

Research article

## Individuated Media

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### Abstract:

**Purpose:** This article asserts that new, extremely popular modes of media services have arisen during the past 25 years that need to be critically categorized as different from the Mass Media we have known from the Industrial Era. These aggregational, extremely customized, new genus of media services, which I term collectively Individuated Media, arise solely from computer-mediated technologies, and are unprecedented before this century. All take marked advantage of a largely overlooked inherent limitation that Industrial Era technologies have but that Informational Era technologies don't.

**Method:** Among four approaches toward a conceptual paper, this article uses model approach to explain this new concept and to suggest new connections to understand the phenomenon of individuated media.

**Findings:** Among forms Individuated Media take are search engines, social media, and extant forms of individually customizable topical or genre services produced solely via computer-mediated technologies. The fulminant rise of these extremely popular Individuated Media is already causing them to supersede Mass Media products and services as the predominant means by which a significant portion of the world's population now obtains news, entertainment, and other information. This topological paper proposes a conceptual framework for defining this new genus and raises research questions for further study.

**Keywords:** Analog Uniformity; Hallmark Limitation; Individuated Media; Interactive Media; Mass Media; Media Management; Newspapers.

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### Introduction

The first major sector of media experimenting with computer-mediated technologies to deliver services to consumers were daily newspapers, and their experience has been illustrative of the differences between Mass Media and what this paper will define as Individuated Media. Perhaps because daily newspapers' initial experiences with online were with videotext systems in which text contents were distributed electronically onto video monitors, the daily newspaper industry

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misperceived computer-mediated media as mainly electronically mediated means of delivery for otherwise printed content. In other words, as wired ways to distribute texts, graphics, and photographs, without the expenses of purchasing, printing, and distributing paper products. A result of this misperception--a failure to understand larger and novel capabilities of computer-mediated technologies, the newspaper industry misbelieved that all it needed to succeed online would be to transplant into computer-mediated technologies its traditional products' contents, production and content packaging, and business models, along with the Mass Media theories, doctrines, and practices which had led to success with its centuries of commercial success with its printed products. The normative expectation of the newspaper industry was that when consumers shifted media their consumption habits from printed products to online would consume newspaper contents online the same way that they did printed editions, and that online editions could thus generate revenues commensurate with those generated from printed editions.

However, as thousands, millions, then billions of consumers made that shift (Meeker, 2019), the newspaper industry's expectations and online revenues did not reach that industry's expected levels. Empirical data from the online auditing firms such as Nielsen/Netratings and Comscore began to demonstrate that although some newspapers' websites were receiving more monthly 'unique users' than those newspapers had daily purchasers of printed editions, the consumption of newspaper contents online was much different than it had been with printed editions. On average, consumers online used newspapers' websites infrequently and superficially compared to how consumers used printed editions. For example, the average user of *The New York Times'* website during 2007 visited it only 4.05 times per month; spent an aggregate total of 20 minutes and 20 seconds on the website that month; and read a total of only 27 webpages during those total visits. (NADBase, Combined Home and Work, Six Month Average March-August, 2007) That average visitation frequency is equivalent to approximately once per week for this daily changing product; and the average total monthly time spent is roughly equivalent to the time the average reader of printed edition spends reading during an average day. Data from lesser renowned newspapers' websites showed worse consumptions. For instance, the average user of the *Miami Herald's* website visited merely 2.09 times per month, spending a total of just six minutes there all month, seeing only nine web pages during that period (NADBase, Combined Home and Work, Six Month Average March-August, 2007). When consumers' comparatively infrequent and superficial usage of newspapers' website became a focal phenomenon in the newspaper industries during the first decade of this century. Newspapers and their trade groups ask online ratings agencies such as ComScore and Nielsen to cease publicly publishing such data.

This comparatively infrequent and superficial usage caused newspapers' websites to generate much lower advertising revenues compared to the newspapers' own printed editions. Nominally this is due to online advertising using a more effective business model than traditional printed advertising business models have yet is also rooted in a fundamental difference between physical and virtual (i.e., online) media. The prices that publishers charge for printed advertising is most often based upon the publication's net circulation, regardless of how many readers indeed see the page upon which the advertisement is placed. There generally is significant wasted spending by advertisers on readers who subscribe to an edition but don't open it or who don't open the page upon which the advertisers' ads are displayed. Computer-mediated technologies can however detect the actual number of users to whom an advertisement was displayed, and thus the predominant business model that has been used during the first 25 years of online publishing via the Internet has been to charge advertiser only for the actual number of consumers to whom the advertisement was displayed. If the average unique visitor to a newspaper's website visits only 4.05 times per month, such as has been the case of *The New York Times*, then that newspaper can expose advertisements to its website's average user on average only some four days per month, and then only for the number of advertisements that user indeed saw during those few visits. That generates much lower advertising revenues than does charging the advertiser for all readers who purchased or subscribed

to a printed edition, regardless of if those readers opened the edition and saw the page on which an ad was displayed.

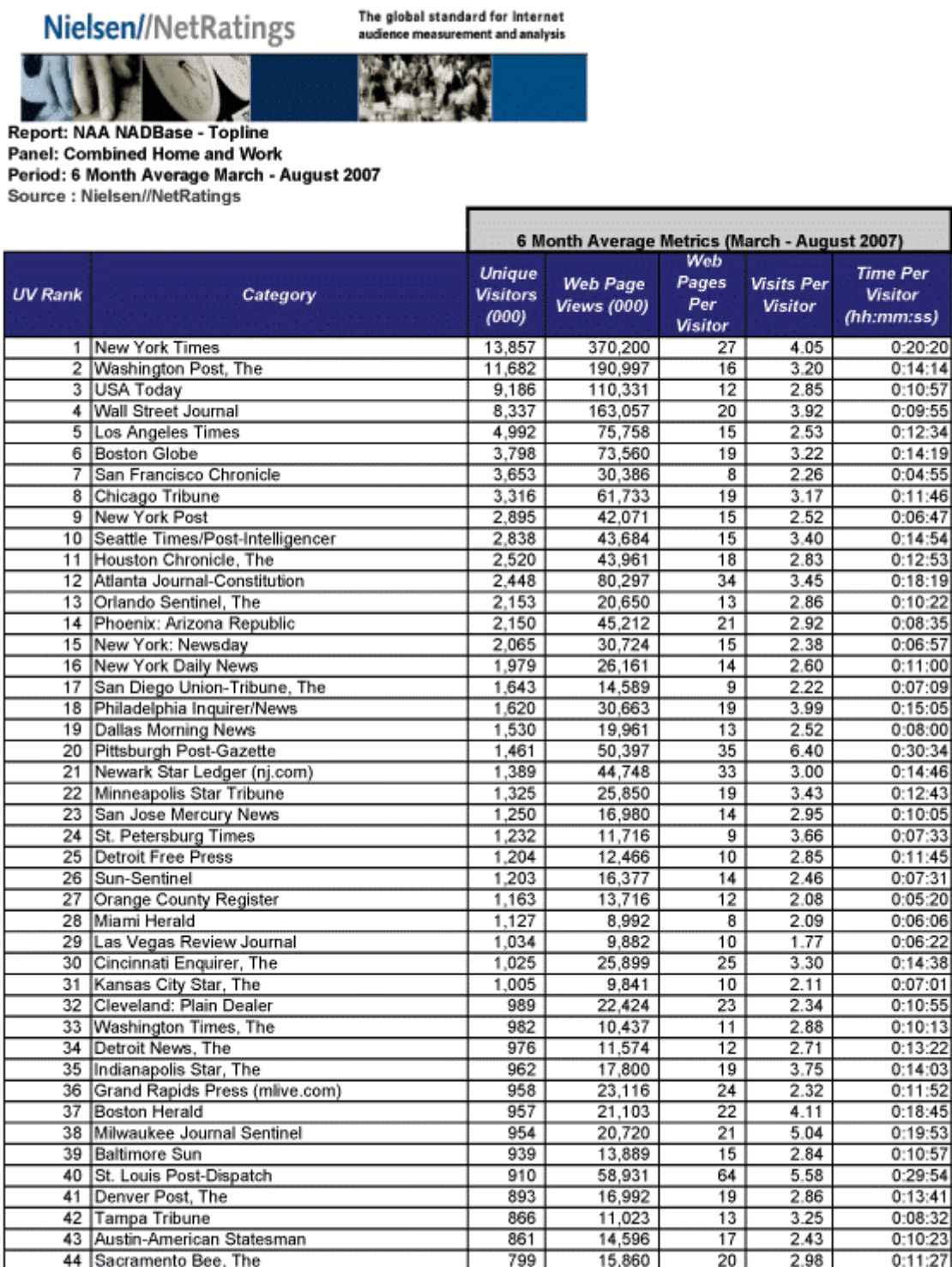


Figure 1- Nielsen//Netratings March-August 2007 average metrics of major U.S. newspaper websites

Moreover, the economics of printed (or broadcast) advertising differ from those of computer-mediated advertising in a more fundamental way, namely the principle of supply and demand. The printed advertising operates according to the economics of scarcity: there is a generally finite amount of page-space in a printed edition (or absolutely minutes within a broadcast hour). If an advertising-supported printed publication were to double in readership, its publisher doesn't necessarily have to

double the number of pages in its editions, but he generally will be able to increase (perhaps double) the rate which he charges advertisers for space in that edition. However, computer-mediated editions operate according to the inverse: the economics of surplus. If an advertising-supported website's online traffic (i.e., unique users') were to double, the website's publisher will need to find purchasers for twice as many banner ads as before; the inventory of displayed banner ads he needs to sell has doubled. If he cannot sell this increased inventory, then he either must forgo advertising on half the new page-exposures or else he has reduced his effective advertising price per ad. As traffic to a website increases, this tends to prevent online advertising rates raising proportionate to that traffic, thwarting the online advertising revenue expectations of publishers who might have been used to the economics of printed advertising. Furthermore, printed advertising used to be bolstered by relative scarcity to which consumers had access to media. Pre-Internet, consumers in most localities had had access to a relatively scarce number of publications with daily changing contents. Nowadays, however, consumers online have access to almost all publications with daily changing contents. That is another economic inversion of the principle of supply and demand that has caused more infrequent and superficial usage of most printed publications' websites and advertising revenues from those.

The focal phenomena of consumers' infrequent and superficial usage of newspaper contents online compared to in printed editions was an unexpected shock to publishers. When billions of consumers began shifting their media consumption habits from print to online, publishers' advertising revenues didn't shift proportionately from print to online. U.S. daily newspaper advertising revenues 2008 and 2018 fell from \$37.8 billion to \$14.3 billion, a 62% decline. During that same period, their online advertising revenues increased from \$2 billion to \$3 billion (Pew, 2019). With online advertising revenues failing their expectations, most U.S. daily newspaper during that period began charging consumers to access most or any of their websites' contents (Pew, 2019). Yet given that the average user of these daily newspapers' websites visited them infrequently, generally less often than once per week, relatively few of those visitors have been converted into paying online subscribers. For example, after nearly nine years of multimillion dollar marketing efforts to get its website's 130 million registered 'unique users' to pay, *The New York Times* has been able to convince only 7 million to pay, a 5.4 percent conversion ratio (New York Times Company, 2019 and 2020). Less renowned newspapers have fared more poorly. Given that the average daily U.S. newspaper has less than 20,000 weekday printed circulation and its website between 10,000 and 20,000 monthly unique users, compared to *The New York Times*' 443,000, a conversion rate of less than 6 percent would result in merely 600 to 1,200 paying online subscribers, which at rates of at least \$15 per month (the minimum allowed by audit bureaus of circulation to count as paying online subscriber figures given to advertisers), those revenues would barely pay the costs of operating the website, nonetheless compensate for the printed newspaper's rapidly declining overall revenues.

Relying on the strategic misperception that computer-mediated media are mainly electronically mediated means of delivery for otherwise printed content has led to an existential crisis in the U.S. newspaper industry. As its printed edition circulation steadily evaporates as consumers shift to reading online, the industry is rapidly reaching the point when it will no longer be cost-effective, nonetheless profitable, to continue printing such editions (Meyer, 2004). Many U.S. daily newspapers, such as the *Pittsburgh Post-Gazette*, *New Orleans Times-Picayune*, and *Detroit Free Press*, have already begun printing editions only three to four days per week. All U.S. newspapers have been undergoing steady waves of budget and personnel cuts to keep operating. Because most U.S. daily newspapers' websites don't generate enough revenues to sustain their newspaper's newsroom, nonetheless, their entire commercial enterprise, and are dependent upon the circulation and advertising revenues of those printed editions for their survival, should those printed editions cease to exist, their websites will likely cease to exist, too.

This existential crisis has prompted a nomological problem for those media executives and media academicians whose hard-won experience and learning has been primarily in Mass Media theory, doctrines, practices, and business models. Why, besides computer-mediation, does not online

media operate the same ways that printed or broadcast (i.e., terrestrial, cable, or satellite) media do? Why don't consumers use online media the same ways they did printed or broadcast media? Many studies (Grueskin, Seave, Graves, 2001) during the past 20 years have been unable to answer such questions. During 2005, Evan Cornog, then the publisher of the *Columbia Journalism Review*, even speculated in an editorial entitled 'Let's blame the readers: is it possible to do great journalism if the public does not care?' that the problem might not be Mass Media theories, doctrines, practices, and business models but that consumers might no longer care about the news. (Cornog, 2005; Getler 2005) [Unusually, his editorial has since been removed from that journalism review's own online archive but is still available via academic publishing companies' archives.]

Moreover, during the same 20-year period billions of consumers have shifting their consumption habits from traditional media websites to usage of search engines and social media websites as their predominant method of obtaining news, entertainment, and other information online. The fulminant growth of search engines and social media has been unprecedented media history. Although the first search engine and social media websites are 26 and 24 years old respectively, search engines and social media are nowadays used by nearly 4 billion people, are the most used websites in the world, and have captured more than half of all online advertising spending worldwide at international, national, and local levels. Most of those gains have been at the expense of traditional media industries such as newspapers, magazines, and broadcasters. Search engines and social media websites are already becoming the predominant means by which youths and young adults now obtain news, entertainment, and other information. This gargantuan shift in online traffic from traditional media industries' websites to those of search engines, social media, and other online services which provide highly customized results to individual consumers has surprised and flummoxed many media executives and media academicians.

### Literature Review

That shift was nevertheless predicted. In his 1995 book *Being Digital*, Massachusetts Institute of Technology Media Lab Director Nicholas Negroponte wrote:

True personalization is now upon us. It's not just a matter of selecting relish over mustard once. The post-information age is about acquaintance over time; machines understanding individuals with the same degree of subtlety (or more than) we can expect from other human beings, including idiosyncrasies events, good and bad, in the unfolding narrative of our lives (Negroponte, 1995, pp. 164-165).

Negroponte nicknamed the resulting individualized media of such an era, the "Daily Me".

Another insightful observer of computer-mediated technologies for media, business journalist Evan Schwartz noted in his 1997 book, *Webonomics* how traditional package of printed contents tend to "unbundle" when placed online.

You can already see it happening right before your eyes. Once they enter the Web economy, all magazines and newspapers that you hold in your hands deconstruct — in the true sense of the word. They lose their unity. They break up or decompose into their constituent elements. No longer is the editorial product a cohesive package tightly controlled by a team of editors. Once on the Web, the editors must relinquish some of that control to the readers, who play a big part in reinventing and reinterpreting how that information is seen. Instead of flipping through pages in a linear fashion, readers may pick and choose from menus of stories, look up stock quotes, search databases of classified ads, and have conversations with editors and

other readers. They may never even see what the editors deem the top story of the day (Schwartz, 1997, pp. 33-34).

In his book, *The Long Tail: Why the Future of Business Is Selling Less of More*, Chris Anderson, then editor-in-chief of *Wired* magazine, charted the relative popularity of people's myriad interests and found that these could be displayed as a power curve graph (Anderson, 2006). Although few topics of interest are universal (viz, the weather), many topics are of interest to large groups (viz, Manchester United football team), and there are huge numbers of topics are of interest to relatively small numbers of people. General interest publications such as newspapers deal mainly with universal and some group interests. However, the largest areas of interest measured within the power curve consists of the myriad topics of interests to relatively small numbers of people.

When the public gained access to the Internet, people's access and choices of news, entertainment, and other information, shifted from relative scarcity to surplus, even overload. This shift alone caused their media consumption habits to change. Rather than continue to consume their daily newspaper, which had once been their only source of daily changing contents in text, that traditional package of contents 'unbundled' once placed online. Why continue to utilize the *Willimantic Chronicle* for international and national news in print or online when you nowadays have online access to *The New York Times*, *Washington Post*, *Guardian*, etc.? Why continue relying on that *Chronicle* for national sport news when you nowadays have access to the daily changing websites of *Sports Illustrated*, ESPN, etc.? Each daily newspaper began being used by consumers online only for whatever contents which those consumers could not get from any better online news vendor. That left mainly local news. As Peter Horrocks, director of the British Broadcasting Corporations World Services wrote:

The consequence of this change in users' consumption has only dimly been understood by the majority of journalists. Most of the major news organisations had the assumption that their news product provided the complete set of news requirements for their users. But in an internet world, users see the total information set available on the web as their 'news universe'. I might like BBC for video news, the Telegraph or Daily Mail for sports results and the New York Times for international news. The ability of audiences to pull together their preferred news is bringing the walls of the fortresses tumbling down. In effect, the users see a single unified news universe and uses technology (e.g. Google, Digg, etc.) to get that content to come together. Thus, if media companies simply transplant into digital their traditional packages of content—even with the converged additions of hyperlinks, multimedia, editors' or CEO's blogs, and 'hyperlocal' coverage—and offer these enhanced traditional packages content via Web sites, mobile phones, and e-book devices, the companies will fail (Horrocks, 2009).

## Discussion

What we have colloquially known as Mass Media arose from the media technologies of the Industrial Era, technologies with advantages and disadvantages. Historians argue about when the Industrial Era began and if it has ended. For the purposes of this paper and discussions of media, the author argues that it began with Johannes Gutenberg's invention of the moveable type (i.e., letterpress) printing press circa 1450 CE. It was the first invention for mass production of information, an invention considered by many western scholars as the greatest development in the history of media. Within 30 years of its invention, approximately 1,000 book titles had been printed and sold to

thousands of Europeans, helping to catalyze the European Renaissance and Age of Discovery. Yet that invention pales might pale in comparison with what has occurred during the past 30 years: nowadays: thanks to computer-mediated technologies including personal computers, 'smartphones', and the Internet, more than 4.6 billion people (60 percent of humanity) have gained nearly instantaneous access to all the information that has ever before been printed and broadcast. What technological, commercial, political, cultural, and societal changes will be catalyzed by billions of people now having access to this gargantuan vast cornucopia of information? The ramifications of this massively greater development are only beginning to be perceived and understood.

Gutenberg's invention allowed mass distribution of text, graphics, and photographic information, particularly when letterpress was coupled to mechanical engines. Guglielmo Marconi's 1896 invention of the analog waveform wireless transmitter eventually added similar mass reach to audio and video contents. The new forms of media that arose from these technologies are colloquially known as Mass Media. As wonderful as those analog technologies have been, however, they all have a disadvantage, a hallmark limitation. Despite mass production and mass reach, the analog media technologies of the Industrial Era which spawned Mass Media are incapable of creating a unique package of contents (i.e., a unique edition, a unique program schedule, a unique musical playlist, etc.) for each consumer according to that individual consumers own unique mix of needs, interests, tastes, and beliefs. All recipients of a Mass Media package of contents simultaneously received the same mix of items--the same edition, same program schedule, same playlist, as everyone else who received that package from its publisher or broadcaster. Mass Media products have this analog uniformity. The theories, doctrines, business models, and practices of Mass Media are rooted within that hallmark limitation of Industrial Era production technologies. And because of that limitation, most producers or editors of Mass Media packages of contents use two criteria when selecting which items to include in the packages they produce. They choose (1) items about which they think everyone should become informed, and/or (2) items which might have the greatest common interest. Nonetheless, no matter how skilled those producers or editors might be, the results are that most items in general-interest periodicals or general-interest broadcast don't interest the average recipient; only a few of the items do. Mass Media has had to live within that flaw.

Yet this hallmark limitation does not exist in computer-mediated technologies. These new media technologies have equal or greater mass reach than do the media technologies that arose during the Industrial Era, yet computer-mediated technologies can produce and distribute unique packages of contents (i.e., an individualized edition, an individualized program schedule, an individualized playlist, etc.) to each consumer according to that individual's own unique mix of needs, interests, tastes, and beliefs. When most media industries embraced computer-mediate technologies solely as a means of delivering text contents without the expenses of purchasing, printing, and distributing paper products, they failed to understand this novel, articulate, and more efficient capabilities of these new technologies.

As Anderson noted in his 'Long Tail' power curve hypothesis (Anderson, 2006), each consumer is a mix of the very few universal topics interests, perhaps some group interests, yet myriad specific interests. No two consumers are exactly alike. It is their own unique mix of universal, group, and specific interests that individuates them, that makes them individuals. Computer-mediated technologies, rather than being merely 'wired' ways of delivering Mass Media contents to consumers, are fully capable of aggregating and producing an individuated package or feed of news, entertainment, and other information, according to each consumer's own unique mix of needs, interests, tastes, and beliefs. This evolution in media is already underway.

Imagine that all your life you've been fed the same type of institutional or standardized meal as everyone else in your school, your company, or your community received that day. On some days, the mix of items in this meal might interest you and on other days not. Yet what if you were then given an alternative: a gargantuan buffet of appetizers, entrées, vegetables, salads, fruits, deserts, and

myriad other items, the mix of which you yourself can select? Would you continue to consume the same standardized meal as everyone else that you have been given? Or instead select from this newfound buffet whichever mix of items that you think best match your own needs, interests, and tastes? If you are like most people, you will probably cease to consume the standardized meal and instead select your own choices of items from the huge buffet to which you now have access. That is like what billions of consumers who use computer-mediated devices are doing when they now consume news, entertainment, and other information. Rather than continue to rely upon a package of items that Mass Media company's editors selected based upon perhaps what those editors think might interest most or should be given to all consumers, billions of consumers have begun utilizing their computer-mediated access to the Internet to obtain a better match of items to their own individual mix of needs, interests, and tastes—a feed more articulate to them than any media company (or practical combinations thereof) can provide.

Thousands and then millions of consumers first began doing this during the 1990s by using search engines. Those websites helped them find other websites containing information specifically for their interests, increasing their abilities to hunt and gather such contents. The search engines also kept records of their previous searches and developed interest 'profiles' of those individual users, increasing the efficiencies of further individual searches. During the first years of this century, social media websites were invented. These allowed consumers to create a network of their friends (presumably, like-minded individuals) and to share items that might be of common interest. These websites hosting such collaborative efforts also attracted information sources and vendors (including most Mass Media companies) who wanted to provide items of information to these social media consumers; items that could be 'Like'd and information source and vendors that the consumers could then 'Follow'. These capabilities and the algorithmic process operating these social media websites markedly increased the articulation and efficiency of the billions of consumers who began using this as ways to obtain news, entertainment, and other information. In recent years, new, genre-specific species of Individuated Media have been developed. Services such as Pandora and Spotify for music, and Flipboard and News 360 for news, provide each of their consumers with highly customized feeds of content, based upon each of those individual's own 'Like's and 'Dislike's. The recommendation engines of YouTube, Netflix, Yuku, and other video website similarly recommend new contents to their individual consumers based upon what selections of video contents that individual has made in the past.

### **Conclusions and Items for Further Research**

The author of this paper proposes that the rise of computer-mediated information services marks an epochal development in the history of media. As developed countries' economies cease to be dominated by producing industrial goods but now producing services, the Industrial Era is waning and the Informational Era dawning. Likewise, Individuated Media is superseding Mass Media as the predominant ways in which people in those countries and other nations obtain news, entertainment, and other information. The fulminant popularity of Individuated Media services attests to their market success. Computer-mediated technologies have all, if not more than the, reach of Industrial Era analog media technologies, plus breach the hallmark limitation of the latter by being capable of producing and delivering individuated feeds of contents according to each individual consumer's own needs, interests, and tastes. That is a marked evolutionary development in media, one that billions of consumers have embraced. The author asserts that its characteristics are topologically different enough to be defined as something other than what is colloquially known as Mass Media. Among the Individuated Media companies defined that way would be Facebook, Google, Twitter, Baidu [百度], Pandora, Renren [人人网], Spotify, Vkontakte [ВКонтакте], among others.

It should be noted that search engines and social media websites were not founded and were not initially designed to be media companies. For examples, Google was started as a webpage ranking



experiment by two doctoral students at Stanford University who then founded a company to sell that software to other companies. They were surprised by the unexpected volume of consumer usage traffic their software demonstration website generated during their company's first years, but they were averse to earning ancillary revenues by selling online advertising space on it. They ultimately did and those revenues nowadays generate 83 percent of Google's parent company's \$162 billion in annual revenues last year (Alphabet Inc. Form 10-K, 2021). Likewise, Facebook began as a student photo rating website at Harvard University. Only years after it achieved explosive usage when students at that university and others instead used it to network with their friends did Facebook begin advertising space on its website and give news sources and news vendors access to its users; it now generates \$70 billion in advertising revenue annually (Facebook Inc. Form 10-K, 2021).

Although there are many Mass Media companies offer 'personalized' or 'customized' email newsletters, those two adjectives are too often overhyped and should be used with caution. A 'personalized' product or service can merely mean its recipient's name is applied, such as a personalized golf ball (i.e., a uniform product). Similarly, a 'customized' product or service generally means something to which some parts have been added or subtracted. Individuation is best defined as a product or service that is bespoke, designed from its onset specifically for that individual according to his own needs, interests, tastes, and beliefs. For example, an individual's Facebook 'news feed' is highly customized yet not yet truly individuated. Nonetheless, as algorithmic processing continues to develop, particularly with the developments during this century of machine learning, specific or general artificial intelligence, and quantum computing, most of the highly customized services provided by the Individuated Media companies that the author defines as Individuated Media will continue to make towards fully individuated services.

The Mass Media industries appear to be conceptually and nomologically challenged by the declines of their businesses and the explosive rise of the types of companies that the author typologically defines as Individuated Media companies. Most Mass Media industries continue to misperceive and use computer-mediated technologies merely as delivery methods for 'converged' multimedia (text contents with audio and video or video content with texts). versions of traditional publishers' and broadcasters' packages of contents. Most likewise still misperceive search engines as the online equivalents of library card catalogs and misperceive social media websites as mainly as forms of discussion boards for Mass Media contents. Meanwhile, Mass Media companies have fallen into great distress. Does reconceptualizing Individuated Media companies as typologically a new genus of media, which not only has mass production and mass reach but the added dimension of mass customization (towards individuation of contents), clarify the situation of the media environment today and provide a framework for understanding it?

If Individuated Media are a new genus of media, ones that have begun to supersede and predominate Mass Media companies, how can the latter adapt and survive in this rapidly changing new media environment? Is it already too late? Do efforts to prolonging the existence of obsolesced content packaging models or business models worsen the abilities of Mass Media companies to adapt?

Given that Mass Media packages of contents tend to 'unbundle' online; that consumers nowadays are more likely to access only whichever items in those packages interest them, not wanting to pay for access to the entire package, is the packaged sum of those items now worth less than is the sum of the items disaggregated? Likewise, are consumer more likely to pay for a single aggregated feed of individuated contents rather pay a similar amount to access for than one or more traditional Mass Media packages of contents?

Should Individuated Media companies, due to their explosive growth and dominating competitive nature or advantages, be regulated? About what. And by who?

The rise and popularity of Individuated Media create many challenges for some traditional Mass Media theories, doctrines, and practices, particularly in journalism. For examples, how does an editor create a 'common agenda' for a community of consumers consuming primarily individuated feeds of information? Should total individuation be avoided or regulated against, to provide for the abilities of 'gatekeepers' to provide information about which they think all individuals should be informed? Or should it be considered a right of individuals to reject all such insertions or intrusions in what could be his fully individuated feed?

Further research about these questions and the Individuated Media concept is encouraged.

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