

The Rise of Attention Metrics: Can a New Digital Currency Help Sustain Journalism?

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Executive Summary

The news publishing industry faces an existential crisis as digital technologies continue to erode the traditional business model of print journalism. Signs of decline among legacy news publishers abound. Print ad revenue has fallen off precipitously, and digital ad sales are far from making up the loss (Vranica & Marshall, 2016). The number of people employed in the newspaper industry dropped by almost 60% between 1990 and 2016 (U.S. Bureau of Labor Statistics, 2016). Newspaper circulation continues to shrink, as does the number of daily papers still in business (Barthel, 2016). The sobering litany stretches on. Although a portion of those lost jobs and ad dollars have migrated to digital native news publications, few digital-first outlets have yet struck a profitable, sustainable business model. They benefit from lower overhead costs than legacy publishers do, but face similar challenges generating revenue in an extremely competitive digital ad economy dominated by Facebook and Google.

For anyone who accepts that a robust press is critical to a functional democratic society, it's clear that news publishers' struggle represents a real threat. Weakened institutions of journalism limit informed public discourse and diminish government accountability. If this observation sounds alarmist, consider that these consequences are already playing out on a local level. Research carried out in several U.S. cities suggests that the effects of a local paper closing include reduced civic engagement and less competitive local elections (Shaker, 2014; Schulhofer-Wohl & Garrido, 2013). In this context, searching for solutions to the challenges faced by news publishers is more than an esoteric intellectual exercise, and any development that may contribute to publishers' financial sustainability is worth examining.

One relatively recent trend that may hold promise is the rise of attention metrics, which are based on real-time digital analytics software measuring how much time a website visitor spends actively viewing online content. Measures of audience size have long dominated internet analytics, but digital publishers are increasingly seeking alternatives to volume-based metrics in order to gauge more effectively the impact of their content and the ways in which their audiences engage with it. Some have even claimed that, in addition to improving the utility of digital analytics, measuring attention can help news publishers create a more sustainable business model by placing greater value on quality content, both from an editorial perspective and for the purpose of ad sales.

This report sought to determine whether analyzing attention for editorial pur-

poses or using attention-based currencies to sell display ads – usually the main source of digital revenue for news organizations (Lu & Holcomb, 2016) – can, in fact, improve publishers’ financial prospects. The conclusions are based largely on interviews with professionals at analytics firms, in the advertising industry, and at several leading publications including *The New York Times*, *The Washington Post*, the *Financial Times*, and *The Atlantic*. These interviewees were selected because they represent key types of organizations that have a stake in the future of measuring attention, and they offer diverse perspectives from different parts of the digital publishing industry. Their insights should be of interest to publishers who want to find out more about the story behind attention metrics, their current role in newsrooms, and the potential that selling ads based on audience attention holds for bolstering digital revenue. Key findings include the following:

- *Measuring attention (i.e., engaged time) will not become a dominant metric for gauging editorial success.* Publishers report that attention metrics are a valuable indicator of audience engagement, but will remain just one of a suite of engagement metrics along with recirculation, scroll depth, social sharing, commenting, and other measures. The amount of weight given to engaged time varies from publisher to publisher depending on their analytics capabilities and editorial goals.
- *Advertisers’ demands for greater viewability may help drive the adoption of time-based ad currencies that trade on attention, such as cost-per-hour (CPH).* Concerns among advertisers about ad fraud and poor viewability have already led the Media Rating Council (MRC) to create an ad currency called the viewable impression, which is defined in part by time measurement. This may serve as a stepping-stone to broader adoption of time-based currencies, which guarantee greater viewability than the viewable impression.
- *Interest in trading on attention is growing among publishers.* Publishers are seeking ways to compete for more digital ad dollars in a marketplace dominated by tech giants. Some view selling ads using attention currencies based on time measurement as a way to capitalize on quality content and highly engaged audiences in a manner that better aligns business incentives with editorial performance.
- *Significant barriers to broader adoption of time-based attention currencies remain.* The greatest challenge is the inertia of a massive digital ad marketplace

built on selling impressions. Additional hurdles include lack of demand from ad agencies, technological challenges, and difficulties standardizing the value of attention sales. The first step toward overcoming these barriers is better education and providing more empirical evidence of the value of attention currencies.

- *Practitioners' assessments of how likely time-based attention currencies are to spread vary dramatically.* Some feel that broader adoption is unlikely due to industry inertia, while others believe wider use is fairly certain, at least for some types of publications. The most probable scenario in which these currencies could spread would rely on successful early adoption by premium publishers and advertisers.
- *If adopted more widely, attention currencies could help some digital news publishers build a more sustainable business model.* Selling ads based on attention may offer certain publishers a more profitable alternative to volume-based sales. The greatest benefits would accrue to publishers with the ample resources needed to optimize for engagement and to premium publishers with highly engaged audiences that are desirable targets for advertisers.

While it's too early to predict what role attention currencies will ultimately play in digital publishing, it's certain that ongoing forays into attention-based ad sales warrant the effort and are worth monitoring. Pioneering publications such as the *Financial Times* and *The Economist* are reporting positive results from selling on a cost-per-hour currency, and other publishers are poised to follow suit. In an economic environment where publishers are fighting for survival, any prospect for greater financial stability is welcome.

Introduction

“So here’s the story: Only a small number of you are reading all the way through articles on the Web. ... When people land on a story, they very rarely make it all the way down the page. A lot of people don’t even make it halfway” (Manjoo, 2013). When Farhad Manjoo made this observation in Slate in 2013, he helped make the case for using attention metrics and other measures of engagement in digital publishing analytics. Rather than measuring audience volume via pageviews, unique visitors or clickthroughs, attention metrics reflect the time users spend actively engaged with online content. Measuring attention makes sense in light of Manjoo’s point, that the vast majority of users who visit a webpage simply don’t spend much time looking at it – even if they had to click a link to get there.

The long-standing dominance of volume metrics in digital publishing does not stem from their being selected as the most useful measures for publishers. In fact, they’re a vestige of the earliest web analytics technologies, which were developed specifically for e-commerce. Clare Carr (2017b), Vice President, Marketing, at the analytics company Parse.ly, explained, “A lot of analytics platforms – Google Analytics and Adobe’s Omniture being the two big legacy players – were built for e-commerce and built on page hits because that’s what they could do at the time.” As a result, digital publishers inherited a system where content performance was measured mainly by visitors and pageviews, and ad sales were based on selling impressions and clicks. These metrics dominate the industry to this day.

The basic argument for adopting attention metrics is that no matter how many visitors you have, audience volume is a poor measure of success if they don’t spend time looking at your editorial content and actually viewing the ads you sell. From a publisher’s point of view, attention metrics are useful in understanding user preferences such as what types of content keep people engaged on their websites. Additionally, user attention is a more limited resource than their views and clicks. This makes time “a scarce and therefore valuable unit for advertisers” (Sobel Fitts, 2015) and a potential basis for a more lucrative ad pricing model for publishers. From an advertiser’s point of view, knowing whether someone spent one second versus five with their ad in view could reveal a meaningful difference in value.

Before discussing attention metrics in greater depth, it’s helpful to define a few key terms that may mean slightly different things to different people in the publishing world. For the purposes of this report, the term *attention metrics* refers to measures of website visitors’ engaged time, determined by concrete evidence of their

presence on a page, such as cursor movement, keystrokes, and scrolling. The terms *attention* and *engaged time* will be used interchangeably. *Engagement metrics* are a class of measures to which attention metrics belong. The definition of engagement varies from publisher to publisher, but generally speaking, it includes any indicator of how the audience is interacting with content, such as recirculation, social sharing, and commenting. Finally, *advertising currencies* are “a class of metrics that constitute a common coin-of-exchange that all buyers and sellers of media can use to conduct business” (Webster, 2015). The most common example of an advertising currency is CPM, or cost per thousand impressions. This report will frequently refer to a subset of ad currencies called *attention currencies*, such as cost-per-hour (CPH), which are used to sell ads based on chunks of viewing time rather than number of impressions.

The rise of attention metrics has been driven by publishers seeking better ways to understand and monetize their audiences than the volume metrics bequeathed by e-commerce permitted. Relatively new technologies, including real-time analytics, and new tech firms that designed measurement tools specifically for the needs of digital publishers have been facilitating the shift to new regimes of measurement. The following report first looks back at the rise of attention metrics, then examines the role they currently play in editorial analytics and ad sales, and concludes with an exploration of the future of attention-based ad sales, based on interviews with industry professionals.

The Rise of Attention Metrics

Publishers and Analytics Firms

Beginning around 2014, a small group of digital native and premium publishers began pushing the idea of using attention metrics for editorial and ad pricing purposes (Moses, 2015). On the digital publishing side, the conversation about attention metrics began with several publishers questioning which audience measures really mattered. Medium and Upworthy are two digital-native publishers that first championed the use of attention metrics. In late 2013, Pete Davies, a product scientist at Medium, published an article where he introduced “The Only Metric that Matters” at Medium: Total Time Reading (TTR). He explained, “attention is the precious commodity of the super-connected era,” and therefore TTR was the best measure to understand the performance of the entire Medium platform.

Just a few months later, Upworthy published a post on its blog that introduced a metric called attention minutes. The post claimed that pageviews are a “flimsy metric,” and that unique visitors “reward breadth over depth of user experience.” Additionally, it described shares as a valuable metric, but one that doesn’t provide a complete picture of engagement. Attention minutes, which would be used to measure both Total Attention on Site (per day, week, month, etc.) and Total Attention per Piece, would help Upworthy achieve its goal “to maximize attention for meaningful content” (Upworthy, 2014).

As digital natives tried their hand at improving performance by measuring attention, a small group of legacy publishers began experimenting with using attention as an ad currency. Many publishers were tired of being held to “ad success standards that don’t correlate to quality” (Smith, 2014) because the incentives that drive volume-based advertising sales don’t necessarily reward the production of quality content that audiences want to spend time with. In March of 2013, John Slade, commercial director of digital advertising and insight at the *Financial Times*, shared with his staff an idea that “stands to upend the digital-advertising industry.” It was a simple question on a PowerPoint slide: “Time as a currency to trade?” (Sebastian, 2014) What Slade proposed was the basic concept behind using attention as the basis for an ad pricing model.

The *Financial Times* lost little time in acting on Slade’s idea. By 2014, they were testing time-based sales with select advertisers. And by May of 2015, they rolled out the option to buy ads on a cost-per-hour (CPH) basis. CPH ad sales

were based on selling hours of audience attention rather than number of impressions, and guaranteed that only impressions that were 100% viewable (as defined by the MRC standard of having at least 50% of the ad on screen) for at least five seconds would count toward the total purchase (*Financial Times*, 2015). A viewer's presence was confirmed by tracking activities including mouse movement, scrolling, and keystrokes, and the browser was monitored to ensure the correct tab remained in the foreground of the screen (Sangvhi, 2015). Other premium publishers followed suit. *The Wall Street Journal*, *The Economist*, and Bloomberg have also experimented with time-based ad sales (Ingram, 2015a), and *The Economist* announced in November of 2015 that it would begin offering ad sales on a CPH basis (*The Economist*, 2015).

Real-time analytics made these forays into measuring attention for editorial and advertising purposes possible. Measurement technology provided by Chartbeat was widely adopted among publishers because it was one of the earliest analytics firms to offer "a dashboard specifically for use by journalists, rather than by advertising sales departments" (Petre, 2015). Chartbeat also chose to provide real-time data about website visitors and content in order to set itself apart from Google Analytics, which at the time gave only historical data. These real-time analytics addressed publishers' new need for up-to-the-minute measurement driven by the rise of social media (Sobel Fitts, 2015), and they permitted the measurement of a visitor's attention by tracking engaged time. Chartbeat's role was significant from an advertising perspective because its real-time measurements provided the foundation for the *Financial Times*' initial CPH ad campaigns.

Other analytics firms catering to online publishers and providing real-time data entered the market, including Parse.ly, Chartbeat's main competitor. Founded in 2009, Parse.ly began focusing on online publishers in 2011 after its team realized that "most [analytics] tools were one-size-fits-all systems that treated an e-commerce site the same as a content site" (Kamdar, 2012). Google Analytics also announced the addition of real-time analytics in 2011, but without the focus on publishing that Chartbeat and Parse.ly explicitly promoted (Google Analytics, 2011).

Despite the proliferation of real-time metrics, Chartbeat remained "the arbiter of audience in the digital age" (Sobel Fitts, 2015). Not only was it widely used among top online publishers, but its CEO at the time, Tony Haile, was a vocal evangelist for the adoption of attention metrics. The company aspired to help build a sustainable, attention-based economic model so that, as Haile put it, "Twenty years

from now, the journalist that wants to investigate the corrupt politician actually has the means to do so” (Sobel Fitts, 2015). In order to achieve that goal, Chartbeat asserted, “It’s time to recognize that attention is a true measure of success” (Chartbeat, n.d.-a).

The Digital Advertising Economy

In order to understand why measuring attention is part of the conversation about success and sustainability for publishers, it’s necessary to examine the context of the digital advertising economy in which they operate. One of the greatest structural challenges publishers face is that even as programmatic trading reshapes the market, ad sales are still largely based on volume, and it’s nearly impossible to compete with tech giants in terms of scale. But as advertisers look for ways to find more value in a marketplace plagued by fraud, there may be opportunities for savvy publishers to trade on attention.

In 2014, as news publishers began experimenting with selling ads based on time, just five firms – all tech giants – brought in 51% of total digital ad revenue. The top two, Facebook and Google, earned 24% and 14%, respectively, and were even more dominant in mobile ads (Olmstead & Lu, 2015). Since then, their share has only increased. By 2015, the top five firms brought in 65% of all ad revenue (Lu & Holcomb, 2016). Astonishingly, the Facebook-Google duopoly accounted for 99% of the \$2.9 billion ad growth in the third quarter of 2016, and their control of audiences is only expected to grow (Ingram, 2017).

In an environment where the duopoly has a stranglehold on audience attention and ad dollars, it’s extremely difficult for digital news publishers to compete. The financial consequences are dire, especially for legacy publishers who are unable to stanch the bleeding of lost print advertising income. As *The Wall Street Journal* observed, newspapers are “in a race against time to grow their digital revenues to make up for the collapse of print advertising,” and one of the main factors impeding their progress is “the dominance of Facebook and Google in the digital market” (Vranica & Marshall, 2016). The challenges are not limited to legacy publishers – all digital media outlets are essentially fighting for the duopoly’s leftovers when it comes to ad dollars. This existential struggle has driven publishers’ interest in trading on attention, as they hope to capitalize more effectively on the quality of their content.

While publishers struggle to generate revenue, advertisers face the challenges of limited viewability and widespread ad fraud; many of the display ads they pay for are never seen by human eyes. In 2014, comScore reported that 54% of the display ads it analyzed weren't viewable by a consumer (Vollman, 2014), and similarly, Google reported that 56.1% of impressions that it served weren't viewable (Marvin, 2014). The same year, a bot traffic analysis determined that bots accounted for 56% of all web traffic and "sophisticated malicious bots" were on the rise (Zeifman, 2014). In light of such serious flaws in advertising models, *Fortune's* Matthew Ingram (2015b) lamented, "a massive chunk of the advertising market is based on smoke and mirrors, or even outright fraud."

One major development which advertisers hoped would help them get more value for their ad dollars and potentially reduce fraud levels is the meteoric growth of programmatic advertising. Programmatic buying encompasses a diverse array of ad sales arrangements, but the common characteristic is that they rely on software to automate buying and selling. The key to programmatic is that it allows advertisers to target individuals across publications using their unique personal data, rather than targeting a single publication's entire audience as a proxy for a desired demographic group. This approach has proved extremely attractive for advertisers; in 2014, programmatic accounted for 49% of all display ad spending (eMarketer, 2016), and by 2019 its share is expected to leap to 84% (eMarketer, 2017).

Its rapid spread notwithstanding, programmatic has not been a panacea for the problems presented by digital ad sales. Fraud remains widespread overall, and fraud and viewability rates are worse in programmatic buys than in direct buys negotiated between a single advertiser and publisher (Business Insider, 2016; Business Insider, 2017). Additionally, serving ads across broad swaths of the internet rather than select publications means they can end up in contexts that range from irrelevant to offensive. As a result of these issues, advertisers are shifting their purchases away from types of programmatic transactions that offer less transparency and lower quality impressions, such as real-time bidding, and are moving toward more premium programmatic offerings (Heine, 2017).

Advertisers' desire for higher quality programmatic purchases presents an opportunity for high-end publishers. Sales arrangements such as programmatic direct, which refers to automated sales between one advertiser and one publisher, and private marketplaces, where one or more publishers offer premium ad inventory to select buyers, could potentially help smart publishers capitalize on their reputations and user data in order to improve financial returns on their ad sales. In terms of the

discussion about attention, though, it's important to note that while programmatic may offer valuable new methods of transacting, it doesn't change the underlying currency of exchange from one based on volume.

Due in part to problems with fraud and viewability, advertisers and trade groups have been interested in designing better currencies for years. In 2011, The Association of National Advertisers (ANA), The Interactive Advertising Bureau (IAB), and the American Association of Advertising Agencies (4A's) launched the Making Measurement Make Sense (3MS) initiative, an industry-wide effort to "propose standards for metrics and advertising currency that will enhance the evaluation of digital media and facilitate cross-platform measurement" (Association of National Advertisers, n.d.-b). Among the stated goals of 3MS were initiatives to make digital publications a more valuable medium, and to address a need for standard metrics that can be compared to legacy media and are based on a "fundamental opportunity for consumers to see online ads" (Making Measurement Make Sense, n.d.). 3MS would work with the Media Rating Council (MRC), the body that accredits audience rating services and determines what can be used as currencies for advertising.

In March of 2014, the MRC announced its approval of viewable impressions as a transaction metric and released a draft of its Viewable Impression Measurement Guidelines. The MRC's viewability standards for both display and video ads were based on two main factors: the number of an ad's pixels in display and a time requirement. For display ads, 50% or more of an ad's pixels must be in view for at least one second. For video ads, 50% or more of an ad's pixels must be viewable for at least two continuous seconds (Media Rating Council, 2014).

The introduction of the viewable impression standard was a step in the right direction for advertisers, but it still set a relatively low bar, and ad fraud remains a major problem. The ANA (n.d.-a) estimated that advertisers would lose \$7.2 billion to bots in 2016, and other ad industry analysts estimated the yearly cost of ad fraud at \$12.48 billion – almost 20% of total digital ad spending in 2016 (The&Partnership, 2017). Amidst ongoing problems with ad fraud, the introduction of viewable impressions as an ad currency based partly on time could serve as a stepping-stone to selling more ads based on attention, since attention-based currencies guarantee advertisers even greater viewability than viewable impressions. From a publisher's perspective, "Viewability is a great starting point, but doesn't go far enough to place value on premium advertising inventory" (Sanghvi, 2015).

The opportunities presented by advertisers' demands for greater viewability

were not lost on proponents of attention-based advertising sales. Just months after the MRC published its viewability standards, it completed a six-month audit of Chartbeat. The review was completed in September 2014, and the MRC approved 21 of the metrics featured in Chartbeat’s advertising platform, making it the first company licensed to measure attention. Chartbeat hailed that approval as a major step forward that would allow “premium publishers, advertisers and agencies” to “use attention as a currency,” and announced that “a whole new internet economy isn’t far away if attention is a fundamentally valuable thing” (Carusillo, 2014).

Where Things Stand

In today's newsrooms, volume metrics still play a major role in analytics, but interviews with practitioners suggest there has been a significant increase in the use of engagement metrics, including attention as measured by engaged time. "Over the last few years, we've definitely seen a bit of a revolution," reported Jill Nicholson (2017), Head of Product Education at Chartbeat. "At first, people were a little reluctant to let go of pageviews as a measure of success for their content, but more and more, especially in the last year, publishers are ... starting to think about retention and the loyalty of the audiences they're building," which makes engagement metrics more useful tools than traditional volume metrics. In fact, in a recent survey of publishers by Parse.ly, 50% reported that time-on-page was the best metric for the success of content, while only 45% said it was pageviews (Carr, 2017a). On the advertising side, practitioners report significant enthusiasm about the potential of attention-based currencies, but adoption remains limited for the time being.

In the Newsroom

For editorial purposes, engaged time now serves as one of a broader suite of engagement metrics, including recirculation, social sharing, and commenting, that together tell publishers how successfully they're delivering content to their audiences. Interviews conducted with editorial professionals for this report indicate that the relative importance of engaged time in that mix of metrics varies by publication.

Ari Isaacman Bevacqua (2017), Growth Strategy Editor at *The New York Times*, explained, "Editorially at the *Times*, engaged time can be an important metric, but it needs to be considered in the context of overall readership, story form, and length, and promotional factors that can influence the engaged time with a story." She added that she would identify subscriber growth and the engagement behaviors that influence future subscriber growth as overall key metrics for the *Times*, and also emphasized that the publication does not define success purely in terms of quantitative metrics, but also based on the value of its journalism as defined by editorial judgment.

When asked about the importance of engaged time at *The Washington Post*, which has explicitly focused on scale in recent years, Mark W. Smith (2017), Editor for Mobile Web, described it as one of the "more nuanced" engagement metrics they have begun to focus on over the last couple of years. He noted that engaged time is

a “good place to identify what we could maybe call journalism of impact ... but also it is not our business to tie readers to their chairs.”

From the perspective of a smaller publisher, pageviews are still the main metric that matters. Paul Whelan (2017), Editor of Richmond.com (the online presence of the *Richmond Times-Dispatch*, a mid-size legacy publisher in Richmond, Virginia), said that while he does take note of engaged time, “Pageviews are what our benchmark for success is really based on.” He explained that among legacy publishers similar in size to his organization, the most important metric may vary, but it’s typically tied to volume – either pageviews, unique pageviews, or unique users.

Despite editors’ broader use of attention metrics over the past few years, they reported that challenges remain in measuring engaged time and interpreting its meaning. Smith (2017) mentioned that some of the tools the *Post* was using to track engaged time were inaccurate, and that it can be a difficult metric to measure correctly due to technical challenges. Aside from accuracy, understanding the significance of engaged time can be difficult. The *Times*’ Bevacqua (2017) observed, “It can be misleading if there are a small number of views or if you don’t look at it over the lifespan of the article.” Smith also pointed out that it’s hard to compare engaged time across different types of content in a standardized way; a short breaking news update may get much less average engaged time than a feature article, but that doesn’t necessarily indicate that it wasn’t valuable to the reader. “If we have a really efficient piece of journalism that isn’t necessarily getting massive engaged time, that should also not be something that we look at as a sign of failure.”

Asked about these limitations, Clare Carr (2017b) from Parse.ly suggested that looking at total engaged time rather than average engaged time could help with standardization issues, explaining, “If you have a longform piece you’re probably going to have fewer people reading it, just by the nature of it, and breaking news is probably going to reach a larger audience, so total engaged time is still a good proxy for the overall success of that piece to a certain extent.” Nevertheless, she agreed that while the metric is useful for ranking articles, it’s not as intuitive as comparing pageviews. “When you see 2000 pageviews, you know if that’s good or bad; when you see 2000 minutes, I think people still don’t know what that means yet, so that’s a challenge.”

Interviewees at publishers and analytics firms shared a basic consensus on the future of measuring attention for editorial purposes: it’s important, but will remain just one of a suite of engagement metrics that should be tailored to each publisher’s specific goals and needs. Betsy Ebersole Cole (2017), Executive Director of Dig-

ital Product and Strategy at *The Atlantic*, gave an assessment of what the future holds that's representative, saying, "I think that it's probably going to stay as one of the many things we consider. I don't think it's going to supplant other metrics like pageviews and depth of visit. ... There are so many things that we're looking at when making decisions, I don't see it taking over those other metrics." Carr (2017b) shared a similar view. "I'm not saying by any means count engaged time out. I think it's important. But you see stuff out there saying, 'We're going to save the industry with engaged time,' and I think that is a little simpler than the reality on the ground."

Selling Attention

On the advertising side, there's been limited spread in the adoption of attention currencies beyond the original pioneering publishers – namely the *Financial Times* and *The Economist* – but awareness and interest continue to grow, according to practitioners asked about the prospects of attention-based sales. Rob Scudder (2017), Director of Advertising Sales for Boston and the Mid-Atlantic Region at *The New York Times*, observed, "I know it's a conversation that's taking place in the industry as a whole." And even though the *Times* itself doesn't have any immediate plans to transact on time, "it's certainly on our radar." The *Financial Times* leads a working group of more than 30 publishers and tech companies to develop attention sales (Ryan, 2016), and 2016 saw several industry conferences devoted to selling based on time, which Digiday described as "the current vogue in many digital media circles" (Willens, 2016). Brendan Spain (2017), Vice President of Advertising – Americas, at the *Financial Times* confirmed that further adoption is likely, saying, "The MRC viewability mandate has made publishers think about attention metrics and has resulted in a lot of questions around optimization for and selling on attention. We're hearing other pubs talk about getting their ducks in a row to sell on time."

Since the earliest forays into attention-based ad sales, there have been some changes in which analytics firms are involved in these efforts. Chartbeat, which partnered with the *Financial Times* on their initial CPH sales campaigns, no longer offers analytics for ad sales. Nicholson (2017) explained why Chartbeat withdrew that particular service, commenting, "Unfortunately, the industry at large was not as flexible or willing to change as the *FT* was, and wasn't ready for changing an entire economy." She emphasized that while Chartbeat's focus is now on editorial analytics, they still strongly support the idea of selling ads based on attention in order

to reward quality content. Other analytics firms have stepped in where Chartbeat left off, including Moat, which currently works with the *Financial Times* and tracks viewability, provides attention analytics for ad transactions, and screens fraudulent ad views. In another notable development, an ad network called Parsec is now available, which places ads sold exclusively on a cost-per-second basis within a network of premium publishers.

Although the use of attention metrics for editorial purposes has spread over the past few years, the greatest potential economic impact of measuring attention lies in the realm of ad sales. Publishers, facilitated by tech firms, are poised to continue the adoption of attention-based transactions, but it remains uncertain how common this approach will become or if it will grow into a viable alternative to volume-based sales. The next section of this report examines what the future holds for attention-based sales by looking at what the greatest barriers to adoption are, and how likely selling audience attention is to help support a more sustainable business model for digital news publishers.

The Future of Attention-Based Ad Currencies

Barriers to Adoption and a Potential Path Forward

According to advertising professionals, the most significant barrier to broader adoption of an attention currency is simply the inertia of a massive digital ad economy built on selling impressions. “Because of the size of the [media] industry and the amount of people and money and institutions and structures, it just is very difficult for overarching changes to take place. ... The ability to pivot a ship that big is a challenge,” Chartbeat’s Nicholson (2017) pointed out. Stephanie Laysner (2017), Director of Advertising Technology at News Corp, offered a similar assessment, saying it would be difficult for an attention currency to spread because “the industry as a whole and the technology that it takes to achieve these goals are so deeply ingrained in the CPM model.” Additional hurdles to the spread of selling on attention include lack of demand from ad agencies, technological challenges, and difficulties standardizing the value of attention sales.

Aside from industry inertia, inadequate demand for attention sales from ad agencies is one of the greatest impediments to wider adoption. Based on his experience using attention currencies at the *Financial Times*, Spain (2017) confirmed that of the different players involved in digital ad sales – publishers, ad agencies, and their clients – the agencies present the biggest roadblock because their business models are so entrenched in impression-based ad sales. He commented, “Without calling out agencies too much, I do think that’s the single largest barrier to overcome. If they’re going to act in the best interest of their clients, engaging on attention is the best way to do that.”

From the agency perspective, viewability measures are welcomed, but trading on an attention currency would present challenges similar to those faced by publishers. Demian Brink (2017), SVP and Director of Analytics at The Martin Agency, a leading international advertising firm, reported that buying ads with time-based viewability guarantees is “actually our preferred way, so it’s interesting to hear publishers say there isn’t interest.” Brink did acknowledge that there would be internal challenges presented by a broader shift to an attention currency such as CPH. He explained that the three largest barriers would be the need to educate both employees and clients about a new currency, the lack of pricing benchmarks for CPH, and the technical difficulties created by introducing a new currency to the systems the agency uses. Nevertheless, he pointed out, “This happens more often than you’d

think. New things come along all the time, so it's not like it can't be done. It's just another thing that has to be worked out."

Publishers as well as ad agencies would face problems with mixing impression- and attention-based ad currencies. News Corp's Laysner (2017) explained that on the technical side, there are still a lot of concerns about the ability to measure time accurately, and adding a time-based currency would require significant technological changes:

With something like time spent you almost have to change the way your ad server functions as a whole. Currently, publishers optimize towards the highest CPM for each individual impression – you can measure viewability and time spent after the fact, but to fully transact you'd need to have those technologies functioning in real time. You could do it, but getting the industry to switch over would require mass adoption from publishers, agencies, advertisers and ad tech companies and that seems unlikely given differing goals along the supply chain.

Spain (2017) agreed that, for now, it can be difficult to translate between the different types of currencies. "The idea of buying beyond the impression is exciting for people, but it's difficult when they're buying us on CPM and then they're buying every other publisher or network on impressions; you can't make an apples-to-apples comparison."

The first step in overcoming the barriers to adoption described above is education. In order for attention currencies to spread, publishers and advertisers alike need be convinced of the value of trading on attention by empirical evidence that's currently limited in supply. Laysner (2017), for example, agreed that selling viewable ads makes sense, but wondered, "Is there really any more value to an ad that somebody sees for ten seconds than an ad that somebody sees for two if the ad communicates the message effectively?" The *Financial Times*, one of the few publications currently in a position to offer first-hand analysis, says the answer to that question is "yes," reporting that when ads were viewable for five seconds or more, brand lift increased by 79%, familiarity by 55%, brand association by 51%, and brand consideration by 58% (Schiff, 2016). But there remains a need for more hard evidence that's more widely distributed. Brink (2017) agreed that the *Financial Times* results pass the "gut test," and advised that one of the ways to help spur adoption of

attention currencies on the agency side would be for publishers to share case studies showing positive results.

Interviewees' assessments of how likely attention currencies are to see significantly broader use varied widely and reveal a high degree of uncertainty about the future. Some feel that adoption is unlikely due to the deep entrenchment of the CPM model, others believe that a shift is possible, though uncertain, and some predict that the wider spread of attention currencies is quite likely. Among those who think it's possible or likely, there is general agreement as to what the path to adoption would look like. It begins with small, premium publishers seeking to capitalize more effectively on the value of their highly engaged audiences, working with savvy, premium advertisers demanding greater viewability (much like what's already taking place at the *Financial Times* and *The Economist*). What would have to happen next, Nicholson (2017) explained, is "a tipping point where the early successes are so attractive to publishers, and the monetary benefits, the revenue benefits, of selling a new way are so attractive to publishers that it will overcome the difficulties. ... I think the industry is really hoping for a new way to transact, it's just a scary change to make."

Who Wins in the Attention Economy

"Any change in the methods used to manufacture the coin of the realm will produce winners and losers" (2015, p.5), Webster observed of the potential rise of attention currencies. If they do spread as some expect, which publishers will stand to benefit and which will lose out? The winners among digital news publishers would be, quite simply, sites that offer quality content and have highly engaged audiences made up of desirable advertising demographics. In practice, this means the top tier of publishers in both the legacy and digital native spheres would be most likely to benefit. That group includes publishers of longform content such as magazines, as well as publishers more oriented toward shorter breaking news content whose loyal readers consume lots of articles. Both of these models can earn high total engaged time. Also, top tier publishers are most likely to possess the knowhow and resources to optimize engagement on their sites – promoting recirculation and earning return visits – and can thereby get even more value from the quality content they produce.

On the other hand, publishers who wouldn't benefit from attention currencies, and who might even suffer in the long run as a result of their spread, are those who chase scale without regard for engagement, especially those who do so using click-

bait and misleading headlines. Nicholson (2017) commented, “People with poor site experience are going to be penalized. ... If you have bad content and a poor site design, then yes, the attention economy would be bad for you – but that’s why we believe in the attention economy.” In addition to lower-quality outlets, any publications with limited reach and resources, such as local news publishers, would be unlikely to reap the rewards of a shift toward attention currencies.

One other group would stand to win in an attention economy, or more accurately, to continue winning. Tech giants are positioned to keep dominating digital advertising no matter the rules of the game, because they can win the fight for attention as well as the fight for scale. As Hindman (2015a) has explained, optimizing a site to attract and keep a visitor’s attention requires more than measurement. It takes expertise and resources – human, technological, and financial – that most news publishers simply don’t have. Tech giants, however, have created a virtuous cycle of measuring attention, analyzing the massive data intake, and using it to optimize their sites, thereby getting even more attention. According to Hindman (2015b), “Size matters online. Compared to firms like Google or Yahoo or Amazon, all newspapers are at a profound disadvantage” (p. 5). With this imbalance in mind, the realistic question about a future attention economy is not whether it would allow news publishers to compete with tech giants, but whether it could help them carve out a niche where they can survive.

Conclusions

The most important conclusion of this report is that measuring audience attention and selling it to advertisers can potentially help digital news publishers build a more sustainable business model, but the benefits would accrue mostly to top-tier publications. For editorial purposes, publishers with sufficient resources to take full advantage of analytics have the best shot at growing their audiences and keeping visitor attention, which would result in more ad revenue regardless of the currency being traded. Effective use of analytics can also help publishers earn income from sources beyond ad revenue, including subscriptions, memberships, partnerships, and events. Carr (2017b) said, “The best example of this right now on a large scale is probably *The Washington Post*, *The New York Times*, or *The Wall Street Journal*, who have invested a lot of money and time into their analytics, their data, and turn that into ways they can make money.” But, she cautioned, not all publishers have the necessary resources to implement these programs, and many haven’t realized how much of a priority internal analytics should be, instead chasing scale by distributing content on external platforms.

Attention-based ad sales also offer the opportunity for high-end publishers to capitalize on their content more effectively. Relying on clicks and pageviews “is a recipe for disaster in competing with Google and Facebook” (Willens, 2016), but an attention economy may prove slightly more hospitable to news publishers. Spain (2017) described the opportunity, saying, “I think what we’ll see is a much more sustainable business model for pubs who aren’t top ten or top five sites. You take Facebook, Google and a few others out of the top, and I think you start to see a sustainable business model for the top 1000 publishers instead of the top 100 publishers.”

In addition to the prospect of a more sustainable business model for certain publishers, key findings from this report include the following:

- *Measuring attention (i.e., engaged time) will not become a dominant metric for gauging editorial success.* Publishers report that attention metrics are a valuable indicator of audience engagement, but will remain just one of a suite of engagement metrics along with recirculation, scroll depth, social sharing, commenting, and other measures. The amount of weight given to engaged time varies from publisher to publisher depending on their analytics capabilities and editorial goals.

- *Advertisers' demands for greater viewability may help drive the adoption of attention-based ad currencies such as CPH.* Concerns among advertisers about ad fraud and poor viewability have already led the MRC to create the viewable impression, which is defined in part by time measurement. This may serve as a stepping-stone to broader adoption of attention currencies, which guarantee greater viewability than the viewable impression.
- *Interest in trading on attention is growing among publishers.* Publishers are seeking ways to compete for more digital ad dollars in a marketplace dominated by tech giants. Some view selling ads based on attention as a way to capitalize on quality content and highly engaged audiences in a manner that better aligns business incentives with editorial performance.
- *Significant barriers to broader adoption of attention currencies remain.* The top challenge is the inertia of a massive digital ad marketplace built on selling impressions. Additional hurdles include lack of demand from ad agencies, technological challenges, and difficulties standardizing the value of attention sales. The first step toward overcoming these barriers is better education and providing more empirical evidence of the value of attention currencies.
- *Practitioners' assessments of how likely attention currencies are to spread vary dramatically.* Some feel that broader adoption is unlikely due to industry inertia, while others believe wider use is fairly certain, at least for some types of publications. The most probable scenario in which these currencies could spread would rely on successful early adoption by premium publishers and advertisers.

Many significant questions remain about the use of attention currencies, perhaps most importantly, how broadly they'll be adopted. In order to make the case for trading on attention, there is an acute need for quantitative research on the effectiveness of attention-based advertising. Although there are select case studies available that indicate greater time in view makes an ad more effective, a more expansive body of empirical evidence is needed to prove the point convincingly. Other areas that deserve further exploration are determining how attention currencies perform on mobile versus desktop, whether attention sales can help digital publishers siphon off TV ad dollars, and how large a role sponsored content sales could play in spreading the use of attention-based sales. Finally, as programmatic trading takes over the

digital ad market, more information is needed on whether and how attention currencies could be used in programmatic sales on a large scale.

Regardless of the answers to these questions, it's not realistic that measuring and trading on attention is a practice that can "save" the news publishing industry as a whole. It will not turn around the decline of print newspapers or prevent the next round of layoffs at your local publisher. What it may offer, however, is a tool that can help a larger swath of top-tier publishers maintain financial stability than would otherwise be possible. In an industry with an uncertain future and few bright spots from a business perspective, that possibility alone makes the project of trading on attention worthy of close monitoring and further experimentation.

Methodology

This report is based on research using existing reports and articles as well as a series of interviews the author conducted with practitioners between February and April of 2017. In order to provide a thorough account of the rise of attention metrics, their technological underpinnings, their editorial use, and their role in ad sales, interviewees were selected from different areas of expertise at a variety of organizations involved in the digital publishing business. They included representatives from Chartbeat and Parse.ly, two analytics firms that have been leaders in offering real-time measurement software to news publishers; editorial and product experts at *The New York Times*, *The Washington Post*, *The Atlantic*, and the *Richmond Times-Dispatch*; advertising professionals at *The New York Times*, the *Financial Times*, and News Corp; a data scientist at Medium.com; and an advertising analytics expert at The Martin Agency, a leading international advertising firm. A complete list of interviewees is below.

Ari Isaacman Bevacqua, Growth Strategy Editor at *The New York Times*

Demian Brink, SVP and Director of Analytics at The Martin Agency

Clare Carr, Vice President, Marketing, at Parse.ly

Betsy Ebersole Cole, Executive Director of Digital Product and Strategy at *The Atlantic*

Stephanie Layser, Director of Advertising Technology at News Corp

Gustav Lindqvist, Data Scientist at Medium.com

Jill Nicholson, Head of Product Education at Chartbeat

Rob Scudder, Director of Advertising Sales for Boston and the Mid-Atlantic Region at *The New York Times*

Mark W. Smith, Editor for Mobile Web at *The Washington Post*

Brendan Spain, Vice President of Advertising – Americas at the *Financial Times*

Paul Whelan, Editor of Richmond.com (the *Richmond Times-Dispatch* website)

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