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Media and Manias: News and Economic Decision-Making

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This paper proposes an interdisciplinary framework of mass communication and economic theory to examine the role of the media in economic decision-making. The recent expansion of business-financial news in the mass media and the development of specialized information sources for the general public is linked to the democratization of the stock market, which is related to the development of managerial capitalism. Speculative bubbles are also examined in this context of general economic transformation. Media coverage of the 2000 speculative bubble in France and Quebec illustrates the double trend of « economization » of media discourse and « popularization » of business-financial news.

Econlit Keywords *: Entertainment; Media (performing arts, visual arts broadcasting, publishing, etc.) (L820); Information and market efficiency; event studies (G14).*

Introduction

The general purpose of this paper is to show the role of media in economic decision-making. Since the 1980s, business-financial news has expanded significantly, both in the mass media and in specialized broadcast media and magazines. This abundance of information sources opens new areas of inquiry. The first section of the paper is concerned with economic and financial information influence on the stock market, specifically the relationship between economic information in media and speculative bubbles, called "manias" by Kindleberger (2000). The second section is devoted to the production of economic information, specifically the evolution of the nature of economic information and the role of journalists. We thus propose an interdisciplinary framework combining economics and mass communication studies. A third section outlines the method applied to content analysis of a small sample of articles from daily newspapers and business magazines destined to a general readership.

1. An economic theory perspective

Analysis of the role and place of information was one of the main topics in economic research during the last decades. Stigler's seminal article (1961) underlined the importance of imperfect information on individual and collective decisions. The famous « lemon» example [Akerfof (1970)] showed that asymmetric information involved non pareto optimal equilibrium: if consumers can't distinguish honest and dishonest car sellers, the market price is the average price of bad cars. So honest sellers are discouraged to supply good cars and the market can vanished. Asymmetric information theory leads to an agency problem [Ross (1973)]: markets comprise informed and non informed individuals. Non informed individuals endure *moral hazard* (in case of persistent asymmetrical information, uninformed individuals are obliged to make blind or very hazardous decisions). This moral hazard situation is solved if honest sellers produce a costly signal (for example, a one-year guarantee). The signal theory [Spence (1974)] identifies two kinds of signals. In the previous example, an endogenous signal is produced by automobile suppliers. Another solution is an exogenous signal: an expert is asked to express an opinion about the product (rating agencies on assets markets). The expert's opinion is used in advertising or published in the media (consumers' magazines or the financial press for example).

1.1. Information and economic decision-making

The role of media, according to economic theory, is to reduce the agency problem between principal and agent. Media are information providers. Although the relationship between media and economics seems obvious, media economics is a relatively still unexplored field. Nobel prize winner Coase (1974) gives a stimulating explanation: economists' analysis usually suggest methods of regulating markets but economists don't want to have their own market -the intellectual market for ideas- regulated. The same argument is relevant for media analysis because they relay ideas and intellectual debates.

Recently, macroeconomic influences of mass media have been investigated by economists close to Public Choice theory. Besley and Burgess (2001, 2002) stressed the role of mass media in enhancing government responsiveness to recognition and relief of famines in India. They find that "states with greater newspaper circulation are also those that have the most responsive governments. In contrast, richer states do not tend to be more responsive than poorer states[1]". Following the pioneer analysis of Downs (1957) and Spence and Owen (1977), Strömberg (2001) endogenized mass media in existing models of political competition and showed that the development of radio in USA during 1930's involved a reallocation of public funds to counties with a large number of radio users (new radio users were the best informed voters). All these authors opened a large field of research with many unresolved questions as the relationship between media competition and the state size or relationship between press freedom, democracy and economic development [Brunetti and Weber (2003)].

Another active field in media economic research is media industry behavior, with three specific directions. First, media are dual industries, financed by audiences and advertisers [Picard (2001)]. This *schizophrenic financing* could create bias: infotainment could take the place of serious issues and political news is evinced by "tasteless information" or "soft news" [Gabszewicz (2002)]. Second, concentration of ownership and the mergers of media giants - the "big six" in the United States, for example -is another part of research on media industries. The debate is very active between those who think that concentration reinforces owners' power [McChesney (1999), Champlin (2002)] and those who believe that concentration and competition reduce costs, maintain profitability of numerous media and allow for plurality [Owen (2002), Picard (2002)]. Third, regulation of media industries is another topic for researchers, for example quotas of domestic production in TV or legislation on advertising [Benzoni (2001)].

If macroeconomic media influences and media industries behavior are studied by economists and become academic fields, at the moment microeconomic influences are less popular. We anticipate a big change because of the great interest of this topic. Microeconomic influences deal with the perception by individuals of media economic information and the impact of this perception on individual choices. Can media economic information modifies market process? Economic information is everywhere in every media. The confidentiality of economic information was transformed into popular economic information during the 1980s because of new policies of deregulation and globalization. Not only economic information takes a larger place in media but also there is a new phenomenon that we call *economization of information* - traditionally non-economic themes include more and more economical aspects - for example, sports news give large place to the advertising contacts of players or to the owners and the market value of the team. More economic information and more economic contents in news call into question the evolution and adaptation of economic information production process.

[1] Besley and Burgess (2001), p 630.

1.2. Economic information and speculative bubbles

To illustrate our discussion of economic information influences, we will analyze the case of the stock market where information and perception are essential. It is a relevant example of decision-makers facing choices under uncertainty. Financial theory analyzes investors and firm' behaviors. The investors' end is to maximize the return on investment r_t during a period [t-1,t].

$$r_t = (p_t - p_{t-1}) + i_t$$

p_t is the asset price at the end of the period and i_t the asset yield during the period (dividends, interest rates …). Investors have to estimate price and yield in the future. To do that, they need information about firms' behavior and economic models to think of a relationship between present information and future price. Investors draw public information[2] from specialized or mass media. Specialized media are for example Reuters or Bloomberg financial news agencies. Only professional investors (banks, stock-brokers) use such accurate sources of information because of very expensive fees (redeemable only for numerous transactions) and codified instructions. Financial news agencies sell instantaneous and complete information about asset prices on stock markets, firms, markets and present state of the economy [Boyd-Barett (1995)]. They use cable numeric diffusion available on computer screens. Institutional investors do not use daily newspapers (specialized or not), financial magazines or the Internet: these information sources are considered to be common knowledge (with no specific codification or an accessible one), with commentaries, explanations, advices to optimize portfolios' management. Subscription fees for financial media fees are generally higher than regional or national newspapers because of the specificity and the utility of financial information.

Economic information is an old story [Arrese (2001)]. Arrese analyses three periods. The first spans the middle of the sixteenth century to the middle of the nineteenth century. There was economic information before (Egypt, Babylonia), but the real beginnings followed Gutenberg and New World expansion and commerce. Information was produced by well-known businessmen (the Függer family in Augsburg or the Gresham family in England). During the second period (middle of nineteenth century to 1929), specific newspapers (economic press and academic press) and news agencies expanded because of telegraph innovation. It was a major period with the birth of *Journal des Economistes* (1841-France), *Reuter* (1851-

[2] Public information is easy access to free or paid information. Private information is available only to a few individuals.

London), *The Economist* (1878), *The American Economic Association (*1885), *The Financial Times* (1888), *The Wall Street Journal* (1889), *The Financial Post (*1907-Canada), *Les Echos* (France-1908), the "Big Three" (*Forbes*-1917, *Fortune*-1928, *Business Week*-1929), etc. The last period started in 1929. The financial press was weakened by the 1929 crisis. Press reputation and credibility were eroded (for example, *The Financial Times* took ten years to return to its circulation of 1928 (30 000[3]). Three major phenomena illustrate this period: an evolution from specific financial press to more general economic press with a large pace to macroeconomic questions and business life; the important development of activities (circulation growth, internationalization, creation of magazines); mergers with constitution of specialized press groups. Since 1980, the development of economic information sources includes the creation of new specialized media (radio and TV networks), a larger number of columns in newspapers or magazines and the economization of information. Information is central to newspapers and media but also to economic theory. Neo-classical substantive rationality and the *efficient market hypothesis* assume that greater access to information permits better choices and reduce uncertainty.

Market efficiency

The *efficient market hypothesis* argues that investors' anticipations are rational, using relevant information about *fundamentals* (values of key variables like profit, growth rate, consumers' preferences) and pertinent economic models. This neo-classical hypothesis assume *informational efficiency*, which is a variant of perfect information hypothesis with introduction of some random information. If markets are efficient, markets close at equilibrium and prices disclose available information.

This hypothesis is discussed by Grossman and Stiglitz (1980). In their famous paradox, they explained that investors have no motivation to spend time or money to get information because observation of price gives all information without any cost. Assuming that stock value, v, is function of an observable exogenous signal s (profit, for example) and there are two types of investors, informed (those who observe signals and spend money or time to do so) and uninformed investors. The proportion of informed investors is k. The stock demand of informed investors depends on price and signal whereas demand of uninformed investors depends only on price. S is stock supply. $S = k\ D\ (p,s) + (1-k)\ D\ (p)$. Time after time, uninformed investors discover the relationship between s and p. So the market reveals information. If $k=0$, there is no equilibrium. If $0<k=1$, market price reveals information, so there is no motivation to spend money to get information. This is a typical free rider problem: no one invests on information, so $k=0$. *Informational efficiency* makes no place for information.

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[3] See Arrese (2001), p 111.

Another problem with the *standard efficient market hypothesis* is the occurrence of a speculative bubble. A bubble is a market statement where observed prices on the market are very different of fundamental values[4].

Speculative bubbles

Standard economic theory isolates a walrassian individual, with no interaction with other individuals. *Homo Economicus* takes care of his own interest without taking into account the position of the group around him. In that case, bubbles are irrational accidents: no rational individuals choose to buy assets at a price very superior to the price dictated by observation of fundamentals. Modern theory explains bubbles by democratization of access to stock exchange and asymmetry of information. The democratization of access to the stock exchange is a phenomenon related to the development of managerial capitalism, starting at the end of the nineteenth century. "The rise of managerial capitalism, however, changed the position of investors in fundamental ways. Unlike the small, family-controlled firms characteristic of preindustrial economy, there was a high degree of separation of ownership and control in the modern corporation. Professional managers who usually own only small proportions of equity, became the primary decision makers with large corporations"[5]. A key problem is the existence of asymmetric information about the firms that separate managers from investors due to the development of managerial capitalism: managers can restrain information about the firm to avoid market judgment. This specific problem was investigated by recent financial agency theory[6].

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[4] Bubble is also the name of a very famous British Act. The Bubble Act of 1720 imposed legal prohibitions restricting the use of joint-stock companies. The Bubble Act was abrogated in 1825. This economic freedom was one of the main prerequisites of industrial revolution. The Bubble Act was enacted to limit creation of new firms enable to compete with the South Sea Company in the London stock market. The South Sea Company is a similar and contemporaneous experiment of Law's system in France [Baskin et Miranti (1997)]. The first important bubble is probably the Dutch Tulip Mania crash in 1636. Amsterdam's Bourse was created in 1530 and was one of the most sophisticated and important financial places in Europe until Tulip Mania [Schiller (2000)].

[5] Baskin and Miranti (1997), p 168.

[6] "Financial agency theory was unified in the view that the firm was best understood as a nexus of contracts whose purpose was to allocate its residual income among shareholders. What these school of research shared was the belief that the economic interests of shareholders and professional managers were poorly aligned. Although shareholders were generally presumed to be risk-adverse, they preferred corporate management to pursue risky growth strategies that promise higher dividends or capital gains. This was explained by the fact that shareholders could accommodate to the high risk of particular firms by the simple expedient of maintaining diversified personal portfolios. The investment of managers in their firms, on the other hand, primarily took the form of untransferable intangibles such as perquisites and status based on firm-specific knowledge. Unlike shareholders, managers were unable to diversify their risks outside the firm and thus had a strong intensive to reduce the overall risk of the firm (...). It

So, because of the great number of investors and the lack of transparency of managers' behaviours, bubbles can occur. The 2000 new technologies bubble was one of the most dramatic : for example, in January 2000 in Paris, CAC 40 reached 6700 points. In 2003 September, its value is around 3300 points (its weakest value, 2400 points, was in January 2003). This bubble is an interesting case because there were no new technologies fundamentals at that time (no profit, no turnover, no consumer but only the hypothesis of a rapid development of BtoC or BtoB[7] on the Internet). The new technology bubble was built on *self-fulfilling prophecies* and *mimetic interactions*. Literature on prophecies and sunspots [Azariadis (1981)] analyzes impact of information on market coordination: even "extrinsic" information - with no relationship with fundamentals (sunspots) - can lead to a temporary equilibrium. "Public information has attributes that make it a double-edged instrument. On the one hand, it conveys information on the underlying fundamentals, but it also serves as a focal point for the beliefs of the group as a whole" [Morris (2002), p 1521]

Mimetic interactions and threshold

Recent microeconomic theory of interactions focuses on group influences and mimetic behavior. Herding process is analyzed and three mimetic rational behaviors are underlined. Mimetic interactions could be rational choices even if they end in non-optimal configurations. This is the case for the informational mimetic, the normative mimetic and the self-referential mimetic [Orlean (2002)]. An *informational mimetic* occurs when individuals decide to imitate other individuals because they believe others better informed than themselves. A *normative mimetic* occurs when individuals' decision-making depend of a collective norm chosen by the group. Individuals prefer to follow the opinion of the majority because they are concerned with the group's opinion of them and fear sanctions. This approach is close to Keynes' beauty-contest game [Bosc-Domech (2002)]: "each player simultaneously chooses a decimal number in the interval (0,100). The winner is the person whose number is closest to *p times* the mean of all chosen numbers, where p<1 is a predetermined and known number[8]". A *self-referential mimetic* occurs when individuals' decision-making depends on a reference group (which has economic influence on individuals). To differ these kinds of mimetic , Orlean[9] gives the following example: "on a financial market, it's different to say: (a) management account A buys asset X because others will buy it and price

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induces some managements to negotiate *golden parachute* contract, which guaranteed substantial economic benefits in the event of loss of employment". *Ibid.*, p 289.

[7] Business to consumer, business to business.

[8] Bosc-Domech (2002), p 1688.

[9] Orlean (2002), p 122 (our translation).

will go up (self-referential mimetic) and (b) management account A buys asset X because he wants to preserve his reputation (normative mimetic).” Media and economic information play a central role in mimetic phenomena because they relay the opinion of the majority or of specific groups. News can influence perception of majority or groups' opinions.

Granovetter (1978) describes the *bandwagon* or *domino effect* and underlines importance of perception of group or individual opinions. Individuals' reactions to this perception are different: individuals have variable threshold behaviors. In his classic riot example [10], Granovetter describes three kinds of individuals: the instigator, with a threshold of 0, the radical, with a low threshold, and the conservative individual, with a high threshold. Individuals take a binary decision (to join or not a riot). To illustrate the threshold model, he imagines 100 people “milling around a square - a potential riot situation. Suppose their riot thresholds are distributed as follow: there is one individual with threshold 0, one with threshold 1, one with threshold 2, and so up to the last individual with threshold 99. (..) The person with threshold 0, the instigator, engages in riot behaviour. This activates the person with threshold 1 and so on until all 100 persons have joined. The equilibrium is 100. Now perturb this distribution as follows. Remove the individual with threshold 1 and replace him by one with threshold 2. By all of our usual ways to describe groups of people, the two crowds are essentially identical. But the outcome in the second case is quite different”. Indeed, in the second, there is no riot because the instigator stays alone. A very interesting conclusion is Granovetter's comment on a hypothetical reporter writing an article about the riot. “Newspaper reports of the two events would surely be written as, in the first case, “A crowd of radicals engaged in riotous behaviour”; in the second case, “A demented troublemaker broke a window while a group of solid citizens looked on”. We know, however that the two crowds are almost identical in composition[11]”. This kind of error is not specific to journalists; economists do the same when they forget to analyze dynamic interactions to explain economic behaviors.

The riot case is very close to the financial bubble. Brokers make binary decisions (to buy or not to buy assets). Our purpose is to test media influence on brokers' individual threshold decision. The question is: do media reports change the threshold distribution? Do media reports displace the second person from threshold 2 (no bubble) to threshold 1(occurrence of a financial bubble)? In the riot case, individuals are influenced uniformly by every group member. In our case, individuals are influenced by group members, themselves influenced by economic information reported by the media. Investigation of production, the

[10] Granovetter applies his model to eight cases: diffusion of innovation, rumors and diseases, strikes, voting, educational attainment, leaving social occasions (party), migration and experimental social psychology.

[11] Granovetter (1978), p 1425.

ways of diffusion and agendas selection of economic information is essential to the comprehension of economic information influence on economic desion-making.

2. Mass communication theory

2.1. Media influence

The speculative bubble of 1999-2000 is considered here as a unique illustration of long-term trends in business-financial reporting[12]. A period of intense market activity and fascination for high-tech stocks, followed by a rapid fall of the stock market, was reflected in the news media's coverage. Did the media contribute to the frenzy or were they simply the mirror of an external phenomenon? Media effects research (on individuals' perceptions, attitudes and behavior) suggests consumption patterns and responses to media content are highly variable, difficult to measure, and that other social influences, such as interaction with opinion leaders, may be more significant.

However, the media remain a major source of information for individuals on topics that are not directly accessible to them in their professional or social lives. For the typical "uninformed" consumer or investor, business-financial news falls in this category. Although it is available elsewhere, the time and effort required to find and read it (and in some cases the cost of buying it) may be too great in comparison with that of turning on the evening news or reading the business section of the newspaper, according to the individual's level of interest and previous knowledge[13].

Thus, the mass media remain a window on the economic world for most people. But this window is not a pure reflection of reality, but rather a constructed frame influenced by social values, industrial and organizational structure, routines, and personal characteristics of journalists [Shoemaker and Reese (1991)]. The framing effect of news has been studied as a process in the context of news production through field observation [Tuchman (1978)] and as a result of this process through content analysis

[12] A larger research program aims to conduct quantitative content analysis of business-financial news in Quebec's print and broadcast media over three decades (1974-1975 to 2004-2005). This period was chosen because of profound changes in journalism and its economic context.
[13] In the United States, business magazines now rival daily newspapers in terms of circulation (40 million compared to 55 million copies)[State of the News Media (2004)]. However, the frequency of publication should be considered in comparing readership. And although newspapers' and broadcast television news' audiences are declining, their Web sites are among the most popular online news sources.

[Iyengar (1991)]. Framing of events by news media and other social actors, particularly political leaders, has been found to influence «subtly but powerfully» public responses and attitudes [Shiller (2003 : 83)].

2.2. News media and economics

Although media scholars and journalists tend to define the media's role in political, social or cultural terms, the media can be argued to be largely economic entities. Media organizations are (in liberal democracies) typically capitalist ventures; news is relevant information for economic decision-making by a public of consumers, investors, and managers. The relationship of journalism and economy is a classic debate in mass communication research. However, recent changes in both fields suggest this relationship has intensified. Many scholars have studied media as economic entities, either in a perspective inspired by critical political economy theory [Bagdikian (1997); Hackett and Gruneau (2000); McManus (1994); Philo (1995)] or a perspective closer to liberal market theory [Compaine and Gomery (2000); Demers and Merskin (2000); Napoli (1997); Picard (2001, 2002).] From these theoretical and empirical studies we can conclude to a consensus on the influence of economic factors on the news, although the nature of this influence remains an unresolved matter. More recently, European researchers have begun to study journalism not only as an economic activity in itself, but also as a form of economic discourse, by analyzing content and practice of business-financial reporting [for example, Gavin (1998)]. The difficulty – and scarcity – of such studies are often attributed to economists' low interest and communication scholars' limited use of economic theory.

Journalism and the economy are vaguely defined fields; their scope is a matter of theoretical and practical debate. The nature of their relationship is difficult to grasp because they are not totally independent from each other. Duval's longitudinal study of French business-financial news [in Champagne and Marchetti (2000)] concludes that journalism has a low level of autonomy in relation to the economic field (including advertisers, experts, and the general industrial structure of the media).

Because of its historic relationship to freedom of expression, journalism is not highly regulated and its professionalism is mostly defined in the context of news organizations [Beam (1990); McManus (1994)]. In recent years, conventional forms and practices of journalism have been adopted and adapted by commercial or institutional interests (such as magalogues and infomercials). The development of news marketing and news management is also relevant to this trend of hybridated communication, such that it is sometimes difficult to distinguish news, entertainment, advertising and public relations. The abundant literature on profound changes in journalism over the past 20 or 30 years is mostly variations on this theme: “infotainment”, “tabloidization” [Sparks and Tulloch (1999)], “popularization” [Dahlgren (1995)], “communication journalism” [Charron and de Bonville (1996)].

Another trend suggested by the analysis of business-financial reporting is the “economization” of journalism which increasingly refers to economic models for all spheres of human activity [Lindhoff and Martenson (1998)]. This hypothesis can be related to the critique of economic reductionism in academia and public debate [Block (1990)], to which the media contribute. Our own research on election coverage in the news organization suggests business-financial reporters have a strategic advantage in the newsroom, because of the relative exclusivity of their expertise, their access to credible, nonpartisan sources and the less conflictual nature of their practice compared to political correspondents [Brin (2002)].

2.1. Business-financial news and the “double economics” of journalism

Journalism’s economic nature can thus be defined as both economic *activity* and economic *discourse*. Its economic activity refers to the industrial context of production as articulated by critical political economy theory: management of media businesses, including newsroom hierarchy and resources, marketing and sales divisions, ownership structure, cross-ownership and convergence strategies, markets, consumption behaviours, and relationships between these elements. Journalism as economic discourse refers specifically to business-financial reporting and in a more general sense to general news reporting as it relates to economic activity, often quoting experts to explain, comment and interpret economic events. Structural changes in the economy, such as globalization and financiarization, or at a more micro level, new trends in management and consumption imply that journalism adapt in both economic dimensions, that is, in the context of the media industry and as a discursive representation of economic reality. Journalists tell the public about changes in the economy as a phenomenon “exogenous” to their professional practice; they also adapt to these changes “endogenously”, as employees of businesses whose ownership structure, management of resources and relationship with its public and advertisers are influenced by the economic context. For example, the democratization of access to the stock market may lead the media to offer more financial news as a marketing strategy, but also to cover the markets more intensely because of their importance in society. Implicit to the conception of news as economic discourse is its relevance to economic actors, as seen in the first section of this paper.

The recent abundance of economic information accessible to the public through specialized media (including corporate publications, such as newsletters) and the Internet, as well as the intensified competition in the media sector, are a new reality to which traditional or mass media have had to adapt. Because these media are still destined to a relatively wide public, they can assert their specificity by capitalizing on the traditional democratic mission of public service attributed to journalism in the ideal public sphere. Journalistic professionalism relates this mission to values such as diversity, credibility, independence, and universality (traditionally defined as the public interest). *Diversity* is reflected in the practice of quoting sources that offer different points of view. Critical studies of news content suggest however that in matters of economy, the range of viewpoints is rather narrow [Hackett and Gruneau (1999)]. Because journalists are by definition generalists, the *credibility* of economic information is enhanced by the use of expert sources. One can question the *independence* of economic journalism given the importance of these sources although this issue is not as critical professionally as the independence from political sources[14]. The *universality* of news in a pluralist, postmodern society is ensured by reference to the individual, rather than the collective, human condition.

Business-financial reporting in the mass media allows for simultaneous observation of both economic dimensions of journalism. Its importance as a newsroom beat and as a strategy to reach readers, viewers or listeners refers to journalism as economic *activity*. Its *discursive* elements are often typical of journalism in general: quoting expert sources, using familiar narrative structures, telling idiosyncratic and factual "stories" about events rather than analyzing long-term processes [Goddard, in Gavin (2000); Fairclough (1995)]. Certain discursive elements are more specific to business-financial reporting, such as the reification or naturalization of markets, typically by the use of mechanical, biological or anthropomorphic metaphors. Emmison's (1983) analysis of daily newspapers from the 1930s to the 1980s suggests these are in progression since World War II, but more significantly since the 1970s.

2.4. Popularization and economization

Both as an economic activity and economic discourse, business-financial reporting is produced in relationship to a public, perceived by the reporter and constructed by news-marketing data. Discursive traces of these representations of the public can be gathered from the media text. For example, a news article's focus on businesses' social responsibility or ethics (environmental impact, job creation, philanthropy, etc.) refers to a perception of the reader as *citizen*. If the reporters emphasizes the quality of a product or service, the reader is perceived principally as a *consumer*. Finally, performance indicators point to a perception of the reader as *investor*. We posit that the consumer and investor roles have become

[14] Critical researchers typically argue the traditional oppositional "watchdog" role should be applied to economic, as well as political, structures and actors because of their influence on collective

dominant, not only in the business pages but also in economic news played on the front page (or on television news). This would also support the idea of "individualistic" universality. We also anticipate intensely *metaphoric language* and *reification of the economy* in business-financial news which would confirm the popularization hypothesis. *Conjecture and prediction* is a discursive indicator of subjective enunciation characteristic of contemporary business-financial reporting but also of "communication journalism", the "paradigmatic" form of journalism in postindustrial societies [Charron and de Bonville (1996)]. The economization hypothesis would be supported by a *wide scope of events and phenomena* covered by business reporters (such as social policy, environmental issues, arts and culture).

3. Content analysis

We have analyzed a small sample of articles from two daily newspapers during three two-month periods covering the initial rise, peak and fall of the speculative bubble [15]. *La Presse* (Montreal) and *Le Figaro* (Paris) were chosen for comparative and representative purposes. Both have extensive and credible business-financial news coverage without being specialized publications and have a similar political orientation (center-right, or moderately conservative)[16].

Despite cultural similarities which allow comparison, there are some notable differences in Quebec and France's respective journalistic values and media systems. Journalism in Quebec subscribes in great part to the American model of neutrality and objectivity, with its specific conventions of news writing (5 Ws, inverted pyramid, separation of fact and commentary, etc.). The format and organization of news production is largely inspired by practices in the United States. Although observers suggest a specific local style emerged in the 1960s, when the media played an active part in Quebec's "Quiet Revolution" [17] [Saint-Jean (2002); Roy (1986)], this uniqueness may have been exaggerated or at least does not bear scrutiny in recent years [Pritchard and Sauvageau (1999)]. The French press, whose tradition is inspired by its own philosophers, literature, and longer history, is more distinct from the American model. In France as in other European countries, journalists are widely considered to be "public intellectuals",

decisions.[Curran, (2000: 122)]

[15] The NASDAQ and CAC indicators were used to establish these periods.

[16] As elsewhere in North America, Quebec newspapers do not have an official political colour like the French. However, *La Presse*'s management and editorial positions generally lean in favor of Canadian federalism and economic liberalism; in the political context of Francophone Quebec, this can reasonably be considered as the equivalent of center-right in France.

[17] The term designates a period of rapid modernization. Generally associated to nationalization of education and health care - until then the domain of the Catholic Church – the Quiet Revolution was followed by (and according to some, made possible) the rise of Québécois nationalism, secularization, and access to economic power by members of the French-speaking majority.

which is not generally the case in Quebec (although there are a few exceptions). The most obvious difference is scale: Quebec has a population of 7,5 million people compared to France's 60 million. For its size and compared to English Canada, the Quebec French-language media industry is relatively successful: the language barrier has until now shielded it from U.S. competition. This is particularly true for television and magazines. *La Presse* prints about 200 000 copies daily, compared to 400 000 for *Le Figaro*; there are 10 French-language dailies in Quebec with a combined circulation of 2 962 000, compared to 10 national and 96 regional dailies in France with a total circulation of 2 400 000 000 [Mathien (2003)].

The stock exchanges in both Quebec and France underwent profound restructuring during the period studied. The Paris stock exchange merged with Brussels and Amsterdam to form Euronext (http://www.euronext.com/editorial/wide/0,4771,1732_4427342,00.html). In Canada, the stock exchanges in Vancouver-Calgary, Toronto, and Montreal, previously independent from each other, agreed to specialize : the Western stock exchange in small capitalization, Toronto in shares and bonds, and Montreal in futures.

Corpus

Articles from *La Presse* were retrieved from an electronic database (*Eureka* CEDROM-SNi) using the keywords "NASDAQ", "boursier", and "Dow Jones". *Le Figaro*, not accessible on database, was searched manually. The electronic search yielded 329 relevant articles for *La Presse*; the manual search in *Le Figaro*, 210 articles. Wire stories and unsigned articles were excluded.

Le Figaro's daily edition typically contains two sections, general and economic news (printed on salmon-colored paper and familiarly dubbed *les pages saumon*), with various supplements every day of the week. *La Presse* has three or more sections, including sports (in tabloid format) and economic news. Articles from *La Presse* are in general slightly shorter than those in *Le Figaro*.

Measures of issue prominence

How hot a news story was the stock market between 1999 and 2001? Number, length, and location of articles in each newspaper were used as measures of issue prominence. Although these stories account for a very small proportion of each newspaper[18], the total number of articles progresses most notably between 1999 and 2000 in *La Presse* and between 2000 and 2001 in *Le Figaro* (table 1).

The rise of stock-related stories in periods 2 and 3 in *La Presse* is also partly caused by the "RRSP effect". In Canada, March 1 is the deadline to contribute to a tax-deductible Registered Retirement Savings Plan for the previous fiscal year. *La Presse* publishes a supplement on the first Saturday of February and a biweekly "personal finance" column during three weeks, accounting for 10 articles in 2000 and 13 articles in 2001. It is interesting to note that a special effort seems to have been made in 2001 to convince small investors to put their trust in the markets once again. There are more articles than the year before and most of them focus on practical advice[19].

Table 1. Number of relevant articles, by newspaper, by period

	1. Rise	2. Peak	3. Fall
La Presse	71	124	134
Le Figaro	63	57	90

Story length[20] indicates prominence because editorial space is limited and events are numerous. In both newspapers (table 2) the proportion of long articles rises during the "peak" period which suggests a desire to expose and analyze rapidly changing events. However, because the volume of text is also a function of advertising sales, this may simply mean there was more space available during this period.

Table 2. Long articles, by newspaper, by period

	1. Rise	2. Peak	3. Fall
La Presse	4/71 = 5,6 %	16/124 = 12,9%	14/134 = 10,4%
Le Figaro	7/63 = 11%	10/57= 17,5%	8/90 = 8,9%

[18] Business news accounted for 6% of front-page stories in American newspapers in 2003, slightly less than crime (7%) and lifestyle (8%). Government (26%) and foreign affairs (18%) continue to dominate front-page news[State of the News Media (2004)].

[19] A quick scan of February-March 1999 yielded 104 relevant articles, which were not analysed for the present study. This would suggest that the increase in coverage during the different stages of the bubble was only a slight one in quantitative terms.

[20] Articles from *La Presse* were categorized on database as short, medium and long; articles from *Le Figaro* were compared to average story lengths in that publication to form the same three categories.

An article's location in the newspaper is another indicator of prominence as determined by editorial judgment. The front page is composed of stories that will presumably "sell" [21], are considered to have wide appeal and are considered generally most newsworthy; it can be considered the newspaper's "agenda". The inner pages of the business section are aimed at more sophisticated, special-interest readers. In both newspapers, not surprisingly, most relevant articles in all 3 periods are in the inner pages of the business section. Front-page articles are more numerous in *Le Figaro* during the «fall» period, but do not progress significantly in *La Presse*. However, *none* of the front-page stories of 1999 and 2000, and *all* those of 2001, in the Montreal newspaper, are directly related to technology stocks or the stock market's general performance. This lends support to the common critique of the media's overemphasis of "bad news" which some economists suggest may have a negative impact on economic processes [Parker (1997)].

Table 3. Location of articles in *La Presse*

	Front page	Front section	Front page, Bus.-fin.	Business-finance section	Other/N.A.	Total
Rise (p1)	3 (3,5%)	0	18 (21,2%)	42 (49,4%)	8 (9,4%)	71 (100%)
Peak (p2)	7 (5,6%)	7 (5,6%)	35 (28,2%)	72 (58,1%)	3 (2,4%)	124 (100%)
Fall (p3)	6 (4,4%)	3 (2,2%)	21 (15,7%)	101 (75,3%)	3 (2,2%)	134 (100%)

Table 4. Location of articles in *Le Figaro*

	Front page	Front section	Front page, Bus.-fin.	Bus.-finance section	Other/N.A.	Total
Rise (p1)	4 (6,3%)	0	12 (19%)	47 (74,6%)	0	63 (100%)
Peak (p2)	3 (5,3%)	0	9 (15,8%)	44 (77,2%)	1 (1,8%)	57 (100%)
Fall (p3)	8 (8,9%)	1 (1,1%)	22 (24,4%)	59 (65,6%)	0	90 (100%)

[21] The top half of a full-sized newspaper (such as the two studied here) and the entire front page of a tabloid are used to maximize newsstands sales. A French firm, TNS Media Intelligence, which produces a «media impact index» (UBM, *Unité de bruit médiatique*) calculated from number of pages and broadcast minutes on a given topic, allows double value to front-page stories because of the «newsstand effect» (http://www.ubm.secodip.com).

Traces of economization and popularization[22]

As expected, very few stories reveal an implicit representation of the public as "citizen" or "consumer". More surprisingly, these are not more frequent in the front page or other sections of the newspaper as compared to the business-financial section. This could lend support to the idea of a general "economization" of journalistic discourse. Columns with titles such as "your money", "your personal finances" and "trading tips" are also representative of this trend.

Market metaphors become twice as frequent in 2000 and 2001[23] and the images also seem to become more colourful and original. Some expressions are so ingrained in financial language we have not considered them metaphors: i.e. "scoring points", "to get one's fingers burnt" (*perdre des plumes*), "bear" and "bull" markets.

Anthropomorphism is the most common type of metaphor, especially mentalstates ("fright", "depression", "optimism", "nervousness", "anticipation", "memory", "craze", "schizophrenia", "mood swings") and, to a lesser degree, medical interventions ("health", "getting a facelift", "doped-up", "preventive medicine"). References to the weather and nautical metaphors are also frequent (index as "barometer" or "beacon", "storms brewing" over markets, "sinking", the economy like "a ship about to crash in the dock", Nortel's "wave breaking"). There are also a few zoological metaphors ("herd of investors", "galloping", "fauna of speculators", prices "taking flight").

The use of metaphor allows journalists to make complex processes (such as macroeconomics) more accessible and interesting to a neophyte reader. The specific types of metaphor most often used suggest a representation of markets as irrational and unpredictable (like the human psyche, the weather, and wild animals) with a faint hope of "curing" these ills (as with medical techniques and, occasionally, with violent reprimand: "whip into shape", "punishment", "pillory"). In both newspapers, stories in 1999 were generally quite "technical", almost austere, focusing on numbers and graphics with very little analysis or commentary. In the typical "weekly stock market summary", facts and events are presented sometimes in strict chronological order, with little attention to conventional journalistic style or structure (lead, inverted pyramid, dominant angle or focus).

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[22] This part of the analysis was conducted on a subsample of 60 articles (30 for each newspaper).
[23] We found on average one metaphorical expression per article in both newspapers in 1999, two per article in 2000 and 2001.

In 2000, stories contain more commentary and digression and some even had a "lifestyle" twist: life as a CEO, the experience of creating a dot-com company. Technical pieces still abound but are now accompanied by more "popular" treatments and flashier headlines.

Conclusion – a research program

These results are strictly illustrative and exploratory, given the limited number of articles and publications studied. We are in the early stages of a research program which, we hope, will tackle the following theoretical and methodological issues:

- To validate results for editorial judgment, we can use two other indicators not available on database by consulting print editions: accompanying illustration – photo, graphic, cartoon, etc.; width and font size of headlines; total news space;
- Categories requiring advanced knowledge and evaluation such as types of sources, thematic classification and especially discursive traces of economization and popularization (i.e. reader representation, metaphoric language and prediction) need to be operationalized and tested for coding on a larger sample of articles;
- Comparison across different cultural contexts and different media, especially business-financial magazines and television (general news programs and specialized formats).

Recent economic analysis underscores the central role of information and interactions on economic decision-making. Media are information providers. For that reason, the production of economic information needs to be investigated. A large program of research has to be pursued simultaneously on two fields: - brokers have to be questioned to evaluate the influence of economic media - precisely, which media, what kind of information; - economic journalists have to be questioned to evaluate the process of agenda selection, to identify their academic training and their position about the development of economic information.

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