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Comment

**PUBLIC COMMUNICATION FROM RESEARCH INSTITUTES: IS IT SCIENCE COMMUNICATION OR PUBLIC RELATIONS?**

# The changing rationale of science communication: a challenge to scientific autonomy

**Frank Marcinkowski and Matthias Kohring**

ABSTRACT: *We argue that the institutionalized push communication of academic institutions has become the dominant form of public science communication and has tended to force other forms and functions of science communication into the background. Given the new schemes of public funding, public communication of science now primarily serves the purpose of enabling academic institutions to promote themselves in a competition that has been forced upon them by the political domain. What academics working under these conditions say about themselves and their work (and what they do not) will depend crucially on the strategic communication goals and concepts of the organizations to which they belong. We surmise that the inherent logic of this form of science communication represents a potential threat to the autonomy of scientific research.*

We can understand the term *science communication* in its most general sense as each instance of communication about scientific research which is addressed to a public, as well as about the knowledge (technology) resulting from this [1]. Science communication is in fact a multifaceted phenomenon: it employs a variety of formats and channels of communication, involves different actors, and pursues very different, even sometimes conflicting, objectives. We can nonetheless use three distinctions to make some order of the confusion. First, we should distinguish between *individual* and *institutional* communicators — that is, between an individual academic who reports on his or her research, and the press office of an academic institution in which there are usually professional communicators who provide information on the work of academics belonging to the institution. Second, we should distinguish between communication *by* science, and communication *about* science. This distinction concerns the question of whether academics or academic institutions provide self-descriptions of their own action, or whether external observers (especially journalists) communicate their assessments of scientific processes and findings, and place them in a social context. Third, we should make a distinction

between different modes of science communication, which are defined by the relationship of communicators and recipients. In so-called *push* communication, the prerogative lies with the communicator, who consciously and purposefully selects desired recipients whose interest the communicator simply presupposes and whom the communicator addresses directly with its range of communications, i.e., s/he *pushes* the message. The prime example here is the work of university press offices, which, automatically and usually without there being a particular demand, send out mailings to "their" distribution lists. We distinguish this from so-called *pull* communication, where the communicator makes his/her information available to an anonymous and dispersed public through appropriate channels, which can then be selected and "pulled" on by recipients according to their individual interests. Examples here are journal articles about science, but also, for example, science blogs or wikis.

If we imagine these distinctions as axes of a three-dimensional matrix (Figure 1), then what emerges is a space with eight blocks, each one representing a unique format of science communication.

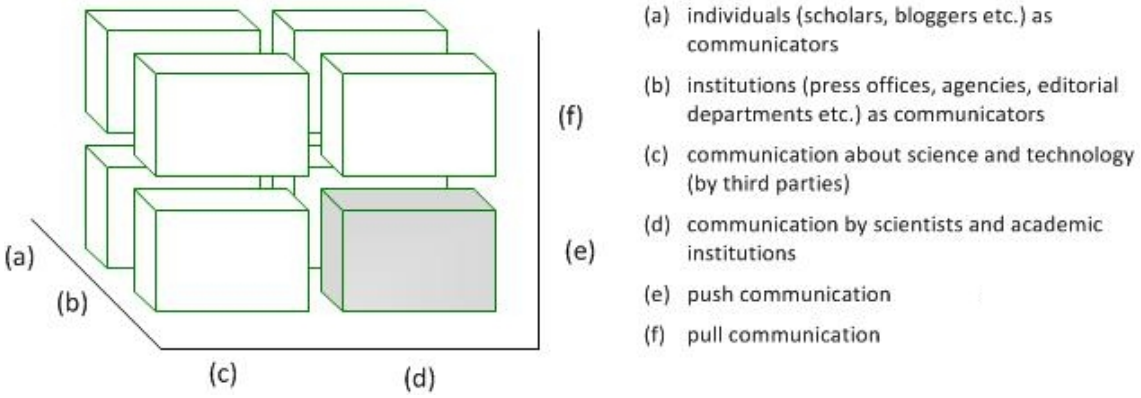


**Figure 1**. Facets and formats of science communication.

We argue here that the lower right square of the first level, i.e., the push communication of academic institutions (usually executed by institutional press offices), has become the dominant form of public science communication and has tended to force other forms and functions of science communication into the background. Given the new schemes of public funding, the public communication of science primarily serves the purpose of enabling academic institutions to promote themselves in a competition that has been forced upon them by the political domain. What academics working under these conditions say about themselves and their work (and what they do not) will depend crucially on the strategic communication goals and concepts of the organizations to which they belong. We surmise that the inherent logic of this form of science communication represents a potential threat to the autonomy of scientific research, with our argument being based on our studies of the publicly funded system of higher education in Germany [2].

## Is science a genuine public business?

The absolute requirement for science to present itself in public is now simply assumed to be obvious and a matter of course. Those academics or academic institutions that try to evade the ubiquitous pressure to communicate publicly come under huge pressure to justify themselves. External communication of almost any kind and amount is considered useful and desirable *per se* — indeed, it is often already understood as being a genuine component of academic activity.

If we consider the process of scientific understanding from a *functional* point of view, however, then the notion that science has to publish itself becomes by no means self-explanatory or self-evident. The function of science is clearly to formulate sentences which, assuming a certain understanding of truth and accepted methods, are considered true and which can therefore be particularly useful in guiding human action. The epistemic process itself, the process of attributing truth values to statements, therefore requires neither public visibility nor the sanction of an uninvolved third party. Whether a statement is deemed true or false is determined within science, and usually within the epistemic publics of scientific communities. There is no reason to assume that the process of scientific understanding would be furthered by having as many people as possible observing or being involved in procedures of justification. Science has had to fight for a very long time for this functional autonomy — against the claims, for example, made by religion, politics and, more recently, even against the claims of the public. Also beyond the immediate context of justification in the research process, there is no functional justification for *public* science communication, since an insight obviously does not become truer simply by being shared publicly, and nor does it become false simply by remaining unknown to most people.

That means that the idea and practice of the public self-presentation of scientific processes of understanding are epistemically non-functional at best; at the same time, though, they can have societal consequences. Since every action responds to the fact of its observability, the public domain brings into play motives, criteria and dynamics that can potentially challenge the original "purpose" of science — and thereby also hinder it. In the following, we are concerned exclusively with these negative consequences of visibility for the autonomy and functioning of science.

So as not to be misunderstood, we do not want to deny that science has to answer to society, and especially so if it is publicly funded. It has not yet been decided, though, which mechanisms in the production of democratic accountability should be used in this regard. There is in any case no compelling reason to fixate prematurely on PR as the primary mechanism of accountability. Every democratic society knows areas of public action that have to be accountable, but that no one would expect to have to be accountable through presenting itself in public. This applies, for example, to many parts of internal and external security, where the claim is rather that being too much in the public eye could have a detrimental effect. And that is precisely our claim for science, too. Areas of action for which that holds true justify themselves through *functioning well*. Their

so-called output legitimacy results from "being good" instead of just "looking good" [3]. Furthermore, of course, such areas should be monitored by an independent journalism and thereby exposed to public observation.

## Who needs science communication?

So how did the demand for public communication from science come into being, if it is not a core component of what academics do? Besides certain ideological currents, especially the social-democratization of many European countries and the associated demand for equal access to higher education, it is primarily economic constraints that are responsible. According to these constraints, the demand for public science communication is justified by the organization of science, coupled with the dependence of organizations on money. Science can only be sustained on a permanent basis if it takes place in organizations (universities, colleges, research centres, etc.), and organizations need money to motivate membership. Most European countries have publicly funded organizations of science, with the state collecting money in the form of taxes and passing it on to academic organizations, for which in return it expects extensive involvement in how the money is used and reserves the right to monitor how it is spent. The state is answerable for what results from this to those who provide the money, i.e., to the electorate. As that has become more difficult and costly, so the state has relieved itself of the duty of detailed responsibility by tying funding to performance agreements, withdrawing from micro-management, and granting organizations themselves more autonomy in budgeting and spending [4]. The idea behind this new public management is that, in return, organizations will have to manage the task of justifying themselves to those who provide the money and use their services. In that way, the binding of the reformed unit to its external (non-governmental) "stakeholder" is intended to become closer, so that the unit responds more directly to the interests of "stakeholders" and also feels a more direct pressure to justify itself with regard to these "stakeholders" (so-called "public accountability").

The work of legitimation therefore takes place — apparently so, since everyone knows that the duty of accountability internal to science is rapidly increasing — not directly with regard to the state funder, but instead with regard to the electorate or taxpayers. That is a process of democratization only in appearance; in actual fact, politics withdraws from its original responsibility of making binding decisions and formulating appropriate criteria for this purpose. Science is subordinated instead to two regimes foreign to it, these regimes being intended to ensure "efficiency" and "quality". One is economic rationality, which has ensured the propagation of the figure of competition alien to science, while the other is the rationality of media publicity and the pursuit of visibility and attention associated with it. The latter is not limited to science, and, in conscious reference to Horkheimer and Adorno's concept of the culture industry, we could almost talk in terms of an *attention industry*. In their pursuit of visibility, both aspects are inextricably intertwined: competition is publicly demonstrated and staged for the public, the most prominent examples of which are the German Excellence Initiative and the ubiquitous rankings.

Once an institution has made the decision to compete for public attention, it is then bound (no matter what terms we use to embellish this or how respectable personal motives are) to the compulsion of self-promotion, of image building and image maintenance, of self-marketing, of consent management. But above all the criteria of success become ever more important for the generation of public attention. Science communication is therefore a gateway for non-scientific motives, relevance criteria and dynamics, and that, from the perspective of science, is anything but good news.

## The collateral damage of publicity

While going along with the needs of the news media was frowned upon until quite recently, universities have believed for several years now that there simply cannot be enough public attention, and so they work with all means possible to increase their own visibility. Behind this there is no recognition of a public function of control and criticism, or even of participation by the lay public. On the contrary, this *mediatization of academic institutions*, understood as the *adaptation to the criteria of public attention*, is a PR strategy to enable universities to survive and thrive in an artificial competition for financial resources that was initiated in the political domain.

It was once believed that the enlightening of the lay population through knowledge could also bring about acceptance for the producer of that knowledge. Although this never really worked as a whole, the belief still has a rational bent which seems almost touching nowadays. The exaggerated pursuit of public attention is now entirely detached from the internal logic of science that we have already described, and it therefore detaches itself also from its functional orientation. Put bluntly, the science system no longer does what society really needs it for. Most strikingly, this is in the seemingly innocent and at first glance generous demand to reward academics for public science communication. Such incentives aim to change science in such a way that it communicates *about itself*. It is therefore not science that has primacy, but communication about science. Only recently did a representative of a well-known German academic organization openly express sympathy for the view that only a blogging academic is a good academic, and that the means of control of "performance bonuses" could well work here.

What becomes clear from such examples is not only the confusion of visibility with relevance; much more serious is what we refer to as the exchange of the dominant "currency", with the dominant currency of the news media (which is functional and necessary for society) becoming the dominant currency of science. It exercises a strong influence at least on the entire process leading to understanding in science: research topics are chosen according to their current potential for attention, resulting in a mainstreaming of scholarly work. Hypotheses are formulated according to exactly the same criteria. Putative research "findings" are published through the mass media before having passed the peer review process. Results are reframed for the public in order to make positive aspects more salient while hiding critical consequences. The social impact of any field of research is consequently exaggerated. Research money and other rewards are distributed

to those who master the "beauty contest", and therefore this process is reinforced. In effect, academics and their work are evaluated according to whether or not they capture the attention of a *non*-academic public sphere [5].

It is said that artificial competitions — that is, competitions without a functioning demand-driven market on which a price mechanism forces an adjustment of supply to performance — lead to a perversion of incentive systems [6]. Our thesis goes one step further: we argue that science communication geared to public attention as an intrinsic value systematically threatens the quality of science — and precisely *because* it is public. How can we justify such a claim?

The competition for media attention in which science is engaged — incidentally, no longer as *the* science, but only still as an apparent unity of actually competing organizations — requires criteria that at least suggest the possibility of comparison. Visibility and the public attention related to it is one such criterion. As long as journalism produces this visibility according to its own intrinsic logic, this is not only unproblematic, but even socially desirable, with journalism highlighting the relevance of science for society. This means that despite the tight coupling of both systems we expect science journalism to stick to the rules of journalism, instead of just copying science. But that applies to science, too. Academia should also prevent the scientific rationale from colonization by the logic of public attention instead of turning scientists into accomplices of mediatization. Yet, the value of an academic is becoming increasingly measured according to whether he or she has accumulated as many units of the currency of "public attention" as possible.

The mechanism described here increasingly affects, and has already affected, academic life, including the epistemic procedures of science, so that we can even claim that it has gradually eaten its way into these processes of understanding at the core of science. In short, when public attention becomes the dominant criterion, then we consider the demand for more publicity for science, i.e., for more communication from science into the public sphere, as being not only alien to science, but indeed harmful to it.

## What is good science communication?

So how can we imagine better communication from science into the public sphere? Is it really the individual academics themselves who benefit from a forced science communication from science into the public sphere? We would answer with a resounding "no" here. Is it the academic organization, e.g., a university, that benefits (and then indirectly its academics)? At first glance, "yes", since those placed at the forefront in the competition for attention receive more resources. But even here there is harm done (described above) to the venture of science, when public attention also becomes the criterion by which science is judged successful. This diagnosis applies also to those who are not seen in the truest sense of the word, since every competition generates a lot more losers than winners, and these losers have also likewise bent themselves double in order to "gain a profile" (the German Excellence Initiative provides very illustrative examples here). Interestingly, those who do not even try would benefit more, for at least they would not

corrupt their researchers. But in the attention industry, what has already established itself as a flaw is *not* communicating and *not* considering publicity as a panacea. Those *opposed to* publicity arouse suspicion and are considered stuck in the past. We can see one thing above all with regard to such arguments: the ideologization of the term "publicity".

We could also speculate that the taxpayer might benefit from more public communication of science, because it is thereby made directly accountable to the taxpayer. This is a very weak argument. It is very doubtful whether there is among the population more than a marginal interest in such *push* science communication, which is not to be confused with a lack of acceptance of science. In fact, public support of science is comparatively high. Was one of the large communication campaigns on behalf of science really being serious when it spoke of "dialogue" and similarly lofty ideas? With the recent governance reforms in higher education and research at the latest, we can see that it is on the whole not about the ordinary person on the street or the informed citizen. Rather, without wanting to discredit the personal motives of science communicators, we can see that public promotion of science is about leaving an impression on those who decide upon the levels of investment in higher education and research, and that is still primarily the political domain. Politics in turn is accustomed to evaluating its own decisions via media attention, since it reaches its voters in such a way; but it does not realize that this is totally inappropriate in the case of science, since this public internal to science simply does not exist.

If we draw a balance sheet, then we can make the following three arguments. First, "public attention" is the wrong criterion for measuring the quality of individual scientists and academic institutions. Second, the application of this criterion is directly harmful to the production of scientific knowledge. Third, spending a lot of money on this, tying the time of academics down, and increasingly demotivating them — all this is simply wasting immense resources on the wrong strategy.

If our argument is correct, then "better science communication" would mean adding by subtracting. We are firmly convinced that science would advance more rapidly and with greater potential societal benefit without such a strong focus on publicity. By this we by no means mean that the external communication of science and with it science-related PR is generally unnecessary. Rather, it is to warn against the ever increasing pervasiveness of push science communication and the current political drives to persuade everyone to do it.

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## Authors

Frank Marcinkowski is Professor of Communication at the University of Muenster, Germany, where he specializes in media theory, political communication, and science communication. He holds in Ph.D. in political science from Mercator University, Duisburg/Essen. Marcinkowski has written articles and book chapters on the role of the media in electoral politics and referenda, the mediatization of science, the role of the media in new forms of governance, and online campaigning. E-mail: f.marc@uni-muenster.de.

Matthias Kohring is Professor of Media and Communication Studies, University of Mannheim, Germany. His research focuses on trust in media, the public sphere, and science communication. E-mail: M.Kohring@uni-mannheim.de.

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