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zooming out for micro-level insights close to reality

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Science communication and innovation: zooming out for micro-level insights close to reality

Maarten C. A. van der Sanden

Abstract

Much of science communication is peer-to-peer communication in collaborative networks for innovation from the fuzzy front-end of innovation until the marketing back-end. Scientists and engineers at meetings tables talking about new developments. Or scientists and engineers in collaboration with industry and policy makers, discussing various scenarios for implementation of e.g. health care services. However, this focus on science communication 'within the action' of uncertain development of science and technology and its attached academic domains such as innovation studies, high-tech marketing and branding, is not often discussed in the science communication literature. Lacking these considerations at this micro-level communication, means we have an incomplete picture of the ways that discourses develop and are shaped by actors, particularly during the upstream phases of innovation.

Keywords

Public engagement with science and technology; Science and technology, art and literature

Zooming-out from the science and a lay audience boundary, as the commentary authors do, generate a deeper understanding of micro-order linkages between the various stages from the development of e.g. agro-technology or a vaccination program. Moreover, zooming-out brings science communication closer to day-to-day reality in which these linkages between various stages of science and technology development and innovation are important. The commentary authors show a broader range of possible interventions with a broader variety of stakeholders.

As Leeuwis & Aarts write in their contribution, current thinking about 'communication, innovation and development' pays greater attention to limitations in the potential of orchestrating change and innovation in pre-planned directions, and the political and institutional dimensions of both communication and innovation. And they conclude by saying that seen from a communication in innovation perspective one sees that policy makers and other change agents tend to under-estimate rather than over-estimate the complexity of the problematic context at hand. That is what we see in the HPV-vaccination case as well, as Van der Sanden & Flipse write in their commentary.

Considering communication from the perspective of passive to active stakeholders and lay audiences, as Bud writes, not only takes, for example, engagement into account but also encourages us to consider a wider range of theoretical concepts

and models of this kind of interaction: such as branding or product communication. By focussing on innovation and the ways that scientific debates become 'branded' one sees the active roles of stakeholders more clearly. As Bud elaborates when considering the development of Penicillin, this allows us to consider how innovations give authority to certain groups, in this case to the patient 'knowing' what to expect, and the wish to believe in a medicine which has 'seemed' to work. By thinking about scientific developments and innovations as brands, such as a 'synthetic biology' brand, as Bud states, we gain knowledge about how the public is actively involved in construction of the image and discourse.

But science communication also feeds back on e.g. Responsible Research and Innovation (RRI) as Victor Scholten et al. emphasizes in their commentary. The connection, as they write, between science communication and innovation studies leads to the development of more positive narratives and examples that resonate well with the abilities of user and stakeholder groups to understand what is at stake when RRI is discussed, whereas RRI approaches try to prevent and mitigate the possible adverse impact of their innovations.

We may learn from the commentaries that the theoretical and practical connection between science communication and 'branding', 'innovation systems', 'learning through innovation' and RRI enhances understanding, reasoning, and practical implications of science communication 'in action'. Inevitably this leads to new research focusses and questions. As Bud writes in his contribution: 'once the objective of sharing the analysis of scientific categories as brands is accepted, the historical challenge is to explore how terms are, and have been used, and their meaning has changed.' Leeuwis & Aarts, write: 'the emergence of new dialogical governance approaches leads to questions regarding the ways in which such methods and approaches are operationalised and enacted in specific contexts, and whether and how this contributes to greater legitimacy and agreement around emerging technologies.' Scholten emphasizes that for the future we should learn from the methods and approaches each is using and understand the context in which these are used. From a communication design for innovation point of view Van der Sanden & Flipse are much interested in designing science communication strategies and corresponding decision tools, that include deliberation on innovation's uncertainty, instead of over- or underestimated complexity.

Author

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