AI & Society

Journal of Knowledge, Culture and Communication

Special issue on: Drones, robots and perceived autonomy: implications for living human beings

Call for papers

We invite contributions to a Special Issue on Drones, robots and perceived autonomy, to be published by the AI & Society Journal of Culture, Knowledge and Communication (Springer) http://link.springer.com/journal/146.

This special issue arises from ongoing research on drones at the University of Southern Denmark's (SDU). One project explores organizational barriers to drone technology in a utility company and the second uses micro-sociological insights to aid developers, businesses and regulatory agencies to evaluate the technical and social functionality of drones. Although both projects focus on the practical aspects of drone-technology, they have led us to focus attention on the gap between technical aspects of drones and how they are perceived. In this sense drones and robots have much in common beyond the fact that both have much to contribute to workplace practices.

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SPECIAL ISSUE THEMES
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The Special Issue pursues how the perceived autonomy of drones and robots influence living human beings. In its "classical" sense, 'autonomy' is used to drive technological advance and, thus, invites researchers to trace life and intelligent behaviour to how systems self-maintain. Although living autonomy can be ascribed to what Maturana and Varela (1981) term 'autopoiesis', working drones and robots lack such autonomy. For example, while drones are objectively open, non-autonomous systems, when observed in social situations, they can be perceived as at least partly autonomous (see, for example, Kim et al. (2016)).

Following Lindeman and colleagues (2016), we turn from treating human-machine relations as "idealized one-on-one interactions to focus on the "incorporation of autonomous robots [and other machines] into everyday practices." However, rather than treat autonomy as a measure for technical systems (cf. Haselager 2015), the Special Issue focuses on how human attributions and perceptions of autonomy affect the use of such machines.

By contrasting appeals to *actual autonomy* with the effects of *perceived autonomy*, the Special Issue explores, first, how user-controlled systems bring out socio-cognitive and organizational effects. Second, we aim pursue the concerns of the engineer by considering implications for the design and use of robots, drones and other intelligent systems. Third, we ask what, if anything, is gained from the concept of *perceived autonomy*. In so doing, we draw on a human perspective to address how user-controlled devices impact on individuals, organisations and social situations.

We focus on the following questions:
1.   In what sense are drones, robots and similar user-controlled devices 'autonomous'?
2.   How do human perceptions of autonomy impinge on organizational, social and individual experience and action?
3.   In a world where such devices have increasing practical importance, how shall we conceptualise their and our roles as actors (and entities) and its implications for designers of such machines?

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CONTRIBUTION TYPES
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We welcome contributions across two formats:
- Original Papers: Contributions may be experimental, based on case studies, or conceptual discussions of how autonomous systems –and perceptions of autonomy –affect organisations, society and human agency. To connect up with issues of experience, work and society, contributors are expected to view drones and/or robots either as cognitive resources and/or with respect to observable effects on culture, practices and human life as well as mentality. All papers are double blind peer-reviewed by two referees and the editorial team.

- Open Forum contributions: may come from graduate students, researchers, practitioners and others interested in the topics of the special issue. Contributions might be, but not limited to, discussion papers, literature reviews, case studies, working papers, features, and articles on emerging research. Papers published in the open forum target a broad audience i.e. academics, designers as well as the average reader. Open Forum contributions will be double blind peer-reviewed by one reviewer and the editorial team.

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ABOUT THE AI & SOCIETY JOURNAL
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AI & Society is an International Journal which publishes refereed scholarly articles, position papers, debates, short communications and reviews. Established in 1987, the journal focuses on the issues of policy, design, applications of information, communications and new media technologies, with a particular emphasis on cultural, social, cognitive, economic, ethical and philosophical implications. AI & Society is broad based and strongly interdisciplinary. It provides an international forum for 'over the horizon' analysis of the gaps and possibilities of rapidly evolving 'knowledge society', with a humanistic vision of society, culture and technology.

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IMPORTANT DATES
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- Abstract submission: Dec 31, 2018
- Manuscript submission: July 31, 2019
- Notifications: October 31, 2019
- Submission final versions: February 28, 2020
- Target publication date: August 2020
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SUBMISSION FORMATTING
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Contributors are asked to submit a paper between 10 and 25 pages in the AI & Society's manuscript format. You can find more information about formatting under the section "Instructions for
Authors" http://www.springer.com/computer/ai/journal/146.
For inquiries and to submit your abstract and manuscript, please contact: rga@sdu.dk
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SPECIAL ISSUE EDITORS
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Rasmus Gahrn-Andersen's research interests include human-technology interaction, phenomenology, distributed cognition and social organizing. His Ph.D.-thesis outlines a theory about social organizing based on an epistemologically clarified phenomenological outset as well as a critique of the analytical concept of context. He is currently working on how drones affect organizational routines and outcomes, and, further, has recently edited (together with Stephen J. Cowley) a special issue of Language Sciences on the neurophysiological concept of simplexity.

Stephen J. Cowley, is Professor of Organizational Cognition at the University of Southern Denmark. He co-founded the Distributed Language Group and is a leading figure in the International Society for the Study of Interactivity, Language and Cognition. His research has focused on many forms of interaction –how adults use prosody, together and with babies; social robotics, health-care, peer-review and recently with drones. Together with Frédéric Vallée-Tourangeau, Stephen recently edited the second edition of Cognition Beyond the Brain: Computation, Interactivity and Human Artifice.

On perceived autonomy

We aim to build on Lindeman et al.'s (2016) *AI and Society*-special issue on robotic autonomy. Like Lindeman and colleagues, we turn from treating human-machine relations as "idealized one-on-one interactions to focus on the "incorporation of autonomous robots [and other machines] into everyday practices". In so doing, however, Lindeman and colleagues follow many roboticists (e.g. Haselager, 2015) by treating autonomy as a goal for designed systems. In this Special Issue we prefer to focus on how human attributions of autonomy affect the use of such machines. In turning to *perceived autonomy*, we highlight issues that arise in the social and organizational use of 'intelligent' devices.

We start with human experience and, for this reason, contrast technical properties of machines (i.e. the focus of robotics) with perceptions of machines and their functions. The need is clear in studies on human-drone interaction: while drones are objectively open, non-autonomous systems, when observed in social situations, they can be perceived as at least partly autonomous (see, for example, Kim et al. (2016). By contrasting appeals to *actual autonomy* with the effects of *perceived autonomy* we are concerned, in the first place, with tracking how user-controlled systems bring out socio-cognitive and organizational effects. Second, we aim to link our findings to the concerns of the engineer. Third, we ask what, if anything, is gained from recognition of perceived autonomy. In so doing our main aim is to bring a human perspective to the fore in asking how user-controlled devices impact on individuals, organisations and social situations. The special issue will to explore effects on human groups and individuals and consider implications for the design and use of robots, drones and other intelligent systems.

Implications of perceived autonomy can be practical, experiential and ethical. Accordingly, we ask how social encounters are mediated by drones, robots and other user-enabled devices and, equally, how and whether this facilitates and/or impedes their implementation and development. We focus on the following questions:

1. In what sense are drones, robots and similar user-controlled devices 'autonomous'?
2. How do human perceptions of autonomy impinge on organizational, social and individual experience and action?
3. In a world where such devices have increasing practical importance, how shall we conceptualise their and our roles as actors (and entities)? What does this imply for designers and the use of such machines?