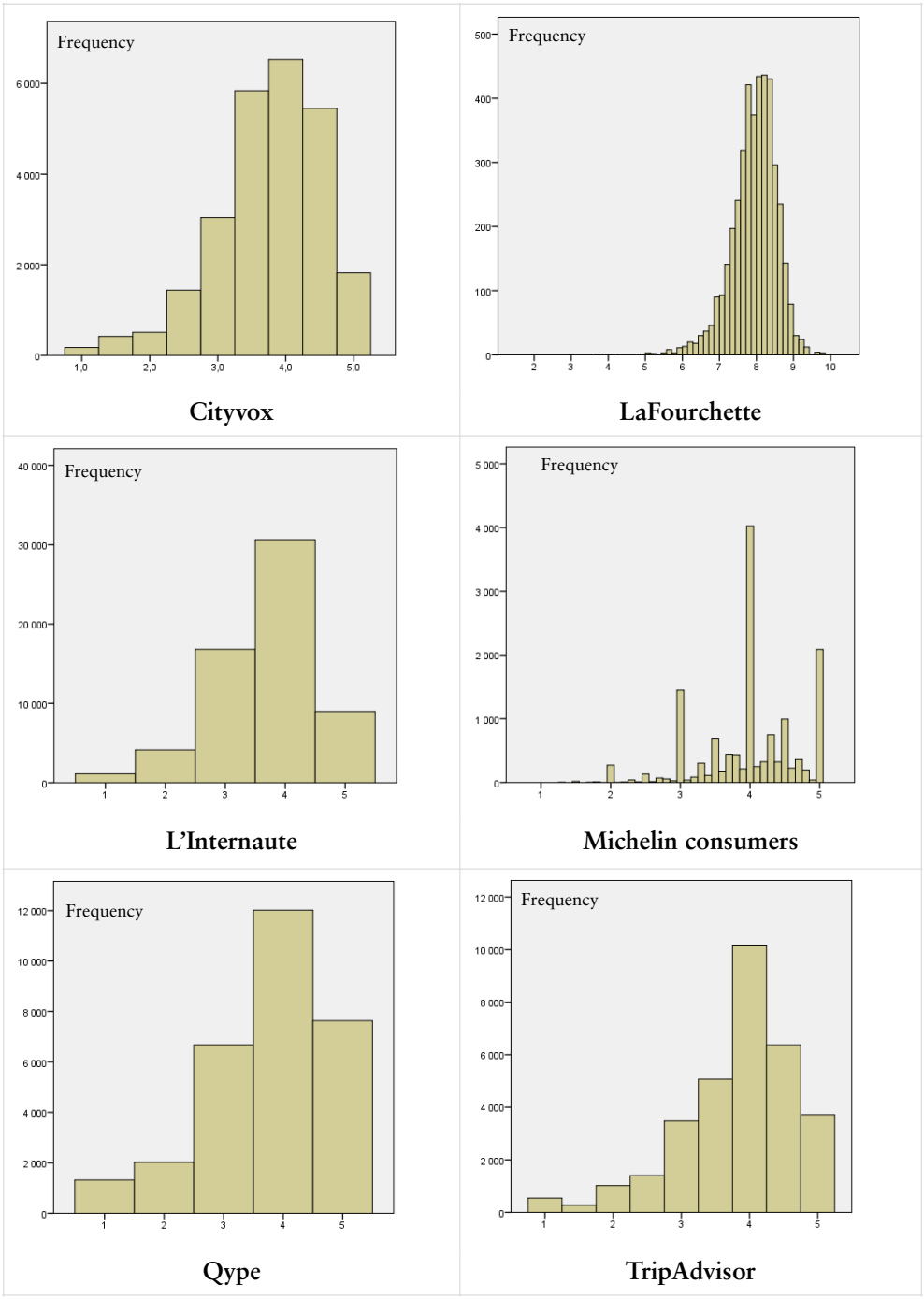


Figure 1. Distribution of average scores of restaurants.

This grading of the quality of restaurants is in stark contrast with the distribution of the ratings given by conventional gourmet guides (Figure 2). *Bottin Gourmand, Gault & Millau*, and the *Michelin Guide* are all extremely parsimonious about bestowing good grades, awarding the highest scores only to a handful of institutions. The

result of this selective and elitist approach is a pyramidal distribution of restaurants, each upper step being more difficult to achieve than the previous one.

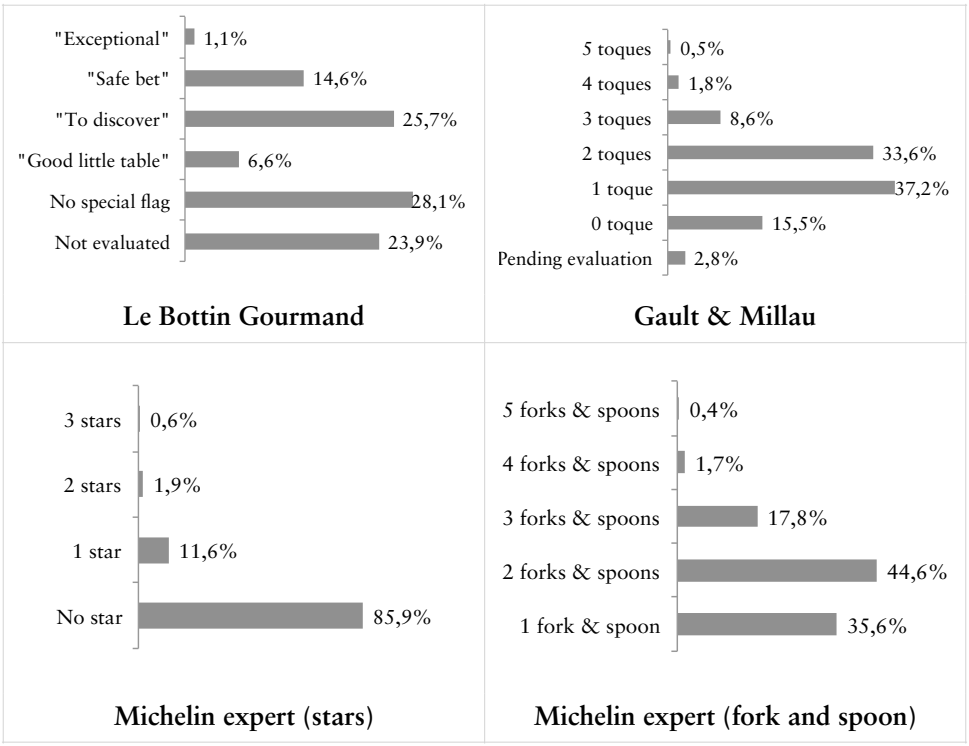


Figure 2. Distribution of restaurant ratings by traditional gourmet guides.

OCR websites build upon the raw material of (individual) ratings and transformations imposed on this material (mean score, rounding) in order to rank restaurants. Due to the particular character of participation, platforms must perform double duty: on the one hand, they must constantly stimulate the production of ratings on as many restaurants as possible; on the other hand, they must manage a very homogeneous—and thus undifferentiating—scoring, which is at odds with the traditional pyramidal grading of guidebooks. This double work implies editorial choices that vary according to the sites. It refers to different normative horizons of the democratic ideal.

Websites' Strategies and Their Democratic Achievements

As an activity performed by Internet users, rating has two main features: it is highly concentrated and unequally distributed, and average scores are very homogeneous. Website managers who were interviewed often indicated that they regard these features as a brake on business development: the heterogeneity of the distribution of ratings limits the audience (and revenue) of platforms by pointing out

a small subset of restaurants; the homogeneity of the scores limits their ability to direct consumers by effectively recommending restaurants. Two different strategies are implemented by website managers to resolve these tensions. Both are shifts away from the democratization movement that we have described above. The first strategy aims at enhancing restaurant selection and differentiation, using various techniques that compensate for the homogeneity of ratings: equality among contributors is maintained at the expense of a decline in democratization-as-inclusion. The second entails differentiating contributors by bringing forth the "connoisseurs" (Blank 2007) among them, at the expense of equality within the group.

OCR websites offer a combination of two operations: commensuration (through an average score from one to five) and singularization (through the free expression of customers in reviews). By comparing the sites and their strategies to address the excessive homogeneity of ratings, we observe how the material apparatuses tend to favour one or the other of these two dimensions. If OCR websites may be considered as "algorithmic apparatuses" (Orlikowski and Scott, forthcoming), their algorithmic policies differ from one site to another, even from one moment to another in the site's history, producing different equilibria between commensuration and singularization.

Equality Among Contributors, Selection of Restaurants

The first strategy used to create differentiation in a homogeneous universe is to maintain equality among the (many) participants while emphasizing the selection and visibility of the best restaurants in the manner of a traditional guidebook. However it is based on the ability to aggregate a large number of reviews for each item evaluated.

The homogeneity of scores encourages platforms to implement effective cognitive tools to orientate consumers in a world where most restaurants are rated between 3.5 and 4.5. Apparently innocuous algorithmic and editorial choices take on great importance. We can identify several decisions shaping the websites that are made in response to the overall homogeneity of ratings.

One seemingly innocuous aspect is the choice of whether or not to round the average scores of restaurants. On a scale of 1 to 5, or 10 for LaFourchette, such a decision leads either to giving the same score to a large number of restaurants, or conversely, allowing a full hierarchical grading of them. Our observations show distinct policies in this area (Table 11).

Table 11. Rounding policy of OCR websites.

	Scale	Rounding
Michelin	5	none
LaFourchette	10	none
TripAdvisor	5	half
Cityvox	5	half
L'Internaute	5	integer
Qype	5	integer*

* Rounding changed to "half" in 2013 to enable the integration of ratings on Qype and Yelp after the former was purchased by the latter.

More generally, platforms develop editorial strategies in their selection and ranking of restaurants, in order to guide consumers effectively. LaFourchette explicitly positions itself as a new kind of "gastronomic guide" and not just another directory. Several times in the interview, the manager insisted on the role of the website as a reliable and effective source of information for consumers by providing, in the manner of a guide, a ranking of restaurants. If quality emerges from consumer reviews rather than from inspectors, the service provided to the consumer should be similar:

> We want to provide a service; we do not want to be just another search engine . . . I used the popular term of "curation." We want to offer a limited sample of quality restaurants. The goal is not to suggest all restaurants, it is not to allow booking in any restaurant, it is to allow you to book in the best restaurants. That's really our goal. Our service needs to be perfect, and so does the supply, so the quality of partner restaurants must be excellent. So yes, LaFourchette is positioned like a guide. (LaFourchette)

This positioning is reflected in several strategic choices made by website managers. The most important is the removal of poorly rated restaurants from the list: businesses whose average rating is stabilized below 6.5 (out of 10) are not listed on the site.

> In any case, when a restaurant starts having an average score below 6.5 to 7 over a significant period, we do quality control: we call up the restaurant, we might send someone for lunch or dinner and if we see that the rating is deserved, the partnership is broken. People often say, "But there are only good ratings in LaFourchette"—yes, and so much the better, since it means that we're doing well our job of curation, because our goal is not to list the bad restaurants. (LaFourchette)

This strategy is also consistent with the policy, as we have seen, not to round the average score, so as to provide a complete ranking of the restaurants within the narrow range of visible ratings (from 6.5 to 10). This policy is possible thanks to the high number of ratings per restaurant (153 on average). In the case of LaFourchette, the goal of providing useful recommendations requires a relaxing of the constraint of exhaustiveness, and a partial renunciation of democratization-as-inclusion. LaFourchette promotes a model of excellence focused, of course, on selectivity; it relies on the website team to select the restaurants and these are, in turn, endorsed by the website's contributors through their ratings and reviews.

By combining the explicit recommendation of the guide and the pursuit of completeness peculiar to OCR websites, TripAdvisor offers another kind of algorithmic compromise between exhaustiveness and recommendation. On the one hand, the logic of the widest possible evaluation prevails, with restaurants rated between 3.5 and 4—scores being rounded to a half point. On the other hand, the site has also built for each city a complete ranking of all the restaurants. The ranking algorithm, which is kept secret, seems to combine the average score and the number of reviews. This ranking thus provides, beyond a relatively homogeneous scoring, a simple and explicit recommendation tool. In addition, TripAdvisor has recently developed "cityguide" applications for smartphones: for different cities, the site offers a selection of the best-rated places, thus approaching the traditional travel guide model.

The selective logic—embraced by LaFourchette and moderately employed by TripAdvisor with its smartphone applications—is not implemented by the other sites. The latter, which are sometimes local directories including various local businesses, must mobilize other resources to produce differentiation and provide effective recommendations.

Pushing "Connoisseurs" to the Forefront

A key symbol of democracy is the vote, which on the OCR websites is emulated by calculating the unweighted average of individual ratings. Its full realization assumes that each review is anonymous (like a ballot paper), and that all ratings weigh the same. However, we observe that personal details about the evaluator are often attached to the review. Thus, all platforms except Nomao associate each review with its author, who is described at least by a pseudonym and a profile that can include a photograph, personal information, statistics on ratings and reviews already published, etc.

In providing author details, platforms let the figure of the individual reviewer emerge. Website visitors will identify with this person or not, according to the displayed information and the credibility given to it. Another sign of this customization is when

various compliments, badges, and statutes are distributed to contributors. These devices are very common, and they tend to single out contributors and give greater weight to the reviews of the most prolific authors.

Special consideration is often given to those who contribute the most, but also to those who receive the most evidence of confidence from the community: Amazon's "x people found the following review helpful" feature pioneered this field. Chen et al. (2001) showed that reviews deemed useful had a significantly stronger (positive) impact on the sales of books on Amazon. This button is now displayed on most OCR websites, including TripAdvisor, Qype, Michelin, Cityvox, and especially Yelp, where users are allowed to tag reviews as "useful," "funny," or "cool."

Provided that confidence in a review depends on the credibility of its author, the websites that display these metrics contribute implicitly to weighing contributors' importance. At Yelp, gaining entry to the "elite squads" of contributors certainly requires intensive assessment activity, but it also requires participation in discussions and events with the community which, in turn, influences opinions about the relevance and usefulness of specific contributors' reviews. These votes allow platforms to identify contributors acclaimed by the community and possibly to highlight them. They can become identified as among the top-ranking contributors (e.g., "Top-thousand" reviewers at Amazon; "Club 300" at Allociné) or otherwise singled out as important members, as with the "elite squad" at Yelp.

To reward the most active contributors and manage the community, a special relationship develops sometimes between platforms and their contributors, through the organization of cocktail parties (Dismoiou), meetings, and dinners (LaFourchette) or regular events, such as here at Yelp:

> In fact, every month we organize an elite event, which is an event dedicated to the most active and influential members. And the event is a way to move from the virtual to the real, from online to offline, to make the community lively outside the site, and create a special moment for those contributors who are, in a sense, ambassadors for Yelp. (Yelp)

The elitist approach of giving greater visibility and weight to the reviews produced by a subset of amateur experts—"connoisseurs" to use Blank's term—is carried to completion by iTaste. This website, unlike the others, includes a "follow" button, in the manner of Twitter. As they contribute and are followed by more users, active contributors increase their "reputation score." This score is directly used to moderate each contributor's rating when computing the restaurants' average scores, as explained by the website: "In order to make the grades more reliable, the ratings are influenced by one's reputation. For

instance, if Peter (138 Reputation Points) gives 19/20 to a restaurant and Paul (1579 Reputation Points) gives 12/20, the average grade will be 13/20, not 16/20 as it was before."[17] In other words, iTaste implements the Matthew effect by giving greater importance to the voices of the most active contributors.

In an interview, a manager from LaFourchette declared his interest in this model and his intention to move closer to it—although this project was finally abandoned:

> Roughly, the idea of establishing a form of hierarchy between users where I can very well follow you without you following me, where I can very well be your scout without you being mine, where I can very well be your guide without you guiding me, all that is very important to us, this is part of a real dynamics . . . We could implement it, even if it is kind of unhealthy but so human, this form of competition between our users. We could give them badges, awards, and have a sort of leaderboard of the most reliable LaFourchette customers. And when you see a customer who left a good review or has a good score or a good badge: "I am the couscous pro," etc., you'll want to follow him and you'll be able to follow him and you will be alerted every time he posts a review—exactly like what happens on SensCritique or on Twitter. (LaFourchette)

This elitist approach involves introducing distinctions between various worlds of tastes and thus reconciles the principles of diversity of tastes and equality of participants. It permits the definition of specialists, Internet users who are more knowledgeable about certain types of foods or places and whose opinions will be considered most useful by those who share their tastes. In this respect, the Michelin website also has badges that attach regular contributors to a certificate of expertise in specific areas—these include not only "Gourmet food," and "French cuisine" but also "Pizza," "Creperie," and "Chinese cuisine."

Intensive contributors, motivated by badges certifying their expertise on some foods, are likely to become authors, such as those professionals found in Ferguson's (2008) work under the label of "judge"—embodied traditionally in the United States by culinary editors of prominent magazines and newspaper sections, or personified in France by Gilles Pudlowski. Some contributors on OCR sites are getting close to becoming such figures, although they are not distinguished or rewarded by the websites:

> [Among contributors] there is a very small portion of people who write huge essays. Since reviews are relatively unlimited in size, sometimes you will have an article, we have writers, people who like to think they are food critics and are indeed not far from the quality of a food critic. (LaFourchette)

Contrasting with this logic of acknowledgement, and sometimes of grading, of contributors is Nomao's approach. This platform aims to produce effective recommendations by aggregating and summarizing

[17] iTaste FAQ, http://www.itaste.com/en/application/faq.php (visited: 01/2014).

"all" the information from the web, not just assessments produced by the contributors on the platform. The platform seeks to index the maximum textual content about the places it rates (name + address). Textual content is broken down into semantic units (words or noun phrases) to which are attached positive or negative qualifications; they are also linked to a category (environment, atmosphere, service, menu, prices, etc). The overall rating of the place is derived from the synthesis of all of these positive and negative evaluations. A written review will have even more weight in the final score if its semantic content is rich and it comes from a source with a good reputation score. In other words, Nomao does not synthesize votes, but semantic evaluations and final assessments are not attached to its authors, who have no visible presence on the platform. Thus, with Nomao, the democratic principle is embodied in a radical computational and algorithmic form:

> The more advanced site when Nomao was launched was Yelp. It was interesting because, at the time, Yelp was already cluttered with content. When I say cluttered, it's the places that are a little trendy where you found yourself with hundreds and hundreds of reviews. And finally, as a user, either you know some other users that you trust, you'll read what they say as you would read a blog . . . Or you're searching and you are completely drowning in all that information. And finally, when you look at user behaviour, you realize that people end up looking at counters. They say "this restaurant, 500 reviews, a score of 4.5 out of 5, it looks good to me." And finally, the uploaded reviews, they are just useless . . . . So yes, the goal was to index everything you can find, everything that is produced by Internet users and to find a way to deal with it in order to, on the one hand, describe a database correctly, with depth, so we can say "This address is a restaurant, it is a gourmet restaurant, the terrace is nice, reception is friendly, etc."; and on the other hand, to rebuild the social graph of users connecting them to local places through shared affinities. The aim is to get to determine that a user—whose identity we do not seek to know—likes this restaurant and this restaurant because he has given good ratings to certain restaurants. . . . Indeed, we are today the only ones to make this work." (Nomao, founder and CEO)

Democratic Achievements of OCR Sites: A Typology

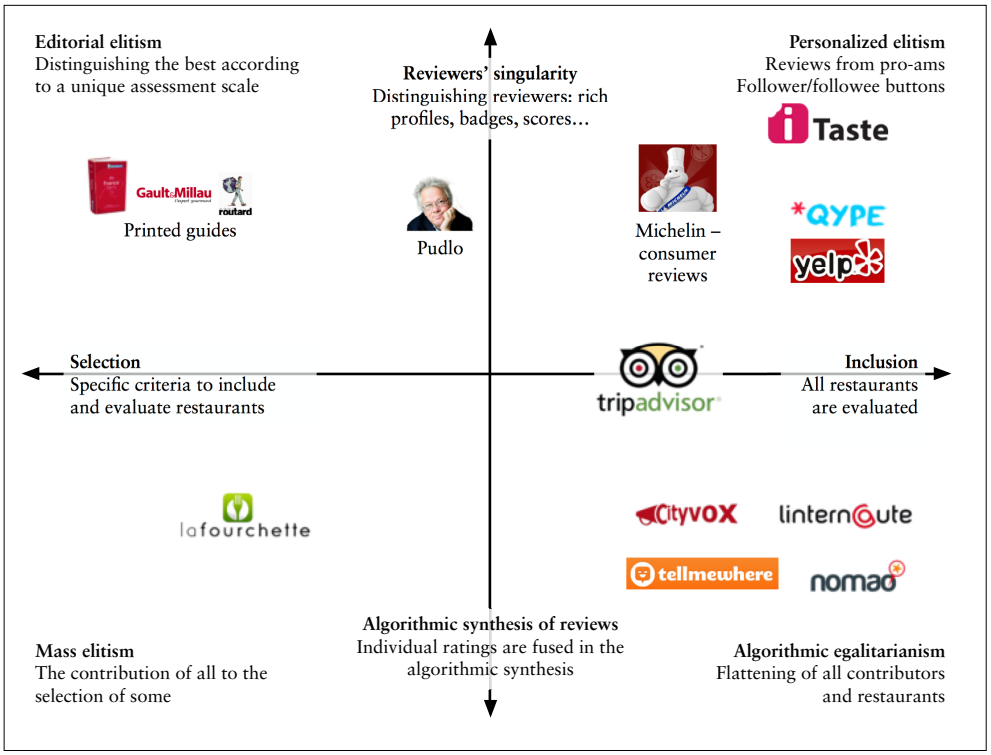
At the beginning of this article we defined two democratization lines: democracy-as-inclusion and democracy-as-participation. We have seen that OCR sites have begun to achieve the first movement by broadening the base of reviewed restaurants, and they have fully opened the second one. However, along with this democratic movement comes tension between the ultimate need to distinguish restaurants from one another and the need to provide useful and effective recommendations to consumers.

The first source of tension is linked to the inclusive dynamics and refers to the relative equality among restaurants. While including all of the supply side, review sites are mixing different worlds of tastes and budgets, and they are flattening the differences between trades. The average kindness of lay rating reinforces this movement: it follows

from these ratings that all restaurants are so close to each other that initial differences are denied. This flattening is treated variably by review sites: for some, the solution is to reintroduce selectivity, either by excluding a subset of the supply (LaFourchette) or by offering selections in the mass of restaurants ("Cityguide" mobile applications and "Travelers' Choice" selections of TripAdvisor); for others, it consists instead in including as many establishments as possible and then provide filters to categorize and manage the information (L'Internaute, Cityvox, TripAdvisor). On one side, the selective action is taken by the guide, on the other by consumers.

A second tension exists between participation and equality. If sites postulate *a priori* that all judgments are equal, the overall judgment on restaurants is formulated primarily by the most active participants because of the structure of online participation. Review sites need these intensive contributors, and they do not offer devices to temper their weight. Instead, they adopt a variety of postures, ranging from concealing individual contributors in the aggregate assessment, to highlighting each contributor's personality, tastes, and rating history.

Based on these two axes, we can outline a typology of OCR sites that distinguishes four embodiments of the democratic ideal under the constraint of effective recommendations:



Let us detail these four models:

1. *Editorial elitism* or "editism" is primarily chosen by printed guides and online editorial spaces; they set up in the same movement evaluation and inclusion criteria in the final list of restaurants.
2. *Mass elitism* keeps editorial elitism's selective logic while showing only well reviewed restaurants, but lets the assessment rely on the mass of lay reviewers. Cohabitation between different worlds of taste and judgment scales is counterbalanced by the decision to list only "good" restaurants. LaFourchette is emblematic of this logic. Democratization of food criticism implies here the removal of the individual reviewer for the sake of improving the quality of the recommendation.
3. *Personalized elitism* stages the diversity of tastes by personifying them through the profiles of intensive contributors. Democratization of food criticism is understood here not as the disappearance of the figure of the critic, but as the opening up of the role to amateurs: each contributor can adopt a critical posture and build and share his or her personal selection of restaurants within a comprehensive list. This logic is associated with rich profile pages of intensive contributors and internal social network tools (iTaste, Yelp).
4. *Algorithmic egalitarianism* is embodied by sites like L'Internaute, Dismoiou, and particularly Nomao. This democratic approach is inclusive and melts subjectivities in the algorithmic synthesis. It produces maximalist lists of restaurants whose average rating is only one characteristic among several others. What is important here is that the Internet users can choose, by using filters (such as location, price, type of food etc. as well as score), the restaurant that will best match their preferences.

Summary and Conclusion

Our aim in this article was to clarify, and qualify, the common claim that online consumer reviews contribute to the empowerment of consumers and the democratization of markets. The article produces evidence that contributes to the following argumentation. We identify two movements of democratization within culinary criticism prior to the Internet: inclusion and participation (section 1). We show that the development of OCR websites extends these two movements, by achieving inclusion and by systematizing participation (section 2). Then, we highlight two features that come with online democracy "in action": the unequal distribution of contributions, and the homogeneity and high level of average scores (section 3). These characteristics of rating are constraints that platforms have to deal with, because they are in conflict with the aim of building fair and

meaningful recommendations. The fourth section describes the different types of compromise set up by websites in order to articulate the participation of all users and the effectiveness of the recommendations. This requires a weakening of the goal of democratization.

In our view, the article is a relevant contribution to the emerging field of valuation studies for two main reasons. First, it examines a valuation device that as yet has been little studied as such (online consumer reviews), examining both its construction and operation. We paid special attention to the framings made by OCR websites and to the material aspects of the production of valuation. If the articulation of the two opposite operations of commensuration and singularization is taken to traditional valuation devices—that is, reviews produced by experts (Blank 2007; Karpik 2010)—it is propelled to a new, algorithmic, scale in order to produce valuation from multiple disparate lay judgments. We also spotted the many subtle variations between websites and we stressed the importance of these variations.

Second, the article contributes to the study of the "politicization" of markets and valuation (by analogy with "economization," see Çalıskan and Callon 2009) by investigating the movement of democratization supposedly carried out by the Internet. We observed the (imperfect) making of a new subject in market agencement: a kind of citizen-consumer who is equipped with, and empowered by, new capabilities to access market information and to voice opinions. Meanwhile, in our case, the ideological discourse of the promoters of OCR has to be qualified. It also results in an *ex post* rationalization by Internet entrepreneurs who were searching for economic opportunities and improvised a lot. While there was an ideological and rhetorical commitment by the founders and developers of some of the online review sites, there were other motivations involved, such as the need for competitive positioning vis-à-vis what at the time were very well established and powerful incumbent publishers, and the ready availability of certain easy-to-integrate ranking and reviewing tools. In a sense, review sites had to use what they could to gain a foothold in the markets that were dominated by the incumbent players, and this involved democratization of both access and participation.[18]

The development of online consumer rating and review websites still marks a real democratization of calculative capacities in the restaurant industry, in terms of inclusion as well as participation. Is it a democratization of the market itself, understood as the pluralization of valuation devices and their openness to all stakeholders? Pluralization of valuation devices, if it does increase the power of consumers, does not, however, automatically imply a greater demand (more customers) for restaurant owners, but rather imposes new intermediaries whose

[18] We are grateful to an anonymous reviewer for bringing this issue to our attention.

strength they are discovering (Bessy and Chauvin 2013). Future work could therefore study how the restaurant owners and managers themselves—and producers and distributors in other industries—welcome and appropriate these new evaluation devices. Public statements by professional actors suggest that online consumer reviews are largely perceived as an illegitimate constraint rather than as an opening of the competitive game and a gain in transparency.

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