SCIENCE, MEDIA, AND THE PUBLIC SPHERE:
A MEDIA SOCIOLOGICAL PERSPECTIVE.

Hans Verstraeten
Professor Media Sociology
Department of Communication Studies
Ghent University
Belgium

Abstract

The fact that the expansion of science and technology occurs in a strongly mediatized society ensures that science becomes more and more subjected to processes of mediatization. In media studies much attention goes to the relation between the media and the transformation of the public sphere. Since the last quarter of the 20th century, also science and technology has penetrated the discussion agenda of the public sphere. In this paper we will first clarify the need for a media sociological approach and demonstrate in how far this approach is different from, but at the same time also related to, the science communication approach.

Keywords: science, media, public sphere, media sociology.

The fact that the expansion of science and technology occurs in a strongly mediatized society ensures that science and scientific research are also subjected to mediatization to a high degree. Hence the need for a media sociological approach to the relationship between science and the media is pressed forward. The first aim of this paper is to clarify that media sociological approach and to demonstrate in how far this approach is different from, but at the same time also related to, the science communication approach.

Media and the transformation of the public sphere: life politics

Ever since the publication of Jürgen Habermas' "Strukturwandel der Öffentlichkeit" and especially since its English translation in the eighties, the relationship between the media and the public sphere has become an important topic in media studies. The past two decades a number of authors have contributed to a more dynamic approach of the "public sphere" concept (for an overview, see Verstraeten, 1996; see also Dahlgren, 1995). The majority of this research has mainly focused on the political and cultural dimension of this concept. Central to this are both the debate about the media and changing citizenship as the cultural implications linked to media globalization. It is clear however that since the last quarter of the twentieth century the rapid evolution of science and technology has penetrated the discussion agenda of the public sphere more and more. By their nature the developments in the field of the life sciences, medicine and information & communication technologies have an inevitable impact on the daily life of ordinary citizens. As such they have become a bigger part of the social debate. Increasing media attention to the debate on genetically modified food is a very clear example of this.

Characteristic of a more dynamic approach to the public sphere is a particular focus on the bottom-up sense-making processes of the citizen, next to the attention on institutionally oriented top-down processes. The necessity for such a dynamic approach presses forward because of the extension of the political domain from "emancipatory politics" to "life politics," as defined by Anthony Giddens (1991: 209-230). "Emancipatory politics" has sprouted from the ideals of the Enlightenment and is primarily directed at freeing individuals and groups from the societal limitations that restrain the development of their "life chances." Hence, the primary role of "emancipatory politics" is the diminishment or elimination of social exploitation, inequality and oppression. Notwithstanding the fact that the different political ideologies disagree on essential points on how to achieve these goals, they all consider the emancipatory goals as fundamental. "Life politics," on the other hand, manifests itself, once the first – however only partial – results of the "emancipatory politics" emerge in society. Once the limitations of exploitation, inequality, and oppression have diminished, and "life chances" have increased, citizens face the problems of "life politics." Having a certain number of choices at their disposal, what decisions do they need to take in order to develop their social identity in the best possible way? Whereas "emancipatory politics" is directed towards increasing societal choice possibilities, "life politics" focuses on the question of how people can use these new alternatives to reach "self-actualization" (see also Verstraeten, 2000). Next to the political developments, scientific and technological innovations have also made a substantial contribution to the expansion of "life politics." As a result of medical developments citizens need to take decisions nowadays which in former days were not even under discussion (e.g. the prolongation of life of terminal patients).

The distinction between "emancipatory politics" and "life politics" can be summarised in diagram form as follows (based on A. Giddens, 1991:215):

Diagram1:distinctionemancipatorypolitics/lifepolitices

Emancipatory politics	Life politics
1. diminishing exploitation, inequality and repression, based on an existing unequal distribution of power and resources	1. possibilities for "self-actualisation" after the increase of choices and within the context of global interdependence
2. life chances	2. life decisions

3. public sphere	3. private sphere
4. transmission view on media	4. ritual view on media

Nevertheless, some explanation and reserve are in order here:

1. "Life politics" certainly does not replace "emancipatory politics". Both concepts do not substitute each other, they are complementary. "Life politics" has to be regarded as the organic consequence of "emancipatory politics".

2. In making this point, we make a clean break with the classical distinction, according to which the political domain solely belongs to the public sphere and the private sphere is reserved for non-political, personal matters. Both spheres have in their own way a political dimension. The transformation of politics thus entails an extension of the political domain. The classical, liberal distinction between a political public sphere and a non-political private sphere has in fact since long been undermined by several social developments. Not so much the media, but especially some social movements have played an important role in this (the feminist movement, the ecological movement). In this connection it may be pointed out that the classical distinction between "public" and "private" never was a neutral one, but an ideological construction in favour of protecting economic interests. This, however, does not imply that the distinction between public/private has lost its social relevance. One should just always be aware that the line between the public and the private domain can never be drawn in an essentialist manner, as it is indeed always subject to shifts. It is important to be aware that these shifts are the result of a struggle between political-societal spheres of influence.

3. The fact that in "life politics" individuals have to make decisions within the private sphere must, however, under no condition be confused with an increase in narcissistic individualism, as a great number of opponents to this approach do. Admittedly, the fact that even Giddens himself sometimes uses "life style politics" instead of "life politics" also gives rise to some misunderstandings. "Life politics" means that people have to make decisions by themselves, often without being able to fall back on social institutions or regulated traditions. However, the fact that people make individual decisions does not automatically imply that they make individualistic decisions. To a large extent, individual decisions also have a social nature. As is the case with "emancipatory politics", the unequal distribution of different sorts of capital (economic, cultural, social and symbolic) plays an essential role in "life politics".

4. This also implies that the increase of "life politics" should certainly not be glorified and idealised, as some followers tend to do, for the swift expansion of "life politics" does involve considerable risks. "Life politics" confronts citizens with all sorts of difficult problems they are often not prepared for. This can lead to different forms of social segregation (the "generation gap" of the sixties, for instance, or more recently, the "education gap"). In other words, not only the rise of the independent citizen can be related to "life politics", but also the growing popularity of extreme right political parties. This process of "life politics" has to be realised by the citizen in a social context primarily characterized by an expanding globalisation and individualisation. Combined with the above mentioned unequal distribution of resources, "life politics" probably contains more social risks than it creates chances.

Detraditionalized public sphere and social representation of science

This increase of life politics is located within a context of a "detraditionalized public sphere": in taking these life decisions people are less able to fall back on established traditions (for a general approach on the idea of a "post-traditional society," see Beck et al., 1994). Such a detraditionalizing public sphere has important repercussions on how people acquire social and scientific knowledge.

Traditional public spheres, however, are much more resistant to the introduction of novelty/differences and, indeed, the predominant form of everyday knowledge (collective representations) that they produce is especially apt to fulfill the function of resisting novelty and the transformations it may entail. Traditional societies call upon the power and emotional dimension of the social bond to reproduce the knowledge they believe to be right and needed to perpetuate their way of life. In detraditionalized public spheres, on the contrary, both strong elements of tradition and strong challenge to tradition exist side by side. These diverse tendencies meet, clash and are constantly negotiated in the public sphere (Jovchelovitch, 2001: 170).

Several social-psychologists have framed this within a social representation theory, founded by S. Moscovici (1976). In contrast with the Durkheimian concept of "collective representations," which are mainly characterized by their fixed and homogenous character, social representations are much more the result of a fluid dynamic, typical for a more detraditionalized public sphere:

It seems an aberration, in any case, to consider representations as homogenous and shared as such by a whole society. What we wished to emphasize by giving up the word collective was this plurality of representations and their diversity within a group….In effect, what we had in mind were representations that were always in the making, in the context of interrelations and actions that were themselves always in the making (Moscovici, 1988: 219).

Of course, such "social" representations also play a substantial role concerning the representation of science and technology. In this case particularly there is a diversity of contrasting representations that are contested and negotiated in the public sphere. It is striking how social-psychologists examining the social representation of science (and biotechnology in particular) almost inevitably end up with the debate on science and the media (Gaskell, 2001; Wagner and Kronberger, 2001; Bauer, 2003; Flynn et al., 2001). The same observation can be made with sociologists of science. In this field of study also, it becomes more and more clear how the media play an important role in both the representation and the construction of science and technology. (Bucchi, 1998; Nowotny et al., 2001; Gamson, 1988). The fact that the debate on science and the media exceeds the diffusionist approach mostly appearing in science communication is of substantial importance. The diffusionist model is grounded on two separate worlds: the world of scientists and specialists on the one hand in which scientific knowledge is achieved, and the world of lay people on the other hand. Science communication's very difficult task is to distribute and popularize that fixed knowledge to the lay people. The media sociological approach presented here corresponds to the social-psychological and sociology of science's approach, and holds a rather different view on the relationship between science and the media. Science itself, the demarcation between scientific disciplines, and scientific legitimation are not considered as constituted a priori before distribution to the public. On the contrary, this is achieved within the science communication process itself. In this sense, Massimiano Bucchi (1998: 36) instructively refers to "a model of science communication as a continuum," as initially proposed by Cloître & Shinn (1985).
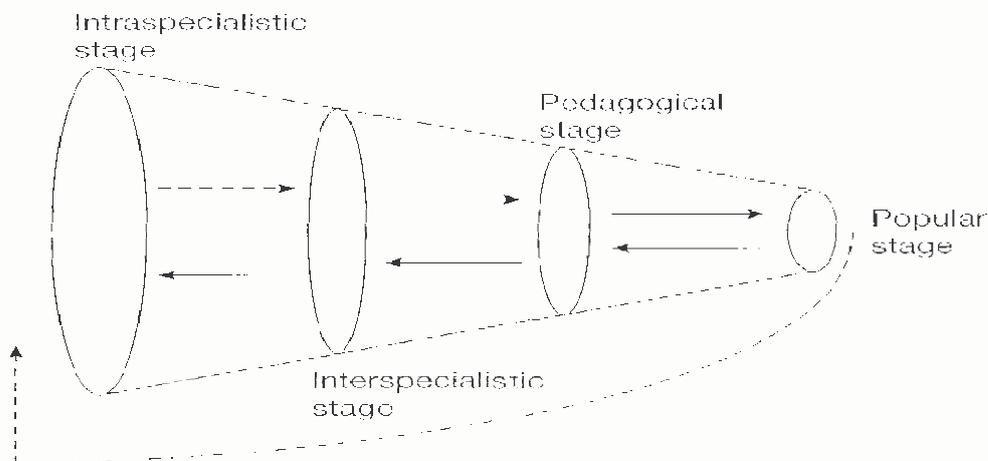

Figure 1: A model of science communication as a continuum (Cloître & Shinn, 1985; Bucchi, 1998: 36).

Four main stages are identified in the process of science communication: 1) the intraspecialist level (the specialized scientific journal of one scientific discipline) 2) the interspecialist level (the interdisciplinary journals) 3) the pedagogic level (the so called "textbook science") and 4) the popular level (the mass media). This model describes some sort of ideal flow of communication in routine circumstances. In each of these stages, science is not only transmitted or translated, but also constructed. Moreover scientists appear to deviate more and more from this classic trajectory:

> In some prominent cases of scientific breakthroughs, a new phenomenon, 'science by press conference' or, in other words, the announcement of scientific findings to the press before the more tedious procedures of peer review have been completed, has demonstrated how successful the media have been in distorting traditional norms of scientific behavior (Nowotny et al., 2001: 212).

All this clearly shows science is not happening "outside society" and inside the closed walls of laboratories, but on the contrary is constituted "inside society." This is a substantial starting-point for a media sociological approach to the relationship between science and the media which requires a systematic media sociological examination on different levels (see also Bauer, 2003: 161-162):

- The production of science news: how does news management function? What kind of actors are part of the "news beat" of science journalists? How is the relationship between those journalists and their sources (experts, policy makers, grassroots movements etc.)? Who is considered as a legitimate source in the definition of science and the perception of the related risks and benefits (Beck, 1992)? And are there any differences in attitudes to science between news and science journalists, and in their respective social identity-construction vis-à-vis scientists & scientific institutions on the one hand and their audiences on the other?
- The media content: is there a diversity of representations of science and technology in the media or, on the contrary, one dominant monolithic representation? Are there differences between the "quality media" and the "popular media"? And especially important: are there differences or even contradictions between the representation of science in the informational and the entertainment content of the media (e.g. the representation of medical science in the numerous "hospital serials" on television)?
- The reception of those representations by the audiences. Since several decennia there has been a large expansion of reception studies in media research, but rather little reception studies dealing with the representation of science and technology. A very important research question is how the different audiences handle these representations in the construction of their social identities (Wynne, 1992). Is there a difference between the processing of the representations of those scientific developments that have an immediate impact on the daily life of people (e.g. medicine, biotechnology, ICT) and those developments that have a far lesser impact on the construction of social identities (e.g. aerospace technology, cosmology)?

The research questions of this media sociological approach are both highly differentiated from as well as strongly related to classic science communication and science popularization, in the sense that these would actually have to precede both. Before wondering what communication strategies, which type of media, and which type of scientific knowledge should be transmitted to which segments of the public, one should have a clear understanding of which type of science by way of which type of actors has more access to the media and social debate, next to how the audiences handle these representations in the construction of their social identity.

References

Bauer, M. (2003) '"Science in the media" as a cultural indicator: contextualizing surveys with media analysis', in M. Dierkes and C. von Grote (eds) Between Understanding and Trust. The Public, 157-78 Science and Technology. London/New York: Routledge.

Beck, U., Giddens, A. and Lash S. (1994) Reflexive Modernization. Politics, Tradition and Aesthetics in the Modern Social Order. Cambridge: Polity Press.

Bucchi, M. (1998) Science and the Media. Alternative Routes in Scientific Communication. London/New York: Routledge.

Cloître, M. and Shinn T. (1985) 'Expository practice: social, cognitive and epistemological linkages', in T. Shinn and R. Whitley (eds) Expository Science, 31-60. Dordrecht: Reidel.

Dahlgren, P. (1995) Television and the Public Sphere. Citizenship, Democracy and the Media. London: Sage.

Flynn, J., Slovic P., and Kunreuther, H. (2001) Risk, Media and Stigma. Understanding Public Challenges to Modern Science and Technology. London: Earthscan.

Gamson, W.A. (1988) 'The 1987 distinguished lecture: A constructionist approach to mass media and public opinion', Symbolic Interaction 11 (2): 161-74.

Gaskell, G. (2001) 'Attitudes, Social Representations, and Beyond', in K. Deaux and G. Philogène (eds) Representations of the Social. Bridging Theoretical Traditions, 228-41. Oxford: Blackwell Publishers.

Giddens, A. (1991) Modernity and Self-Identity. Self and Society in the Late Modern Age. Cambridge: Polity Press.

Jovchelovitch, S. (2001) 'Social Representations, Public Life, and Social Construction', in K. Deaux and G. Philogène (eds) Representations of the Social. Bridging Theoretical Traditions, 165-82. Oxford: Blackwell Publishers.

Moscovici, S. (1976) La Psychanalyse, son Image et son Public (2nd ed). Paris: Presses Universitaires de France.

Moscovici, S. (1988) 'Notes toward a description of social representations', European Journal of Social Psychology 18 (3): 211-50.

Nowotny, H., Scott, P. and Gibbons, M. (2001) Re-Thinking Science. Knowledge and the Public in an Age of Uncertainty. Cambridge: Polity Press.

Verstraeten, H. (1996) 'The Media and the Transformation of the Public Sphere. A Contribution for a Critical Political Economy of the Public Sphere', European Journal of Communication 11 (3): 347-70.

Verstraeten, H. (2004) 'The transformation of politics: Implications for media assessment and accountability', Communications. The European Journal of Communication Research 29 (1): 43-58.

Wagner, W. and Kronberger, N. (2001) 'Killer Tomatoes! Collective Symbolic Coping with Biotechnology', in K. Deaux and G. Philogène (eds) Representations of the Social. Bridging Theoretical Traditions, 147-164. Oxford: Blackwell Publishers.

Wynne, B. (1992) 'Misunderstood misunderstanding: Social identities and public uptake of science', Public Understanding of Science 1 (3): 281-304.