

FUNCTIONAL CHANGE OF PATENTS IN PUBLIC BASIC SCIENCE

1 Background

The following abstract presents central results of my doctoral thesis on “Motives and Functions of Patenting in Public Basic Science”, which empirically analyses scientists’ perception of patents, the resulting patenting motives, and the emerging contextual functions of patents, using a qualitative case study methodology oriented on the Ostrom tradition of institutional analysis.

2 Research Objectives

- a.) Develop a descriptive, value-free definition of patent *functions*
- b.) Apply it on empirical findings on limited regulatory efficacy and strategic patenting in public basic science

3 Methodology

The conceptual and theoretical work mainly draws on DRAHOS 2016 and OSTROM 2005. Illustrative results are based on the qualitative analysis of ca. 40 semi-structured interviews with inventors and TT-experts in German Public Basic Science.

4 Abstract

In public basic science, the role of patents emerges in a polycentric regulatory overlap of patent law, research policy and academic self-regulation. Patent Law constitutes the patent system, research policy instrumentalizes it for innovation-oriented funding and evaluation of science, and scientists react by developing corresponding patenting strategies: In line with the persisting social norms dedicated to openness (e.g. Mertonian *Communalism*), They persistently ignore prohibitive rights from existing patents, and use own patents often for primary symbolic purposes. Since law, research policy, and academic communities all bring their own (self-)regulatory legitimacy, there is no single regulatory purpose which could be used to evaluate this occurring “refunctioning” and “deproertization” of patents in science. For further analysis, the function of patents understood as their empirical integration and embeddedness in social systems has to be strictly distinguished from any initial regulatory purposes.

4.1 Contextual Patent Functions

Often, the terms “purpose” and “function” of patents are used either interchangeably, or definitionally linked, as intended micro-functions for a macro-purpose. But modern polycentric regulatory systems a) are the product of heterogeneous regulatory purposes, b) can be subject to regulatory captures from private special interest groups, and c) include private ordering as a source of additional meso-levels of regulation (e.g. standartization). In a globalized patent system, single legislatures, epistemic communities or scholars have limited legitimazy to declare its purpose, and even less control over its actual performance. In consequence, this research turns around the direction of reasoning: Patents get their functions in the hand of their users by

getting instrumentalized in reaction to contextually relevant rules, including market structures and social norms. In a separate step, these *functions defined by usage* can be evaluated based on the purposes of contextually relevant regulators.

4.2 Symbolic Patenting in Science

From their public funding sources, basic scientists are facing incentives and expectations to increase their contribution to knowledge and technology transfer (KTT) as the “third mission” of public science. Patents become prerequisites to access translational funding, and are used as performance indicators for evaluation. In reaction, scientists instrumentalize patents in their CVs and evaluation reports as symbols to signal compliance with external expectations, independently of any plans for exploitation. Evaluating instances of this *symbolic function* is ambivalent: While patents change from a property right into a certificate, which is not in line with traditional purposes of the patent system, this certificate can foster Innovation by rendering the Inventor and his tacit knowledge into a unit of knowledge and technology transfer.

References

- BLACK, J. (2008). “Constructing and Contesting Legitimacy and Accountability in Polycentric Regulatory Regimes”. In: *Regulation & Governance* 2.2.
- BURK, D. L. (2016). “On the Sociology of Patenting”. In: *Minn. L. Rev.* 101.
- DRAHOS, P. (2016). *A Philosophy of Intellectual Property*. ANU eText.
- DRAHOS, P. and J. BRAITHWAITE (2002). *Information Feudalism: Who Owns the Knowledge Economy?* Earthscan.
- DRAHOS, P. and M. KRYGIER (2017). “Regulation, Institutions and Networks”. In: *Regulatory Theory: Foundations and Applications*. Ed. by PETER DRAHOS. ANU Press.
- ETZKOWITZ, H. and L. LEYDESDORFF (2000). “The Dynamics of Innovation: From National Systems and “Mode 2” to a Triple Helix of University–Industry–Government Relations”. In: *Research policy* 29.2.
- FRISCHMANN, B. M., M. J. MADISON, and K. J. STRANDBURG, eds. (2014). *Governing Knowledge Commons*. Oxford University Press.
- HILTY, R. M. and T. JAEGER, eds. (2018). *Europäisches Immaterialgüterrecht: Funktionen Und Perspektiven*. MPI Studies on Intellectual Property and Competition Law. Berlin Heidelberg: Springer-Verlag.
- MOWERY, D. et al. (2015). *Ivory Tower and Industrial Innovation: University-Industry Technology Transfer Before and After the Bayh-Dole Act*. Stanford University Press.
- OSTROM, E. (2005). *Understanding Institutional Diversity*. Princeton: Princeton University Press.
- OVERWALLE, G. van and E. V. ZIMMEREN (2009). “Functions and Limits of Patent Law”. In: *Facing the Limits of the Law*. Springer, Berlin, Heidelberg.
- ULLRICH, H. (2012). “Intellectual Property: Exclusive Rights for a Purpose–The Case of Technology Protection by Patents and Copyright”. In: *MPI IP Research Paper* 13.01.