

Abstract submitted to:

PoM 2018

The Philosophy of Innovation

Dr. Vincent Blok^{*12}

¹ Philosophy Group, Wageningen University (The Netherlands)

² Business Management and Organization Group, Wageningen University (The Netherlands)

Note on the first author:

Vincent Blok is associate professor in the Philosophy Group and the Management Studies Group, Wageningen University (The Netherlands). In 2005 he received his PhD degree in philosophy at Leiden University with a specialization in philosophy of technology and philosophical method. Blok's research group is specialized in Philosophy of Management and Economics, Business Ethics and Philosophy of Responsible Innovation, and is involved in several (European) research projects. His books include *Ernst Jünger's Philosophy of Technology. Heidegger and the Poetics of the Anthropocene* (2017). Blok's work appeared amongst others in *Journal of Business Ethics*, *Business & Society*, *Philosophy & Technology*, *Philosophy of Management*. See www.vincentblok.nl for more information about his current research.

* Corresponding Author, Address: Wageningen University, Hollandseweg 1, 6707 KN Wageningen, The Netherlands. +31 (0)317 483623@wur.nl

Abstract

Innovation is everywhere in our current society. Not only are we overwhelmed by new innovative products and services on a daily basis, ranging from new consumer products like google glass to geo-engineering in order to mitigate climate change, and from new business models like *Uber* taxi to enhanced political engagement via social media. While innovation in engineering and technology is appreciated and encouraged, policy-makers foster innovation as well: “We need to do much better at turning our research into new and better services and products if we are to remain competitive in the global marketplace and improve the quality of life in Europe” (European Commission 2017). It is save to say that our society is characterized by a fascination and quest for innovation (Nowotny 2006). With this, it is uncritically seen as a good thing (Rogers 1976). According to this “pro-innovation bias”, as Rogers called it, “researchers have implicitly assumed that to adopt innovations is desirable behavior (rational) and to reject innovations is less desirable (irrational)” (cited in Godin 2015: 235-236). It is self-evidently taken as a panacea for all kinds of socio-economic problems we face, ranging from the financial crisis to climate change, and from public health issues to welfare in developing countries (Godin 2015). “Most current social, economic and environmental challenges require creative solutions based on innovation and technological advance” (OECD 2010: 30; cf. European Commission 2010). Innovation can therefore be seen as the emblem of our time (Godin 2008).

At the same time, the notion of innovation itself remains undefined in these policy documents, while its meaning seems to be taken for granted in the scientific literature (Godin 2015). We are for instance familiar with dichotomies like incremental versus disruptive innovation (Christensen 1997), but what does the notion of innovation itself mean? While the Cambridge dictionary defines innovation very broad as a “means to introduce changes and new ideas” and originally concerned *novelties* in the broadest sense of the word – including imitation, invention, change - it is nowadays self-evidently understood as *commercialization* of new *technological* inventions (Godin 2008; Blok and Lemmens 2015; Schomberg and Blok 2018). This becomes clear for instance in management and economics of innovation textbooks. In these textbooks, innovation is for instance defined as “the first commercial application or production of a new process or product” (Freeman and Soete 1997: 1). And although the innovation management literature acknowledges that innovation can also take place in new services, it self-evidently associates innovation with a *technological* invention –

the technology behind facebook's or amazon's services – which enables the company to provide new services like social media and online bookstores:

“Hence innovation embraces both a technological and a creative dimension, that we normally refer to as invention, together with a commercial dimension that involves the exploitation of the invention to turn it from a model or prototype into something that is available in the market for consumers to purchase. This latter aspect is much less heroic and less glamorous than invention, but it is crucial. Without it an invention is little more than a great idea, and all too often this is an element of innovation that is neglected, with disappointed consumers the result. Only when both aspects have been effectively handled does one have an innovation” (Smith 2006: 6).

Even if we accept the ‘innovation imperative’ that is thought in engineering and business schools (Bessant and Tidd 2007), and even if we embrace the OECD's and the European Commission's definition in the *Oslo Manual* - “the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations” (OECD 2005) - it remains unclear what are the philosophical underpinnings of this notion of innovation in contrast to related terms like ‘invention’ and ‘imitation’, and why innovation is self-evidently associated with commercialization and technology.

While researchers in the domain of engineering ethics and Science and Technology Studies (STS) primarily focus on the governance of the outcomes of innovation and the engagement of stakeholders during the innovation process, we reflect on the nature of innovation in general and the presupposed techno-economic paradigm of innovation in particular in this chapter, in order to contribute to the development of a philosophy of innovation.

To this end, it seems to be a logical step to consult literature in the domain of philosophy of technology and to apply it in the context of innovation. Surprisingly enough, however, philosophers of technology do not seem to be interested at all in the notion of innovation. Classical philosophers of technology like Martin Heidegger and Gilbert Simondon never reflected on the notion of innovation, and also contemporary philosophers of technology like Don Ihde and Peter-Paul Verbeek use the term sporadically and only in connection with technology (Ihde 1979; 1990; Verbeek 2005; 2011). And yet, there is sufficient reason to dissociate innovation from technology. While for Heidegger for instance,

technology is associated with a type of knowledge – a *sich-auskennen* or “know-how in taking care, manipulating and producing” (Heidegger 1979: 16) – and contrasted with the instrumental and anthropological conceptualizations of technology (Heidegger 1977), innovations like the internet of the combustion engine can be associated with the un-known, with what we don’t have know-how of and are unfamiliar with because it concerns something *new* to the world. While for Simondon for instance, economic considerations do not intervene directly in technology (Simondon 2017: 76), innovation seems to be inseparable from economy. And while Simondon focusses mainly on the invention as *creation* and evolution of a new object or idea, innovation can also be connected with the first *adoption* of this new object (cf. Bontems 2014), or the whole process from creation to market adoption. There seems to be therefore sufficient reason to suspend our self-evident association of technology and innovation, and to philosophically reflect on the notion of innovation itself.

Philosophical reflection on basic concepts like innovation is important, because these basic concepts structure the way we understand the world around us. If I for instance understand innovation as technological innovation which is primarily executed by engineers, than I miss the whole potential of contemporary phenomena that is associated with social innovation, as well as the part of the innovation process that can be associated with the diffusion of innovations. Philosophical reflection on innovation can also help to assess whether phenomena fall under the concept or not, for instance new developments in R&D like *bio-mimetic* technologies that imitate natural processes in technological design (Blok and Gremmen, 2016). Finally, philosophical reflection can help to develop a critical attitude towards the self-evident use of the concept of innovation, to highlight contradictions and tensions in its use, and to raise questions regarding the limitations of its use and the conditions of *responsible* innovation. Is innovation good *per se*, or should we reflect on its consequences in relation to the problems it intends to solve, the risks involved as well as the potential negative side effects?

The relevance of philosophical reflection on the concept of innovation even becomes more urgent when it becomes an emblematic notion that characterizes our time. Why did innovation become so important by the end of the 20th century that it became emblematic? Why is innovation self-evidently associated with technology and commercialization and is this necessarily the case? What does it mean that the ideal of innovation is extended to all aspects of social life, ranging from innovation in healthcare to innovation in politics? To what

extent can innovation be understood as a fundamental category of human existence and the world in which we live? Shouldn't we in the end ask: *why* innovation?

One way to open up the concept of innovation for philosophical reflection is by tracing the different meanings it has in history. In this, our main objective is not yet to compare innovation and technology, but to reflect in the nature of innovation from a historical perspective. Historical analysis can help to question the self-evidence of the association of innovation and technology and commercialation, to deconstruct the taken voor granted concept that always already structurizes our understanding of the world, and to explore the sedimentary conceptual structures which show themselves in the words and notions we self-evidently use in our dealings with the world (Blok 2019). In this, we are indepted to the valuable work by Benoit Godin who wrote an intellectual history of the concept of innovation (2008; 2015). While his main contribution can be seen in the domain of the history of science and technology without the ambition to *theorize* about the concept (Godin 2015: 4), our objective in this chapter is precisely to philosophically reflect on the sources his studies brought forth.

References:

- Bessant, J., Tidd, J. (2007) *Innovation and Entrepreneurship*. West Sussex: Wiley.
- Blok, V., (2019) “Radical Philosophy: Heidegger’s Phenomenology of the theoretical attitude of philosophy”. *Heidegger Studies* (forthcoming).
- Blok, V., Lemmens, P. (2015) “The emerging concepts of responsible innovation. Three reasons why it is questionable and calls for a radical Transformation of the concept of innovation”. In B. Koops, I. Oosterlaken, J. van den Hoven, H. Romijn, and T. Swierstra (Eds.), *Responsible innovation 2: Concepts, approaches, and applications*. Dordrecht: Springer International Publishing: 19–35.
- Blok, V., Gremmen, B. (2016) “Ecological Innovation: Biomimicry as a New way of thinking and acting ecologically”. *Journal of Agricultural and Environmental Ethics* 29(2): 203-217 (DOI:10.1007/s10806-015-9596-1).
- Bontems, V.K. (2014) “What does Innovation Stand for? Review of a Watchword in research policies”. *Journal of Innovation Economics and Management* 3: 39-57.
- Christensen, C.M. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Cambridge: Harvard Business Review Press
- Edquist, C. (2005) “Systems of Innovation: Perspectives and challenges”. In: Fagerberg, J., Mowery, D., Nelson, R. (Eds), *The Oxford Handbook of Innovation*, Oxford: Oxford university press.
- European Commission (2010) *Europe 2020. Flagship Innovative Innovation Union*. Brussels: EU (cited from https://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication-brochure_en.pdf (last Accessed 15-2-2018)).
- European Commission (2017) *Why do we need an Innovation Union?* Brussels: EU (cited from http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=why (last Accessed 15-10-2017)).
- Freeman, C., Soete, L. (1997) *The Economics of Industrial Innovation*. London: Continuum.
- Godin, B. (2008) “Innovation: the history of a category” (*working paper no. 1*).
- Godin, B. (2015) *Innovation Contested. The Idea of Innovation over the Centuries*. New York: Routledge.

- Heidegger, M. (1977) *The Question concerning technology and other essays*. New York: Garland Publishing.
- Heidegger, M. (1997) *Plato's Sophistes*. Indiana: Indiana University Press.
- Ihde, D. (1979) *Technics and Praxis. A Philosophy of Technology*. Dordrecht: Springer.
- Ihde, D. (1990) *Technology and the Lifeworld. From Garden to Earth*. Indiana: Indiana University Press.
- Moussavi1, A., Kermanshah, A. (2018) "Innovation Systems Approach: a Philosophical Appraisal" *Philosophy of Management* 17:59–7
- Published online: 25 September 2017 # Springer International Publishing AG 2017
- Nowotny, H. (2006) "The Quest for Innovation and Cultures of Innovation", in H. Nowotny (Ed.) *Cultures of Technology and the Quest for Innovation*. New York: Berghan Books: 1-38.
- OECD (2005) *Oslo Manua. Guidelines for Collecting and Interpreting Innovation Data (third edition)*. Paris/Brussels, OECD/EC.
- OECD (2010) *Innovation and the Development Agenda*. Paris, OECD.
- Rogers, E.M. (1976) "Where are we in the understanding of diffusion of Innovations?" In W. Schramm and D. Lerner (Eds.), *Communication and Change: The last ten years – and the next*. Honolulu: University Press of Hawaii: 204-222.
- Schomberg, L. von, Blok, V. (2018) "The turbulent age of innovation. Questioning the nature of innovation in responsible research & innovation", *Synthese* (??)
- Schumpeter, J. (1939) *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*. New York: McGraw-Hill.
- Schumpeter, J. (1943) *Capitalism, Socialism and Democracy*. London: Routledge
- Schumpeter, J. (1983) *The theory of economic development*. Transaction Publishers: New Brunswick.
- Simondon, G. (2017) *On the Mode of Existence of Technical Objects*. Minneapolis: Univocal Publishing.
- Smith, D. (2006) *Exploring Innovation*. Berkshire: McGraw-Hill Higher Education
- Verbeek, P.P. (2005) *What things do. Philosophical Reflections on Technology, Agency and Design*. Pennsylvania: Pennsylvania State University Press
- Verbeek, P.P. (2011) *Moralizing Technology. Understanding and Designing the Morality of Things*. Chicago: The University of Chicago Press