



Disruptive innovation has to be accompanied by social and cultural progress. In the provocative opinion piece, Kirsten Drotner from the University of Southern Denmark and Mariachiara Esposito from Science Europe call for policy makers in Europe to abandon the prevailing approach to innovation that has informed European policies and funding programmes, in particular Horizon 2020. Instead, they call for a recognition of the role of arts and humanities research in fostering future innovation.

Disruptive innovation: requires humanities' input



When arts and humanities research fosters deep change

Innovation has been on the lips of many politicians and policy-makers alike in Europe's capitals over the past few decades. Innovation comes across at the one-size-fits-all solution for all of the economic problems of Europe. But what does innovation really mean? The answer to this question comes from experts from the humanities, who are used to analysing the meaning of words, in their wider context.

In particular, the Science Europe's Scientific Committee for the Humanities sets out to explore the concept of innovation in an opinion paper published in December 2015, called [Radical Innovation](#). The Committee focused on the current narrative around innovation processes, in the context of European debate on innovation policies. It also analysed the dynamics which are at the basis of disruptive, or radical, innovation.

Innovation revisited

The paper opens a wider and deeper understanding of the definition of innovation and its potential than previously understood. It reveals that the ability to create and promote innovation depends on the capability of research actors and policy makers to support meaningful research-driven strategies occurring in a truly innovative ecosystem.

The authors distinguish between radical and incremental innovation. Incremental innovation dominates research cultures where technical advance has precedence over social and cultural innovation.

Conversely, radical innovation is fostered by transformative approaches and radical thinking in cultural and scientific environments with great creativity and imagination. Radical innovation is therefore a process, which leads to 'unanticipated' answers that are capable of producing radical and deep changes.

The human factor

Innovation is becoming ever more central to policy makers' priorities for supporting research policies, which are expected to guarantee societal and economic impact. This requires radically new answers to new challenges, such as climate change, access to clean water, health and food security, emerging alongside social and cultural progress.

This paper focuses on innovation processes that have the 'human factor' at their very core. The human factor is akin to actions that change peoples' lives and behaviour which arts and humanities research help to identify.

In their publication, the Scientific Committee's members stress that radical innovation should therefore be integrated from the outset into any strategies for tackling societal challenges. This requires creating conditions for researchers to work across disciplinary boundaries. Indeed, interdisciplinary work facilitates creativity and radical thinking designed to tackle complex societal challenges which are more and more interdisciplinary in nature.

The paper outlines a series of examples of radical innovation taking place within arts- and humanities-driven projects. Some examples also concern those innovations that happen in the context of research itself, such as innovative methods of organising interdisciplinary teams that take place in several [emerging fields](#), including medical, digital and environmental humanities.

Arts and humanities' role

The arts and humanities should not merely be relegated to supporting an understanding how innovation happens. These disciplines also act as catalysts in explaining why innovation happens and--in so doing--help to design the **future shape of the world. This humanities-driven approach to innovation can create 'game-changing' solutions to the major challenges of our societies. They can help transform the ways in which we conceptualise, manage, study and act in the world.

The case studies described in the opinion paper represent a variety of projects which have been conducted across Europe, either with national or European funding. These include how psychosis in urban environments is studied from an interdisciplinary angle; how co-operation between neuroscientists and sociologists, philosophers or linguists help [tackle clinical and health issues based on humanities](#)-centred research questions; how new methodological approaches advance the study of [cultural heritage](#); and how innovative ways of addressing environmental problems are dealt with through [designers' and anthropologists' research methods](#).

In addition, the paper gives examples of how some Asian countries, such as [South Korea](#), support cultures of innovation. In particular, it refers to cases where the arts and humanities are driving research fields and where there is no hierarchical order between different scientific disciplines or between the 'hard sciences' and the arts and humanities.

Recommendations

When it comes to recommendations, the paper states that Europe should abandon the prevailing approach to innovation that has informed European policies and funding programmes so far, in particular Horizon 2020. The authors find that the current approach has relegated the human factor--and hence arts and humanities research--to the peripheries of the scientific landscape.

If Europe aims to transform a culture of reproduction into one of innovative production, it is essential to bring the arts and humanities at the centre of technological and scientific developments. For these reasons the paper strongly advocates the urgency of taking measures across the research ecosystem to support further integration of arts and humanities with other scientific disciplines.

It also advocates to stimulate a genuine interaction between these disciplines in order to develop strategies addressing and supporting all aspects of innovation, which promote non-linear and intangible innovation too.

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