Darüber hinaus diskutiert der Beitrag von Alkemeyer die Öffnung kontrollierter Funktionsräume des Sports als mögliche Labortypen: Raus aus dem Hochleistungssport, in dem die Leistungsfähigkeit des Körpers vermessen und neu ausgelotet wird, hinein in die Stadt als Experimentierfeld, wobei nun auch Aspekten wie „Ästhetik und Stil" eine wichtige Bedeutung zukommt.

Im letzten Teil werden urbane Räume als „Laboratorien der Moderne" sowie die Rolle von Planungsprozessen in den Blick genommen. Nach Etzemüller fließen in städtischen Laboren „‚Wissenschaft' und ‚Soziales' prozesshaft ineinander" (S. 269). In diesem Sinne stellt der Autor die Frage, ob Entwurf, Konstruktion und das urbane Zusammenleben Brasilias als Experiment bezeichnet werden können. Karow-Kluge greift in ihrem Beitrag den Spagat zwischen „Planung und Eigensinn" im städtischen Kontext auf. Dabei skizziert sie nicht nur den Wandel des Planungsverständnisses und geht auf Herausforderungen wie den Umgang mit Unsicherheiten ein, sondern knüpft auch an die einführenden Gedanken des Buches zu Akteuren und Betroffenen an: „In der Stadt von morgen regeln und planen die Verantwortlichen in der Stadtverwaltung nicht mehr, was Architekten dann entwerfen und umsetzen. Ihre Aufgabe ist es vielmehr, Möglichkeiten und Potenziale zu identifizieren." (S. 304) Die Wissensgesellschaft initiiert also selbst Experimente und ist Teil des eigenen Forschungsprozesses. Dies gilt sowohl für urbane Reallabore, in denen beispielsweise Maßnahmen zum Klimaschutz erprobt werden (Reusswig und Lass), als auch über Stadtgrenzen hinaus (Selke).

Fazit

Aufgrund der im Sammelband behandelten Akteure und der damit einhergehenden Fragestellungen zu Machtverhältnissen ist das Werk insbesondere für Vertreter*innen der partizipativen und diskursiven Technikfolgenabschätzung (TA) interessant. Des Weiteren wird auf aktuelle (teils in der Gesellschaft kontrovers diskutierte) soziotechnische Entwicklungen eingegangen, wie *Smart Grid, Climate Engineering* oder die Vermessung des menschlichen Körpers zur Steigerung der Leistungsfähigkeit. Nicht zuletzt bietet das Buch einen breiten Überblick über die unterschiedlichen Verständnisse des Experimentbegriffs. Darüber hinaus richtet sich das Werk auch an Entscheider*innen aus der Wissensgesellschaft, da derzeit Begrifflichkeiten wie „Experiment" oder „Labor" in vielfältiger Weise adaptiert werden und der Umgang mit Risiken sowie mit Nichtwissen nicht nur im Zuge von Infrastrukturprojekten öffentlich diskutiert wird.

Der Rezensent regt an, vor diesem Hintergrund auch das Experimentierfeld „Öffentliche Verwaltung" zu betrachten, wo rechtliche Normen auf dynamische Transformationsprozesse der Wissensgesellschaft treffen, z. B. bei der Digitalisierung. Ein zusammenfassendes Schlusskapitel der Herausgeber wäre wünschenswert gewesen. Davon abgesehen bieten die einzelnen Beiträge auf gelungene Weise Raum für die vielfältigen Sichtweisen der Autor*innen, ohne die Rolle des Experiments in der Wissensgesellschaft aus dem Blick zu verlieren.

REPORT

RRI in Industry

Synthesis report on the stakeholder dialogues of the PRISMA project

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"In the end, we do not want to just win trust, we want to do the right thing as well," said a participant from industry in one of the four stakeholder dialogues organized by the PRISMA project between May 2017 and February 2018. PRISMA's central aim is to anticipate relevant social and ethical issues as well as values related to innovation and integrate them into the design process from the very beginning. This process aims to create more value for users and society. Thus, PRISMA's central question is: how can companies develop strategies and employ tools to make their innovation processes more responsible? This report summarizes outcomes from past workshops in order to shed light on the discussion about how to further implement responsible research and innovation (RRI) in industry. The Rome Declaration on RRI in Europe defines RRI as an "on-going process of aligning research and innovation to the values, needs and expectations of society" (European Union 2014); RRI thus presents the framework for ethically acceptable and socially desirable research and innovation. Within this framework, the research and innovation process should meet such criteria as being anticipatory, reflective, deliberative, and responsive.

Despite the diversity of literature on RRI and the fact that academia and policy makers tend to apply the concept, industry does not seem to recognize it in the same way. As the workshops showed, one way to bridge this gap may be to relate RRI to already existing concepts in industry, such as corporate social responsibility (CSR). CSR is well established in the business world; and being defined as "the responsibility of enterprises for their impacts on society" (European Commission, 2011), RRI can be included in the scope of CSR and to some extent complement it.

So far, few companies have developed an explicit RRI strategy. The PRISMA project addresses this lack by implementing action plans (pilots) for responsible innovation strategies in

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cooperation with eight companies (private firms and public-private partnerships). The pilots, developed by industry with support from the project consortium, seek to identify aspects in product development where RRI should be applied, the necessary tools to be used, stakeholder dialogue strategies, etc.

PRISMA's aim is to compare the development of RRI strategies and the deployment of RRI tools in order to create a conceptual framework (roadmap) for responsible innovation in industry (van de Poel et al. 2017). Several technological fields, identified as transformative technologies, will be included in the pilots, namely synthetic biology, nanotechnology, autonomous vehicles (cars and drones), and the Internet of Things.

Fig. 1: Exercise to create a benchmark for the pilots KPIs at the 1st Stakeholder Dialogue Workshop (13. 04. 2017, Brussels). *Source: PRISMA project*

One of the main tasks of the project is to carry out stakeholder dialogues between relevant RRI actors. Coordination and networking among the various stakeholders is not only important for developing robust RRI methods and tools but also for exchanging best practices and further developing the foundations of RRI. The PRISMA stakeholder dialogues aimed at facilitating debate amongst participants from research, industry, policy, and civil society representatives, and at comparing and discussing practical experiences and approaches concerning the take-up and further development of RRI principles and procedures by industrial research and innovation actors. From a total of five stakeholder dialogues, four have already taken place, addressing questions such as:

- How to develop responsible innovation that takes into account societal needs and could find broad consensus within society? Which principles and tools could be most effective?
- What are the opportunities, challenges, and costs resulting from the adoption of RRI principles? What are the possible economic consequences for industry of RRI adoption (or non-adoption)?
- Which activities can be undertaken to integrate RRI along the entire R & I value chain?
- Are RRI practices – such as stakeholder engagement, open access, transparency, and participatory or value-sensitive product design – suitable and of interest to companies?
- How to involve stakeholders?
- Are there common models for implementation at industrial level or should a case-by-case approach be pursued?

The (un)clear added value of RRI

Workshop discussions showed that sometimes the concept of RRI is just a new way to define already existing or implemented practices in companies. Participants from industry therefore expressed their wish to use a more interpretative and flexible understanding of RRI. In this way, RRI could be tailored to their specific needs, comparable to other concepts such as CSR. Nevertheless, industry participants also consider RRI an attractive concept to communicate benefits and risks of technology development, i. e., going beyond usual practices of promoting a technology approach to the end user. When it comes to adopting RRI in practice, however, both non-business stakeholders and participants from industry agreed that companies lack awareness and understanding of RRI, sometimes perceiving RRI negatively as "weird" or difficult and especially as a bureaucratic and time-consuming process. In defense of this reproach, some participants from industry underlined the difficulty of finding enough internal resources to engage with RRI activities. Thus, appropriate framework conditions are essential for facilitating RRI in business and industry.

Industry participants also mentioned the difficulties associated with quantifying the (intangible) added value of RRI. Several stakeholders from industry stated that internal communication processes and the provision of concrete data might help convince the board of directors that RRI will benefit their company. PRISMA suggests that the use of key performance indicators (KPIs) or other payoff demonstrations would be a plausible solution.

Implementing practices for stakeholder engagement along the R & I value chain

Throughout the PRISMA workshops, non-industry participants suggested that technology developers should open up their innovation process to the potential end users. On the one hand, they provide new ideas for innovations, and, on the other hand, their involvement in early stages of the innovation processes can give valuable feedback on the practicability and acceptability of the

technology. However, for industry participants there remained the crucial question of how to identify an appropriate set of stakeholders and how to determine at which stage precisely such exchanges are useful. All participants agreed that incentives are needed not only for the companies but also for the stakeholders, since it is not easy to motivate civil society or policy makers to participate.

Several discussions focused on companies' need to invest more in training and capacity building in order to complement the development or provision of RRI tools. Providing employees involved in innovation processes with necessary and useful knowledge about RRI practices will allow them to take a critical stance on their work, to identify RRI issues at stake, and most importantly to understand how to choose and use the tools.

PRISMA outcomes

Industry perceives RRI as an opportunity to increase responsibility through knowledge about social and ethical aspects of their innovations. The PRISMA stakeholder dialogue events were of extreme importance to the companies, amongst other reasons because they allowed them to present their activities to a new set of stakeholders. Thus, the pilots running in the PRISMA project are enhanced by the inclusion of non-industry stakeholders, offering important insights into how innovation processes can work. An integrated roadmap summarizing the workshop outcomes will be presented and discussed in the final PRISMA stakeholder dialogue in Milan, 30–31 October 2018. The roadmap will help industries to implement RRI in their innovation processes as part of their CSR policy in order to deal with uncertain and sometimes partly unknown risks and public and ethical concerns of transformative technologies.

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Further information

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BERICHT

Zukünfte der Biomedizinpolitik

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Technologische Innovationen, wie die Präimplantationsdiagnostik (PID) oder die CRISPR/Cas-Methode, scheinen ein neues Zeitalter der Biomedizin einzuleiten. Verschwimmende Grenzen zwischen Erwünschtem und Unerwünschtem, Gesundheit und Krankheit, Natur und Technik reflektierte die interdisziplinäre Fachtagung „Neues aus Biopolis? – Die Politik der Biomedizin. Theoretische Reflexionen und empirische Annäherungen". Sie wurde vom 2. bis 3. November 2017 an der Universität Duisburg-Essen von der Themengruppe „Konstruktivistische Theorien der Politik" der Deutschen Vereinigung für Politikwissenschaft (DVPW) organisiert. Die vielfältigen Beiträge der Tagung fragten nach der Gestaltungsfähigkeit der Politik für verbindliche Regeln in der Biomedizin, nach der Wirkmacht konkurrierender Deutungsangebote aus den Wissenschaften sowie nach Hoffnungen und Ängsten, beispielsweise in Bezug auf „Designerbabys".

Was macht einen „gesunden" Menschen aus?

Mit dem Begriff *Biopolis* verwiesen die Veranstalterinnen Helene Gerhards (Universität Duisburg-Essen) und Kathrin Braun (Universität Hannover) auf vielfältige Definitionen und Deutungen in den Diskursen der Biomedizin und in entstehenden Zukunftsvisionen. Kern all dieser Diskurse ist der Lebensbegriff, der im Spannungsverhältnis von Verbesserung, Schutz, Menschenwürde und Forschungsfreiheit steht. Als Maßstab für „das gute Leben" gelten häufig umstrittene Normen und Definitionen von Gesundheit und Krankheit. Mit Definitionsmöglichkeiten des Krankheitsbegriffes beschäftigte sich Hendrik Schnitzer (Universität München) indem er Unterschiede zwischen naturalistischer und normativistischer Herangehensweise darstellte: Während im Naturalismus die Unterscheidung von „krank" und „gesund" (beziehungsweise „normal" und „pathologisch") deskriptiv durch quantifizierbare Verfahren geschehe, komme der Beobachtung von gesellschaftlichen Normen im Normativismus

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