# A mutation of media ecosystems

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#### Abstract:

Given the semantic and institutional dimensions of the media, a complex industrial organization has arisen in which ecosystems comprising several firms interact to enhance their offers of contents. Digitization has introduced in these ecosystems new media that change not just production and distribution but also the very structure and aggregation of contents. The pricing schemes that used to finance creative productions have been upended. To adapt, the historical media must thoroughly review their offers and pricing methods.

At the end of March 2020, France was "confined". From day to day, the government laid down the rules for this unprecedented emergency caused by the pandemic. The electronic media — some of them, once again, for free — relayed these instructions and news from the world to households. For three billion persons sheltered in place on the planet, these media have been the only means of socialization and relaxation. But what are the media? What functions do they have? How has digital technology changed them? How has it altered the economic and institutional framework for music, the news and movies?<sup>1</sup>

# What are the media?

The media were first seen as technical systems of communication. Paul Starr's (2003) history of the media starts with the printing press, describing its function as a sharing of information or even knowledge. However this definition unravels in the digital era. Not only is all information converging on a single system, the Internet, but also the very idea of information has changed due to binary coding. "Information" no longer refers to the shaping of something into a meaningful form but to any series of bits circulating on a network (VARIAN & SHAPIRO 1999).

Consequently, the idea inherent in the word "information" — symbolically shaping messages into a meaningful form — needs to be reworked. This shaping operation plays out through two different protocols: CORRESPONDENCE, whereby meaning is constructed during an exchange between two identified parties, and PUBLICATION, whereby the party emitting a message addresses unidentified receivers of the message (BOMSEL 2010). In the case of "co-responding", the parties to the exchange, whether people or machines, identify themselves and accept (or refuse) to enter into an exchange for their mutual benefit. The meaning of the exchange is thus gradually worked out; and the exchange stops when it is no longer of use (when the prospect of a gain is no longer present). Several technical systems rely on this protocol: the human voice, the clay tablet and reed pen, mail, telegraphs, telex, telephones and faxes. Correspondence is usually put to use for transactional (private, diplomatic, or commercial) purposes. The message is intended to remain private, secret, to not be disclosed. In contrast, publication organizes a disclosure: one party addresses indistinctly a message to several receivers. The message is prepared in advance, usually in secrecy, and then

<sup>&</sup>lt;sup>1</sup> This article has been translated from French by Noal Mellott (Omaha Beach, France).

disclosed, *i.e.*, circulated to the public. Publication has the effect of "making meaning", or "making sense". It produces a "mythification" that is added onto the contents of the actually published message. This effect comes from the disclosure, an event whereby the state of the world is marked by a "before" and an "after". It depends on the identity of the emitting party (the speaker) and on the editorial protocol (the processes chosen for disclosure and distribution). The media are operatives in publication (BOMSEL *et al.* 2013). The effect wrought by making meaning is so powerful that Barthes (1957) called "semiology" the exegesis of the "mythologies" of "mediatization". He led McLuhan (1964), another pioneer on the media frontier, to say that the message is the medium.

The media are the tools of editorial protocols for the purpose of constructing an image, or social representation, of an institution, good, service, narrative, etc. These protocols are of a vast variety, symbolically and technically. The Sumerians built monuments, their tools for signaling the hieraticism and lasting nature of their social rules: the Hammurabi Code (GLASSNER 2013). Alfred Sloan, a charismatic boss of General Motors, introduced design for "editing" technical innovations for new cars (SLOAN 1963). Steve Jobs invented the "keynote" to show off his inventions (ISAACSON 2012). More than other businesses, the creative industries are showcases, or "show businesses". They organize shows (openings, exhibitions, festivals) and circulate "proofs" in order to ritualize the "appearance" and status of their products and market them. Donald Trump tweets in upper-case letters to emphasize parts of his messages.

So, the media have semantic, institutional and economic dimensions: semantic owing to the effect and scope of the meaning they make; institutional because, by regulating legitimacy and international influence, they publish social rules; economic since they underlie the operation of the markets and of firms and are, themselves, structured like an industry and consumed on the market. For this reason, an analysis of the media requires the participation of most of the human sciences.

### The media as an industry

The media do "mediatization", in other words they make a "social representation" of institutions, organizations, persons, facts, merchandise, narratives.... This calls for an editorial protocol, and involves several organizations that will construct and circulate this representation — the media's equivalent to something that is published. For example, the mediatization of the automobile took place through the specialized press, auto shows, motorsports, showrooms and advertising in the conventional media and on line and, too, through the "design" of motor vehicles. The mediatization of music and recording artists involves a combination of concerts, radio and television appearances, records and, nowadays, the social media and streaming platforms. These complementary media interact to create and diffuse a product's image and, in the case of music, the product itself. These interactions, which economists call "crossed externalities", occur within ecosystems, a cluster of adjacent organizations related by formal and informal arrangements.

The media-related ecosystems are associated with specific editorial protocols, especially for "information goods", in particular those based on copyrights and produced by the entertainment or cultural industries. The publication of artistic or literary works observes codes for identifying the authors, endorsing them through editorial protocols, and using certain tools to showcase such works. These protocols used to be associated with a material medium, and the economics of this medium organized the publication of books, films, records, newspapers, radio programs, etc. Digitization has affected the production and distribution of these goods as well as their mediatization. It has heavily affected the editorial protocols since the utility of copyrighted "goods" depends on their meaning, narrative and perception. Publication modifies the meaning expressed as disclosed through the effects related to appearance, status and context. As a consequence,

digitization is upending the "copyright industries" — not only their processes of production and distribution but also the semantic utility of their products. This article will concentrate on these industries.

To simplify, let us assume that the vocation of the cultural industries (including the press or news) is to produce narratives. Accordingly, music as well as video games fit into this perspective if the sequence of emotions procured through them has a narrative dimension. Having clearly understood this, the social media have introduced clips and installments of the narrative to make users loyally follow a plot in which they are the centerpiece. As suggested by Mikhail Bakhtin (1978), a theoretician of the novel, these narratives are characterized by "chronotopes": space-time configurations that identify a genre, a context that shapes consumers' perceptions. News, sports, fictions (audiovisual or literary), music (classical or pop) and video games are chronotopes.

Historically, these ecosystems used to be based on technical systems of production and distribution and on the media that served as a soundboard for promoting products. They were shaped by the specific economic characteristics of cultural goods, in brief:

• "Information goods" are not rivalrous (are not scarce), and the costs of reproducing them, of broadcasting or electronically distributing them, are next to naught.

• "Experiences as goods", which are known only once they have been consumed, require strong signals to shape consumers' expectations about their utility.

• Cultural goods produce network effects (stemming from fashions, trends, affiliations) and cause addiction, since the consumption of narratives divided into serials (breaking news, installments in a series) increases the utility of watching the following episodes.

• These goods, intended to please quite different tastes, have to be priced as a function not of their marginal cost but of their marginal utility for consumers. This calls for price discrimination schemes (bundling, versioning) specific to the ecosystem.

Digital technology and the upsurge of the social media have upended the structures that used to bank on the aforementioned characteristics. As a consequence, the media-related ecosystems have undergone a mutation with, as an outcome, a changing of the incentives for creating cultural goods and narratives.

### A mutation of the ecosystems of cultural goods

#### The recording industry

In the recording industry's former ecosystem, radio broadcast for free new releases in order to persuade consumers to buy a record album and set off a trend. An album was both a set of titles and a context that identified the "sphere" of the recording artist. It generated tours, concerts for making the artist popular. This ecosystem was changed at first under the brunt of piracy, as the Internet and social media grew, and now under the impact of streaming, which, once again, has pays royalties to copyright-holders.

With streaming, pricing has changed radically. Consumers no longer buy the albums of the recording artists they prefer (often impulsive purchases) but pay for a subscription to millions of titles. The artists are no longer paid as a function of record sales but in proportion to the number of clicks registered on platforms. The click contributes to each streamed title's market share. The artist that used to sell his record at a price calculated in relation to the marginal utility for consumers now receives a fixed amount for the listening experience of each title, independently of the listener's musical tastes. The price of a click (on condition that the listening experience has lasted more than thirty seconds) is set by the platform's total sales divided by the total number of clicks. Even more

than the former system, this pricing method favors smash hits and advertising campaigns for clobbering "big" clickers — young people, who, despite their limited purchasing power, make up a huge audience. This system of pay results in a loss of the diversity valued by music lovers who have more eclectic tastes and are more willing to pay.

#### The news industry

The news industry used to comprise the printed press, dailies and weeklies, and then, successively, radio, television, and all-news channels, the online press, social media.... This evolution has changed the chronotope of the news. During the era of the printed press, the evening newspaper brought news to households. Radio and television enlarged coverage and shortened the periodicity for delivering the news. With all-news channels, the online press and social media, the chronotope of the news has become the "world around the clock". Furthermore, the editorial protocol for news, which used to be based on "news anchors" who warranted the reliability of their sources, has become a more complicated process that lets a very large number of "emitters" to spread rumors and fake news, in particular on the "social media", which are capable of incorporating the news in the personal narrative of everyone on the network.

So, the digitization of the news has not just dematerialized the press or made radio obsolete; it has caused a deep mutation of the whole ecosystem that used to construct news narratives and distribute them. Out of this mutation has arisen an ecosystem where the erstwhile editors have not abandoned their medium but are redeploying their business on line while incorporating new narratives (videos, podcasts) and using the social media to increase their audience. Once again, this change has upended the pricing of access to the news on line and the sharing of the benefits of crossed externalities with the social media. The risk for major newspapers is that their contextual power (based on the journalistic quality of their articles) will erode to the profit of the social media, whence the introduction of new rules for enabling news editors to license their products.

#### The movie industry

Cinema is the historical medium for fictions on an audiovisual medium. Its organization as an industry involved an ecosystem (studios, specialized press, the star system, festivals, academies) that set store on films being shown in theaters. The introduction of television led to other formats and narratives, but the movie industry managed to fit in. Television started serializing films, whence a system of price discrimination based on successive installments. This model gradually expanded as new media emerged: for-pay television, video home systems (VHS) and DVDs.

In France, this trend has underlaid the institutional and industrial organization of television with its vast ecosystem of production, distribution and mediatization. In this ecosystem, the cinema has received preferential treatment but for the purpose of boosting what television offers. Given the multiplication of TV channels, this offer now amounts to 6000 films programmed per year.

Television is a medium based on synchronization, on a scheduling of viewing time (ORTOLEVA 2013). As long as it was the only way that households had access to moving pictures, TV programming included narratives of quite diverse chronotopes: news, weather, games, sports, entertainment, documentaries, live shows, films, fictions, etc. Programming was based on "audiences" and offered viewers choices about what to watch in the evening. In contrast, the upsurge of the Internet has tended toward asynchronous form of consumption. For instance, individuals can watch past episodes of films and fictions. Video on demand (VoD) has eliminated

"scheduled" television programming since it proposes the viewing of addictive serials at the individual's craving. The serial is now the dominant format for narratives, surpassing cinema, which has been reduced to a side-product. Furthermore, VoD over the Internet has foiled the points of access controlled by TV companies and dodged around rules related to this access.

The upshot: the whole ecosystem of cinema and television has become a battleground. This phenomenon has been amplified since the coronavirus has shut down movie theaters. In the United States, the studios have, year after year, been adjusting to this new paradigm by setting up VoD platforms. In France, the modification of rigid institutional rules has been stymied by the resistance of employees and stakeholders, and reforms are unpopular. The creative destruction wrought by this new paradigm will eventually overhaul the old ecosystem (BOMSEL 2017).

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