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This paper builds upon an empirical study of suppliers of online advertising space in France in order to highlight the plurality of quality conventions that organize the activity of market intermediaries. We show that the market is organized around two different quality conventions, the 'media' convention and the 'direct-response' convention, each equipped with specific efficiency indicators, pricing methods and selling channels. Then we focus on the growing conflict of territory between the two conventions; we analyse the balance of power between the conventions and the arenas where they compete. We observe that the collective action of the defenders of the traditional world is not (yet) sufficient to contain the pervasiveness of the indicators and metrics from the world of direct-response.

KEYWORDS: market; valuation; quality; conventions; price; advertising; Internet

> Did the Internet kill quality? Or just redefine it? The answer is yes and yes, particularly if you define 'quality' by standards of professionals in content industries that produce the long-form TV, film, journalism and literature once considered the highest forms of information and entertainment – the kind that brands once paid handsomely to associate themselves with through advertising.(Learmonth 2010)

Like other segments of the advertising market, the online advertising market organizes the selling and the buying of the audience product on the Internet (Napoli 2003). More precisely, it is the meeting place between publishers who sell space dedicated to advertising and advertisers who want to promote their products and brands. On the one hand, *advertising space* that is sold by online publishers differs, depending on its *format* – physical feature of the ad: text, banner, richmedia, etc. – and its *environment* – the publisher's 'brand', its content quality, the socio-demographic properties of its audience, etc. On the other hand, the goals pursued by advertisers, though identical in the long run, take different forms in the short run: some campaigns called 'lead' or 'direct response' are directly aimed at provoking measurable additional purchases while 'branding' campaigns try to improve brand-name recall and image appreciation. Thus, the online advertising market organizes matching between publishers with various products and advertisers with various intentions. The multiplication of product features and expectations generates a high level of uncertainty. How do market players cope with uncertainty? How do they determine the value of a particular advertising space?

The question of how market players build and maintain certain values through time is not rhetorical. It represents a major economic challenge and a burning issue when firms or industries undergo a crisis because their idea of value and the instruments they lean on to reveal and establish this value are challenged and attacked by different ideas and devices. This article proposes to examine this question through an analysis of the economic activity of online publishers, especially of online avatars of print media. The actors mentioned in this article have faced, since the mid-2000s, an economic crisis on the Internet – which in the case of sites owned by print media groups adds to the structural difficulties encountered on revenues from print. As we shall see, it is how these players define an advertising product and market it that is at stake.

It is necessary at this stage to introduce some of the technical detail and mechanics of the advertising market. On the Internet, online media derive most of their income from selling advertising space in display format. Display, which accounts today for about one third of online advertising spending[1] in France, refers to several forms of advertising which appear on publishers' websites, next to editorial content: banners, text ads, rich media, video ads, etc. Display advertising is organized around two exchange models.

The first is brought from traditional offline media such as newspapers or television: advertisers purchase space in accordance with an estimate of the number of audience members who are *exposed* to the advertisement. In this model, audience exposure is the coin of exchange and advertising is purchased on the basis of showing the ad to one thousand viewers (cost per mille or CPM). Advertising revenue depends on two things: the number of advertising spaces the website has to sell (its "inventory"), and the unit value of these spaces. The size of the inventory depends on the number of ad spaces per page, and on the number of page views. The first is limited by the possible reluctance of viewers to visit a site with too many ads. The second depends on the actual size of the audience of the site: more page views mean more ad impressions. For example, if an advertiser buys one million ad-impressions from a publisher, the latter will display the ad one million times on his site (that may take a few hours or days), and then switches to another campaign. As for the unit value of advertising space, it depends mainly on the quality of the audience product (its size and its socio-demographic composition) and on the strength of the media brand. For example, online versions of newspapers such as *The New York Times* or *Le Monde* have a powerful media brand and a homogenous audience composed of educated and wealthy readers: The cost of advertising on these sites, expressed in cost per thousand views – i.e. the CPM – should be particularly high.

The second exchange model takes advantage of the interactive nature of the Internet: advertisers pay for advertising only if the user has performed a defined action after being exposed to the advertisement – usually a click through the advertisement or a purchase on the advertiser's website. Advertisers pay on a cost-per-click (CPC) or a cost-per-action (CPA) basis. This exchange model gives worth to the effective action of the consumer rather than exposure to the advertising message. In this model, advertising revenue depends on the percentage of users exposed to the ad who carry on a measurable action and on the cost advertisers are ready to pay for one action – which is a function of the expected sale.

Though any advertising space on the Internet can technically be commercialized either on a CPM or on a CPC/CPA basis, the two market segments were until recently considered as separate: advertisers with distinct goals purchased advertising on different websites using specific pricing and measurement instruments. However, this situation has changed and both exchange models started to compete for the same advertising spaces. Economic struggle turned into a public controversy in 2008. Market professionals – defenders of the CPM approach to advertising exchange – denounced market practices that threatened online media and online display advertising as a whole; they also discussed the material devices that are commonly used to assess and stabilize the quality of products. What is at stake here goes beyond the specific case of online advertising; it involves the process of qualification and valuation of goods in cases where several definitions of quality compete with each other.

We investigated the ways in which market professionals, firms and intermediaries collectively build quality in the online display advertising market. This paper builds upon an empirical study of the supply side of this market: ad-selling units of online publishers and ad-networks (third party players who aggregate and sell inventory on behalf of various publishers).[2]

The article is structured as follows. Section one presents our theoretical framework and reviews relevant literature on the valuation of goods as central to the organization of markets. Section two presents the general organization of the online display advertising market. We show that the market is organized around two different quality conventions, each equipped with specific measurement instruments and pricing tools. In section three, we focus on the growing conflict of territory between both conventions. We analyse the balance of power between the conventions and the arenas where they compete.

1. Theoretical Framework

Sociological approaches to market practices attach a central place to the issue of quality. We borrow from two bodies of literature – the French Conventions School and Actor-Network Theory (ANT)– in order to build a theoretical framework that accounts for situations where several definitions of quality coexist and compete within the same market.

1.1 Market-Things: Quality Conventions and Socio-Technical Devices

Since Akerlof's seminal article (1970), economic theory has taken up the issue of quality uncertainty. However, economic models usually reduce the question of quality uncertainty to a problem of information; qualification – the process of attaching qualities to products – consists only in revealing substantive properties of goods. Moreover, qualification is seen as a potential source of market distortion because it partially suspends the reference to scarcity: the pricing mechanism is performed upstream, prior to the encounter between supply and demand. However, empirical evidence shows that the qualification of goods is a central issue in the organization and functioning of markets (Favereau et al. 2003; Salais & Storper 1997; Stark 2009).

This observation meets up with a central theoretical question within economic sociology: whereas it is intrinsically not a problem for producers and consumers to agree on a price, it is a problem to agree on quality. Market participants need to build a form of equivalence that reduces uncertainty on the nature of goods, and allows valuation and price fixing, in order to reach a satisfying level of coordination. Eymard-Duvernay (1989) has shown that the existence of a stable goods markets is linked to 'quality conventions', which can basically be defined as the (partly implicit) collective agreement between buyers and sellers on what defines quality. In this framework, the word 'qualification' points to the process of sorting goods by putting them into a hierarchy. Proponents of the Convention School insist on, and thus investigate, the plurality of qualification principles that are the basis of coordination and exchange. Salais and Storper use the term 'world of production' to describe the set of conventions and tools that define, among other things, the quality of products, pricing methods and transaction standards. For many products, the market can be divided into several worlds of production: according to the nature of the expectations on the demand side, and to the organisation on the supply side, the quality will be assessed differently.

Economic sociology – especially works grounded in ANT – has also shown that the attribution of qualities to products, which is essential to the transformation of products into marketable goods, relies on very diverse and complex socio-technical equipments (Callon & Muniesa 2005; Cochoy 2007). Material devices such as measurement instruments stabilize the link between a good and its qualities. This pragmatist approach to valuation brings out the tension between value as a convention, or a social representation, and value as a metric problem settled in practice (Muniesa 2012). Thus, it stresses the role of conventions and standards as precarious socio-cognitive prostheses that frame market participants' expectations and interactions (Callon 1998).

These approaches emphasize the diversity (if not the proliferation, in the case of ANT) of possible forms of market organizations. Moreover, they acknowledge the possibility of multiple frames within a single market, or industry. However, since we need to assess situations where these frames come into conflict with each other, we need to go one step further.

1.2 Competing Quality Conventions

To our knowledge, layouts where quality conventions coexist and compete in a market have not been much studied in the literature. Indeed, such layouts usually lead either to the disappearance of a convention, or to harmonious coexistence, but not to long-lasting conflict.

Conventionalist works show that many markets host a plurality of coordinative principles. These works emphasize the separation (and compromises) between different quality conventions and thus do not analyse the way heterogeneous conventions may compete. Historical studies often show how the way a product is transformed into a marketable good changes over time, and may emphasize the moment when the market shifts from one set of conventions to another (for an example about the electricity market, see Granovetter & McGuire 1998). Karpik (2010) studies how markets for singularities are organized around 'coordination regimes', a notion close to that of 'convention' we use in this paper. He acknowledges that several coordination regimes coexist on a market: for example, the market for music albums is in tension between three coordination regimes ('mega', 'common opinion', 'expert opinion'). In the last chapter, called 'the historicity of the economics of singularities', he starts to address this issue; elaborating on the case of recorded music, he observes that the expert opinion regime is progressively disappearing, leaving place to the 'common opinion' regime. Such a process, where critics lose their qualification power and the quality of music is more and more defined by its sales rank, can be understood according to Karpik as a process of 'de-qualification', since music qualification becomes more unidimensional. This process is partly explained by the efficiency of the common opinion regime (simple, unidimensional, democratic, in line with the dominant economic interests), but this analysis is only briefly sketched out in the book.

Our framework aims at exploring further the competition between quality conventions. Following Karpik's intuitions about the music market, our goal is to track the process by which one convention threatens another. We therefore consider that conventions are a set of representations and tools that frame the interactions within a market, defining the quality of the products and making the exchanges possible; and that these conventions are at constant risk of overflowing by new entities that are not yet taken into account (Callon 1998). In our case, some of the equipment of one convention overflow their initial domain of relevance and invade another convention. These overflowing processes upset the arbitrages and pay-off of market actors, and lead to controversies, in which actors discuss the reframing of the market.

2. The Two Quality Conventions of the Online Display Advertising Market

2.1 The Basics of the Online Display Advertising Market

The product sold on the advertising market, advertising space, has some definite properties. The publisher of a website allocates some of every page to advertising: for example, she may decide that each page of her site should contain a banner at the top of the page, and a medium rectangle to the right of the text. The name and size of the spaces are standards elaborated by the Interactive Advertising Bureau, an international professional association that helps organize the market: in our example, the full banner size measures 468x60 pixels, and the Medium Rectangle is 300x250 pixels wide; they both should measure less than 40kB. These standards are essential to the coordination of the market: they ensure that the graphic creations of the advertisers can fit in the advertising space of different publishers, and that publishers can display the graphic ads of different advertisers.

Besides, the market is populated with intermediaries that help organize interactions. On the buying side, advertisers often rely on media agencies. These agencies are market specialists, who choose advertising spaces for their clients according to the target of the campaign and to the relative prices of the ads. They are concentrated (five media agencies control 80% of the French market), which gives them strong bargaining power when dealing with publishers. They are equipped with powerful media planning tools and audience data, on which they rely to allocate clients' ad spend.

On the supply side, the selling of advertising space can be either direct – very large publishers negotiate some of their inventory directly with major advertisers and media agencies – or indirect – independent middlemen, called 'ad-networks', slip in between publishers and buyers (Evans 2008). Ad-networks have several functions: they represent publishers that cannot afford their own selling force; they recover the inventory that large publishers could not sell directly; they aggregate ad spaces from these many sources in order to sell them to advertisers and agencies.

2.2 Two Separate Worlds of Production

Observations and interviews show that the display advertising market can be divided into two worlds of production. Each of them is organized around conventions defining the quality of the advertising space, and the pricing device.

We call the first world of production 'media' because most of its components are imported from traditional media advertising (radio, TV, printed press). In this world, the advertising product is defined as 'the combination of an audience and an environment'. Advertisers choose advertising space according to the size and socio-demographic composition of its audience. But they also evaluate the quality of the editorial content: in our interviews, market actors refer to this as 'the brand power of the media' (lemonde.fr has a stronger 'brand power' than news.yahoo.com). They also use the phrase 'reading contract' to describe the supposed state of mind of the reader: when reading lemonde.fr, people are supposed to 'attend' to quality content; advertisers expand this assumption to the advertisements.

Evaluations of the size and socio-demographic composition of the audience are based, like in radio, TV or printed press advertising, on third party measurements: Nielsen-Médiametrie provides figures such as the number of unique visitors, the 'reach' (the part of the online audience who visits the site), and the age and socio-demographic structure of the audience. These figures are collected through a representative sample of French Internet users, equipped with software which records and reports all their browsing activity. The second dimension of quality, on the contrary, relies mostly on the intuitive evaluation made by media buyers of the brand power of media brands depending on their history, prestige, etc.

In this first world of production, advertisers are interested mostly in improving their brand and product awareness. The unit of account is the page view, and the pricing is made on a CPM basis (cost per one thousand page views): it gives worth to exposure to the message.

We name the second world of production 'direct-response' or 'performance', since these are the terms used by most of the actors we interviewed. This model does not give value to exposure, but to the effective action of a consumer in the process of decision-making. The advertising product is defined as a way to reach consumers and provoke a direct response[3] from them: visit a site, subscribe to a service, buy a product, fill a form, etc. The quality of advertising space depends only on how many 'prospects' (i.e. clients) it brings, whatever the editorial content or the characteristics of the audience. This quality convention is equipped with easy-to-use indicators such as the number of clicks, sales, subscriptions; the canonical ratios are the click-through rate (number of clicks related to the total number of visitors), and the transformation rate (number of people who have bought the product related to the number of people who have clicked on the advertisement). The production of these indicators is cheap, since they are the by-product of the process of serving the advertisements to the websites.

In this world of production, advertisers are mostly interested in generating sales in the short-term ('direct response'). The unit of account is the click, and the pricing is made on a CPC or CPA basis (cost per click or cost per action).

If we take a snapshot of the online display advertising market today, we can roughly identify the demarcation line which separates the advertising spaces sold according to media conventions from those sold according to direct-response conventions.

In the first world of production, most of the advertising spaces occur in the online avatars of traditional media (lemonde.fr, lefigaro.fr, etc.), some pages of the main Internet portals (the home page, news pages and finance pages of portals such as yahoo.fr or orange.fr), and some online media that have earned a strong audience and reputation on niche subjects (such as slate.fr or cnet.com). According to the bi-dimensional convention,

TABLE 1
The Two Quality Conventions of Online Display Advertising

Convention	Media	Direct Response
Dimensions of quality	***Audience*** (size, socio-demographics) + ***editorial quality***	***Direct response*** of the consumer (click, buy)
Pricing method	***CPM*** (cost per thousand)	***CPC*** (cost per click) ***CPA*** (cost per action)
Metrics	***Reach*** (socio-demographic qualifications (% of high revenues, etc.)	***CTR*** (click-through rate), transformation rate
Cost of the measurement instruments	High	Low
Typical advertisers	Large brands	E-merchants
Typical publishers	Large media websites	Small and mid-size websites, forums, webmails
Main marketing channel	Direct sales	Ad-networks

they put forward the quality of their audience (in terms of revenue, or in terms of affinity with the advertisers' target: 'women', 'people interested in new technologies') and their reputation as media brands. The cost of thousand ad impressions ranges from €2 (portals, recent media brands) to more than €10 (for the 'automobile' or 'finance' sections of established websites). Most of these spaces are sold directly by the publishers to advertisers and media agencies.

In the second, direct-response world, we find the large remainder of the available advertising space: media sites without an established brand, 'deep pages' of portals (as opposed to their home pages), user-generated-content platforms, blogs, e-commerce websites, etc. This inventory is sold on a CPC basis, or at very low CPMs.[4] CPC is sold between €1 and €3; the eCPM is between €0.10 and €0.50. Most of these spaces are sold through independent ad-networks.

If we take a broad look at the market, we observe that the first world accounts for a small part of the total number of page views (around 10%); but, since inventory is more valuable, it accounts for a large part of the whole display advertising market, around 50% in 2008 (Parr 2008). Nevertheless, the share of the media world of production has been declining in recent years. We show that most of this decline can be explained by the weakening of media conventions *vis-à-vis* direct-response.

3. Competing Quality Conventions

The two worlds were considered separate until recently. Indeed, each mode of qualification is associated with a specific mode of coordination, specific selling channels and market intermediaries. However, strong tensions have appeared at the border and the two quality conventions appear to be more and more engaged in head-on competition.

A particular feature of the market is that any basic advertising space can technically be qualified for both worlds: the format of the ad (image size and file weight) and the ad-serving process are the same; only the content of the ad, the editorial context and the billing technique differ. If an advertiser chooses one or the other, the pricing method and the final price will be very different. Let's take the example of a hypothetical advertiser who is about to run a campaign with standard banner ads. On the one hand, she could buy space on the online website of a French newspaper, say lemonde.fr. She would buy inventory on a per-impression basis, through direct sales. This product attracts a certain audience, and provides a certain editorial environment. This kind of quality is valuable though not precisely measurable. On the other hand, she might contact an ad-network that sells inventory on a per-click basis. If the advertiser converts the price from CPM,[5] she will see that these ads cost as much as 90 to 95% less than the others. Of course, the arbitrage depends on the objectives of the advertiser and the kind of campaigns she runs. But, whatever these objectives, agencies and advertisers focus more and more on the click-through rate. CTR is an easy to track, easy to use and always available measure. As soon as advertisers assess the efficacy of their campaign with the click-through rate, it becomes very difficult to justify such a difference in price.

Interviews reveal that many professionals within the traditional world complain about the 'imperialism' of the direct-response convention, which acts as a negative externality on their activity:

> The market mainly thinks in terms of performance and clicks. That's all. And indeed, sites like ours offer something else. Beyond the click, an advertiser works with its image. When a web page is seen, it has an impact, be it clicked or not. And it's true that today such an indicator is not taken into account. (Zefir Web, December 2008)

> The advantage of the Internet as a media is its interactivity, which can indeed become an inconvenience. What I mean is that we receive requirements which are extreme in terms of tracking. (Orange Ad Service, December 2008)

We will now build upon the empirical material (observations and interviews) in order to examine how the conflict between the two conventions unfolds. Following Kjellberg and Helgesson (2007), we consider two interconnected levels of market framing: the level of exchanges practice, which refers to daily exchanges on the market; and the level of representational and normalizing practices, where actors explicitly debate good measurement tools and metrics.

3.1 Exchange Practices

The first level of conflict concerns exchange practices, which refer, in Kjellberg and Helgesson's work, to idiosyncratic practices such as specifying and presenting products, negotiating prices and terms of delivery, etc. Empirical material reveals that the click-through rate measure has overflowed from its original direct-response convention and disseminated all over the market, thus weakening the traditional convention. It is a simple indicator for advertisers, easy to manipulate and control, that can circulate inside the firms and enable quick comparisons. Moreover, the efforts of organized groups at the representational and normative level are not sufficient to contain the overall use of the click-through rate in the industry.

3.1.1 The Ubiquitous Click-Through Rate. The particular situation of the display online advertising market today is that actors can mobilize two different toolboxes to assess the value of an advertising space. Let us compare the various equipment of the two quality conventions. On the one hand, the traditional convention relies on two elements. The first is the audience measurement system provided by firms such as Médiamétrie, Nielsen or Comscore, based on representative panels of Internet users. This equipment is costly; it provides information about the socio-demographic composition of the sites, at least those large enough to allow representative measurement through the panel. It allows publishers to give advertisers trusted information about the number of women or high-revenues holders who have seen their ad. The second element is the editorial quality of the site, which relies on the 'subjective' judgment of market professionals.

On the other hand, the direct-response convention relies on simple and cheap metrics: the click-through rate and the transformation rate. Their production is a by-product of the technical process of serving the ads, and therefore costs almost nothing. What's more, whereas the audience is always measured *ex post*, the click-through rate is measured in real time, which is very appealing to advertisers: it allows them to reallocate their campaign while it is underway by modifying the content or the media target, in order to improve its click-through rate.

To sum up, the click-through rate is universally available, and easy to produce and manipulate for all market actors. It allows advertisers to assess their campaigns in a simple, uni-dimensional way. The budget manager, when counting clicks and transformations, can link his advertising spending to a number of customer interactions, or even to a volume of sales directly generated by the campaign. These qualities have made the click a much appreciated indicator. As a consequence, even though it should be only associated with direct-response campaigns, it is more and more used to assess any kind of campaign: the CTR has escaped its original world to proliferate throughout the market. Whether positive or negative, every actor we interviewed made the same statement: the market is more and more organized around the click. Most advertisers praise the CTR and transformation metrics, and the media agencies provide them with such metrics; on the other side, large publishers regret that it is more and more difficult to avoid being measured in terms of clicks:

> At some level, what advertisers need, is to steal some market shares from the competitor, install their brand, their values, and you don't do that with clicks. In ad agencies, most top-level managers agree with that. But when you go down the ladder, you can face a buyer, equipped with his media planning software, who is going to tell you phenomenal bullshit, thinking only in terms of clicks, not even knowing on which media sites he puts his ads . . . The problem we have on the Internet, it is that, indeed, since we are measurable, people tend to drag us down this way [ask us more and more figures that are not relevant]. (Head of the advertising committee of the GESTE,[6] November 2008)

> The click has always been of dubious value. But clicks are easy to understand and easy to measure. (Joshua Spanier, Dir Com Strategy at Goodby, Silverstein and Partners, in *Advertising Age*, 30 September 2009)

Simple as it is, the click-through rate can easily circulate inside the company, especially towards people who are not Internet specialists. This is important for the managers in charge of online advertising in large companies:

> What we need is a simple measure of efficiency, that we can vaporize into the company, down to traffic managers and such, in order to increase their awareness of CTR and conversion-rates. (Head of digital advertising at voyages-sncf.fr, IAB meeting, October 2008)

3.1.2 The Publisher's Dilemma. Publishers rooted in the traditional convention, such as media publishers, try to resist their customers' requests in terms of click-through rate and transformation. But some of them also contribute to their own distress by letting third party ad-networks commercialize their unsold inventory on a direct-response basis. This is one of the most visible friction points between the two conventions.

Most of the independent ad-networks sell inventory on a direct-response basis, and rely on the selling of large volumes to make a living. To reach these large numbers, they offer large publishers their unsold inventory. All publishers therefore face a dilemma. On the one hand, it is tempting to let ad-networks have this inventory, and make it worth something; what's more, this unsold inventory is usually significant, from 30% to 70% of all a publisher's space. On the other hand, letting ad-networks sell a part of their inventory on a direct-response basis means accepting a de-qualification process: the switch of their product from one convention to another. This process contradicts all their efforts to maintain the traditional convention. The presence of advertising space from premium publishers inside ad-networks could lead to the devaluation of the publisher's whole inventory: advertisers may be reluctant to pay €5 for ad spaces that others bought on a €1 per click basis. What's more, selling inventory through ad-networks brings less prestigious advertisers to the site, thus degrading the image of editorial quality and sending a bad signal to high-level advertisers.

All the publishers we interviewed confirmed this dilemma:

> No, we are not in any network. We didn't put the inventory of lemonde.fr in blind networks such as Drivepm, PlatformA, Yahoo! They all came to see us, we said 'No way'. I think it's dangerous. (iRegie, December 2008)

> If we use ad-networks for unsold inventory? We don't, though we receive a lot of offers from them. The problem with these people is that they don't understand our products. They ask: 'do you have potatoes? Ok I'll have ten kilos of potatoes then'. But they don't care about the potato itself, its quality. Why? Because they are in a performance logic: 'we don't care as long as people click, we just count clicks'. So, no, we don't deal with any ad-networks. (Publisher, January 2009)

Though these two extracts suggest that publishers usually refuse to deal with ad-networks, practice is more equivocal. Our interviews show that, though premium publishers try to organize to collectively refuse to sell their unsold ad space to ad-networks, they often break this rule individually when faced with high levels of remnant inventory, or when the pressure of the shareholders gets strong.

3.2 Controversial Representational and Normalizing Practices

The second level concerns representational and normalizing practices (Kjellberg & Helgesson 2007). At this level, constituted groups such as professional associations and authorized experts such as academic researchers and journalists organise and fuel the controversy. In our case, professional actors threatened by the overflowing of the direct-response metrics try to organize alternative metrics, arguments and market practices.

In the professional debate, intervening parties defend their own interests, but also try to convince other market participants; thus they accept the rules of the public space, where arguments are taken in the name of the general interest of the market.

Conferences of professional associations – such as the Internet Advertising Bureau (IAB) – and specialized media – such as *Advertising Age*, *Business Week*, or *Challenges in France* – welcome and organize public discussion. In this professional arena, most actors focus on the equipment of the two conventions, especially on quality measurement indicators.[7]

Identifying the actors of the controversy is the easy part. Media convention is advocated essentially by traditional publishers; online avatars of print media and premium online media. In France, they are gathered around the GESTE (see footnote 8); in the USA, the Online Publishers Association (OPA) plays a similar role. On the other side, most of the ad-networks are very young actors, and have not (yet) rallied or created a professional association. Moreover, as their market keeps growing, they do not feel the urge to organize. Nevertheless, they are very active in promoting their technologies and products in professional meetings and specialized media. Some large actors, such as portals or non-premium content publishers, do not take sides (at least publicly and in our interviews), since they have split interests: portals such as Yahoo! and AOL are at the same time premium editors (as news publishers) and very active in the ad-networks business in order to monetize their very large inventory (mail pages, games, etc.). Similarly, large web 2.0 services (such as Youtube, Myspace or Facebook) hope to enter the media convention, but at the same time develop targeting tools to improve their advertising product within the direct-response convention (Beuscart & Mellet 2008). If publishers play the first role, third party experts, such as audience measurement companies also contribute to the controversy on the relevance of the two conventions.

Proponents of the media convention, who are more organized than their opponents, resort to two types of argument: on the one hand, they criticize the click-through rate for its irrelevance as a measure of exposure, but also for its irrelevance as an efficiency measure in itself; on the other hand, they promote alternative indicators that measure brand awareness, memorization, attitude towards the brand, etc. These arguments are supported and equipped by two series of studies. The first was published by the audience measurement company Comscore:[8] according to its *Silent Click* study, average click rates have fallen in the previous years to levels under 1%; two thirds of Internet users do not click on any display ads within a month; 16% of Internet users account for 80% of the clicks. Such results crystallize scepticism that the click-through rate is not a relevant metric. Comscore's study also supports the argument that display ads, regardless of clicks, generate significant lift in brand-site visitation, and that online users exposed to a particular brand's display ads conduct more searches on that brand's name than those in the control group. The effects of exposure to display ads were also analysed in OPA's studies.[9] These studies present research conducted by the marketing research company Dynamic Logic. Results show that display ads raise brand awareness and brand favourability, but that not all websites perform as well: ad effectiveness is higher on OPA websites than on portals and websites associated with ad-networks.

The publication of the June 2009 Comscore/OPA study and the August 2009 OPA study triggered an intense controversy in the USA, hosted by the professional newspaper *Advertising Age*. The economic context was particularly tough: online advertising was in decline for the first time since 2002 (IAB). The controversy started when Rajeev Goel, the CEO of ad-network Pubmatic, denounced the OPA Ad effectiveness study in an opinion column (Goel 2009). According to him, the results of the study that concerned ad-networks are questionable:

> While the conclusion of the study makes sense with respect to marketers with branding objectives, most campaigns purchased through ad networks have fundamentally different objectives . . . For direct-response-driven campaigns in which the marketer is seeking specific ROI metrics based on clicks or conversions, purchasing inventory from a premium publisher's sales force may not provide the best bang for the marketer's buck.

Goel considers it unfair to compare ad-networks and premium publishers through the lens of branding impact assessment tools. To his mind, there is room for both worlds, and advertisers should combine ad-networks and premium publishers. Another opinion column denouncing the OPA study appeared in *Advertising Age* (Coffin 2009) a few days later. Written by Jarvis Coffin, the CEO of Burst Media – a company that publishes non-premium content, and resorts to ad-networks – it criticised OPA's defence:

> In its study, the OPA dismissed the role that virtually all online publishing properties can play in the grown-up brand advertising world – with the exception of its member sites . . . There are 10 billion websites on the Internet and only 50 on which you can advertise successfully. They must be really good.

For Coffin, the OPA's mission is to defend the interest of online publishers, and not a minority of established media brands.

In their book *On Justification*, Boltanski and Thévenot (2006) argue that public disputes are characterized by an ascent to generality. The more they argue against each other, the more people refer to general principles. For Jim Spanfeller, CEO of Forbes.com, treasurer of the OPA and chairman of IAB, the very definition of advertising was at stake in this controversy. In an opinion column in *Guardian*-owned media professionals' news site Paidcontent (Spanfeller 2009), he argues that the combination of click-based metrics and ad networks is about to 'kill' online publishing. Spanfeller does not quote the controversial OPA study, but he cites Comscore's *Silent Click* study – 'do we really want to be held accountable as an industry by metrics generated by the lowest common denominator and a minority of users to boot?' For him, the spreading of direct-response metrics within the online advertising world is the crucial issue:

> These metrics drive the conversation and the core objectives of online advertising away from demand creation (which is basically the definition of advertising) to demand fulfilment or, put another way, direct response. There is nothing wrong with direct response; every other medium has it, and the industry drives huge value for both marketers and media. But direct response is not advertising – it is something different.

The controversy also took place in France. First, it is important to note that French market professionals are well aware of it; they mobilized the very same arguments in almost every professional meeting we attended. Large publishers and the GESTE claim that the click-through rate is not relevant for a large number of advertisers and campaigns; they actively engage in the promotion of alternative metrics, such as GRP (gross rating point, the metric used in television advertising) and ad recall. Secondly, the defenders of the media convention also took the chance to express their opinions in the public sphere. In October 2008, during the French IAB annual conference, they spoke to online publishers at large. They warned them against the collective consequences of their individual decisions in a context of crisis: if they sold their unsold inventory through ad-networks, and began to lower their prices, they would provoke the collapse of the media convention. Besides, the so-called 'Etats généraux de la presse' (Inquiry into the General State of the Press) was organized by the French government between October 2008 and January 2009. This large consultation, in which 150 professionals were involved, served as an echo chamber for the complaint of online avatars of the print media that the direct-response convention (i.e. ad-networks and search engines such as Google) was destroying their business.

Conclusion

Online advertising has been built around two quality conventions. Although these two worlds remain relatively separate and compartmentalized, there are areas of friction. First, these models are competing to capture communication budgets of advertisers; we have witnessed over the past decade a change in the balance at the expense of media advertising. Second, some techniques from direct-response marketing (click-based pricing and measuring; targeting) are used on graphics formats (banners) *a priori* dedicated to media advertising. The question is how to interpret this tension and the forms of hybridization on the borders of both worlds.

Some academic work, tinged with technological determinism, highlights the archaism of media advertising and the sophistication of direct-response marketing. Authors believe that online advertising is bound to converge on the, supposedly more efficient, model embodied by Google (Goldman 2006; Evans 2008). Their argument is rooted in economic literature. As it happens, we observe that, to reach consumers who derive a positive utility from advertising (information, entertainment), marketing generates a negative externality *vis-à-vis* consumers who derive negative utility from it (consumption of their attention, discomfort). In other words, the problem is over-production. The filters set up by search engines are in this sense an improvement, since they target consumers supposedly interested by matching advertisements with intent – as expressed in the keywords. This work therefore suggests the extension of *matching* techniques to media advertising, by generalizing cost-per-click pricing, click-through rate measuring or behavioral targeting –advertising is targeted based on the recorded behavior of the Internet user.

The problem with these techniques is that they tend to break the link between advertising and editorial content, which is the foundation of the audience economy. Moreover, the convergence argument overlooks the fact that a portion of advertising is specifically designed not to be targeted – one that aims at increasing brand or product awareness. An alternative argument is that friction on the border of both worlds suggests a certain fragility of the model of media advertising when it is transposed to the Internet. We have shown in this article that there is an asymmetry in how the two production worlds are equipped. Online media do not have simple, standardized assessment tools to demonstrate their effectiveness in terms of awareness – unlike the post-test surveys that fit television advertising. Conversely, the main indicator of direct-response marketing, the click-through rate, which is always available and flows easily, tends to parasitize the world of media advertising, undermining media sites.

What general lessons can be learned from this case study? This article makes several contributions to valuation studies and economic sociology, which could be extended by further research.

First, we show that markets are highly political arenas where various stakeholders (firms, professional associations, journalists, academics) discuss the evolution of markets. Part of this discussion aims at building, strengthening and justifying quality conventions. Quality conventions combine a definition of a product (in our case: what an ad is), principles of valuation of the product (what makes the value of an ad), and instruments to measure this value (technologies that produce efficiency metrics). We observed the different arenas in which discussion took place, but we also showed that collective action failed to promote alternative indicators that could counter the so-called 'imperialism of performance'. Online advertising and media professionals – in particular the defenders of the media convention – are well aware of this issue. While recognizing the danger posed by the weakening of the traditional definition of advertising on their business, they can only see their powerlessness. Thus, they have gradually shifted the debate from the professional arena to public space, and claim support from the state because of their contribution to 'quality journalism'. It would be interesting to follow the evolution and enrichment of the controversy when it convenes civic values and general interest, by observing the arenas where arguments and counter-arguments are displayed.

Secondly, if collective action aims at performing exchange practices, it does not necessarily succeed. In the case of online advertising, the performance convention does not spread thanks to a more convincing definition of what an ad is, or thanks to more appropriate principles of valuation; it gains ground because it facilitates systematic comparison of advertising campaigns by attaching to each of them a unique number (click-through rate). Though actors may underline the multi-dimensionality and the complexity of the advertising product, the controversy is closed by the univocity and transportability of performance metrics in the everyday actions of buyers and sellers. This story supports pragmatist approaches to valuation, which emphasize the tension between value as a social representation, and value as a metric problem settled in practice (Muniesa 2012). We have entered this issue only through the discourse of professionals. To explore it more precisely would require an ethnography of market devices (media-planning and advertising buying tools) in action.

Thirdly, we may compare the case of online advertising with research in economic sociology about consumer markets for 'singularities'. These markets are threatened by processes of 'de-qualification', i.e. the replacement of multi-dimensional valuation conventions by univocal ratings. Cultural products are more valued through rank sales and viewers' votes, and less by critics (Karpik 2010); analysts of the wine market discuss its 'Parkerization', that is the reduction of quality to a unique ranking system established by the Parker guide (Chauvin 2010). Further research would be necessary to investigate what appears to be a fundamental tension within contemporary markets: the tension between, on the one hand, the multiplication, diversity, and transportability of valuation tools; and, on the other hand, the mechanisms that lead actors to converge around one simple, reductionist measure.

NOTES

1. The other main component is search advertising, which refers to advertisements placed on web pages that show results from search engine queries. Other advertising formats include classifieds, email marketing and affiliation.
2. We conducted 25 semi-directive interviews between 2008 and 2009 with various market professionals: Online publishers and ad-sales managers; media and advertising agencies;

professional associations; audience measurement firms. Some of the interviews were conducted by Alan Ouakrat (Ouakrat 2011). We also attended professional meetings and analysed most of the professional press and market studies produced by the industry through a two-year period. This material enables us to observe concrete exchange practices as well as the arenas in which market participants collectively discuss the functioning and equipment of the market for online advertising services.

3. Direct response is usually defined as the principal goal of 'below the line' marketing (sales promotion; direct marketing). Historically, its growth on the Internet is associated with the development of e-commerce and search engine advertising.

4. If the advertiser is indifferent to the editorial quality of the advertising space, she can make a trade-off between spaces bought on CPC and CPM basis, at least if she knows the average CTR of the site. The equation is: CPM/1000 = CTRxCPC. For example, if the CTR is 0.05%, a CPC of €1 is equivalent to a CPM of €0.5. This equivalent CPM is often noted eCPM. Today, the average CTR is estimated at around 0.2% (two clicks for one thousand visitors).

5. Compare footnote 4.

6. *Groupement des éditeurs de services en ligne*. This professional association advocates the interests of online publishers. It is the French equivalent of the Online Publishers Association.

7. It is interesting to notice that this debate echoes (and is fueled) by an academic debate on the accuracy of the click-through rate as an efficiency measure. Some authors believe in the superiority of the performance-based pricing models, and claim that click-based pricing models may improve the effectiveness of advertising campaigns (Hu 2004; Lohtia *et al*. 2003). Others argue that click-through is not a relevant measure of the brand building power of online display advertising (Hollis 2005); and that the effect of display advertising on consumers' attitude towards brands happens at the 'pre-attentive' level – and is thus independent from click-through (Yaveroglu & Donthu 2008).

8. Comscore, 'How Online Advertising Works: Wither the Click', December 2008; Comscore/OPA, 'The Silent Click; Building Brands Online', June 2009; Comscore, 'The Click Remains Irrelevant: ''*Natural Born Clickers*'' Return', September 2009. The first study appeared in an academic journal, *Journal of Advertising Research*, in June 2009 (Fulgoni & Mörn 2009).

9. OPA, 'Improving Ad-effectiveness Online: The Impact of Advertising on Branded Content Sites', August 2008; OPA, 'Improving Ad-effectiveness Online: The Impact of Advertising on Quality Content Sites', January 2009; OPA, 'Improving Ad-performance Online: The Impact of Advertising on Content Sites', August 2009.

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