



Thursday, February 15, 2018, 6:15–7:45pm

Drone Culture(s): National and International Spaces of Application, Imagination and Regulation of Civil Drones

Workshop

A joint workshop by Collegium Helveticum, Department of Social Anthropology and Cultural Studies at the University of Zurich and the Department of Geography at the University of Neuchâtel



What does it mean to live and work in contemporary Drone Cultures?

Civil drones are popular. They are getting ever cheaper, smaller and more powerful. Due to their mobility and mediality, they are deeply entangled in spatial and power relations. Furthermore, they are symbolically charged Technoscience objects. Widespread notions such as *Drone Age* or *Drone Culture* ascribe an epoch-making quality to (civil) drones and are linked to popular imaginations of innovation, risk, and surveillance. These narratives render drones as fascinating and feared alike.

Drones are an international and somewhat universal techno-cultural phenomenon, yet their application and also their specific meanings are framed to a high extent by national regulation efforts, media discourses and popular culture. Taking the example of Switzerland, a popular discourse on *Drone Swissness* imagines Switzerland in analogy to the iconic Californian *Silicon Valley* as *Drone Valley*—which primarily denotes the start-up ecosystems of the ETH and EPFL. On one hand, Switzerland stands out due to the relatively liberal regulative framework and a vital economic interest in civil drone development and—to a lesser extent—application. On the other hand, studies show a rising skepticism towards the general use of—particularly private and commercial—civil drones among the Swiss population, mainly due to privacy concerns. Furthermore, Swiss air space is already intensively used, which raises additional safety concerns.

The one-day workshop aims at starting a dialogue between the many different perspectives in the field of civil drone research, development, application and regulation in Switzerland and beyond. It wants to draw together national and international as well as practical and theoretical perspectives in order to explore the cultural, political and regulatory issues at stake when professional or everyday lifeworlds are about to ‘enter the *Drone Age*’. How are civil drones entwined in symbolic, material and regulative spaces and how do they alter these spaces? Which eco-

conomic and cultural narratives are invoked by civil drones as ambiguous Technoscience objects? What does it mean to live and work in different *Drone Cultures*?

Thursday, February 15, 2018

09:00

Reception/Coffee

09:30

Welcome & introduction

Maximilian Jablonowski
(UZH) & Francisco Klauser
(UniNe)

10:00

**Power and Space in the
Drone Age**

Silvana Pedrozo & Francisco
Klauser (UniNe)

10:30

**Discovering the Airspace:
Professional Drone Usage in
Switzerland**

Dennis Pauschinger (UniNe)

11:00

Coffee Break

11:30

**Popular Drone Stories: An
Anthropology of the Con-
temporary in the Drone Age**

Maximilian Jablonowski
(UZH)

12:00

**Law Enforcement Drones
and Surveillance of Public
Space**

Aleš Završnik (Inštitut za
kriminologijo Ljubljana/Col-
legium Helveticum)

12:30

Lunch Break

14:00

**Processing of Personal Data
by means of Drones and
the Enforcement of Data
Protection Rights**

David Henseler (UZH)

14:30

**Civil-Law Liability for Auton-
omous Drones**

Silvio Hänsenberger (HSG)

15:00

Coffee Break

15:30

**U-Space: Unlocking the Full
Potential of Commercial
Drones**

Benoit Curdy (GUTMA, xPres-
sion)

16:00

**Copter Communication -
Perspectives for Journalism
Practice, Education, and
Research**

Max Ruppert (HdM Stuttgart)

16:30

Open Discussion

17:45

Break

18:15

**Zivile Drohnen in der
Schweiz: Anwendungen,
Regulierungen und Imagi-
nationen einer technischen
Innovation**

Public Round Table Discus-
sion (in German language)
with Maximilian Jablonowski
(UZH),
Francisco Klauser (UniNe),
Marcel Kägi (BAZL),
N.N. (Stadtpolizei Zürich)

19:45

Dinner

Benoit Curdy is Secretary General at the Global UTM As-
sociation (GUTMA), a non-profit consortium of worldwide
Unmanned Aircraft Systems Traffic Management (UTM) stake-
holders, and co-founder of xPression Ltd., which provides
independent intelligence and analysis on the unmanned
aircraft systems industry (drones) to corporations and gov-
ernments.

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Silvio Hänsenberger (M.A. HSG in law and economics) was
manager of the profil area “Business Enterprise – Law,
Innovation and Risk” at the University of St. Gallen as well
as co-organizer of international conferences such as “Risk,
Responsibility and Liability in the Protection of Critical In-
frastructures” (2014) and “The Man and the Machine – When
Systems Take Decisions Autonomously” (2015). At the mo-
ment he conducts research at the Research Institute for Work
and Employment Research (FAA-HSG) at the University of St.
Gallen focusing on the impact of new technologies on labour.
At the same time he writes a dissertation about autonomous
drones and works in a law office in St. Gallen.

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David Henseler studied law at the University of Fribourg and
the Center for Transnational Legal Studies (CTLS) in London.
He received his Master of Law degree in summer 2014. After
interning at a major Swiss bank, a commercial law firm in
Zurich and a court of appeals in Lucerne, he passed the bar
exam in November 2016. Since December 2016 David Henseler
works as a research and teaching assistant at the University
of Zurich. In his PhD thesis, he focuses on drones and data
protection.

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Maximilian Jablonowski graduated in cultural anthropolo-
gy, literary studies, and political science at the University of
Marburg. He is currently working as a research and teaching
assistant in the Department of Social Anthropology and

Cultural Studies at the University of Zurich, where he also is a PhD candidate. His fields of research comprise Science and Technology Studies, where he is particularly interested in drones, gun culture, Science Fiction and imaginations of technological futures in general, and Visual Anthropology with a focus on digital audiovisual media practices and arts.
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Francisco Klauser is professor in political geography at Neuchâtel University and currently acts as the coordinator of the SNF project “Power and Space in the Drone Age”. His work bridges the academic fields of human geography, surveillance studies and risk research.
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Dennis Pauschinger is currently a post-doc at the Institute of Geography at Neuchâtel University in the Swiss National Science Foundation project ‘Power and Space in the Drone Age’. Before that Dennis was a fellow in the EU Erasmus+ programme ‘Doctorate in Cultural and Global Criminology’ and wrote his PhD about global security models associated with sport mega-events and how they impacted on established security conditions during the 2014 World Cup and the 2016 Olympics in Rio de Janeiro.
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Silvana Pedrozo is a PhD student in the SNF project “Power and Space in the Drone Age” at Neuchâtel University. Her research concentrates on aerial and mobile surveillance and on related security issues, with a special focus on military and police drones in border and urban areas.
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Max Ruppert works as a researcher and lecturer in the Department of electronic media at Stuttgart Media University. In 2013, he founded the blog www.volledrohnung.de on Copter Communication (Drone Journalism). He is particularly interested in qualitative research methods, user experience

research and copter communication in journalism and media production. He has ten years of experience as a journalist for TV, radio and online media.
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Aleš Završnik, Doctor of Law (LL.D.), is the EURIAS Junior Fellow 2017/18 at the Collegium Helveticum in Zurich, and the Senior Research Fellow at the Institute of Criminology at the Faculty of Law in Ljubljana and Associate Professor at the Faculty of Law University of Ljubljana. He has extensively researched and published on crime and technology, cyber-crime, IT law, surveillance, and social harms of technology. Latest publications *Big Data, Crime and Social Control* (Routledge, 2017), *Drones and Unmanned Aerial systems: Legal and Social Implications for Security and Surveillance* (Springer, 2016). He organised the international scientific conference “Spy in Sky: Regulatory Issues of Drones and Unmanned Aerial Systems” (Ljubljana, 23-24 May 2013).
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Silvana Pedrozo & Francisco Klauser (UniNe)

Power and Space in the Drone Age

First, the presentation outlines the social-scientific research approach pursued at Neuchâtel University in the study of civil drones. It is argued that a distinct “spatial curiosity” and “power sensitivity” are required if we are to investigate and question the evolutions, functioning and implications of civil drones in the present-day world. Secondly, the presentation highlights a series of select results from a case study focussing on how military drones in Switzerland change the border guards relationship to the Swiss border area.

Dennis Pauschinger (UniNe)

Discovering the Airspace: Professional Drone Usage in Switzerland

As part of the Swiss National Science Foundation project ‘Power and Space in the Drone Age’ based at the Chair of Political Geography at Neuchâtel University this paper will put forth in empirical detail the results of a quantitative survey amongst public and private professional drone users in Switzerland. The presentation will focus on four main areas: 1) Who uses drones for professional reasons in Switzerland, how, where and why? 2) What are the obstacles, opportunities and risks of professional drone usage? 3) How

do professional drone users assess the existing Swiss drone legislation? 4) What is the anticipated and desired future of professional drone usage in Switzerland? With the survey results, the paper aspires to shed light into the vast plethora of opinions and discussions about professional drone usage, provide a unique knowledge base for policy makers and provoke fruitful discussions within the research field in Switzerland and beyond.

Maximilian Jablonowski (UZH)

Popular Drone Stories: An Anthropology of the Contemporary in the Drone Age

Civil drones are an emergent phenomenon of contemporary Technoscience culture. As such, they resonate with existing socio-technical imaginations, but also engender new ways to reason about and to act upon dispositives of innovation, creativity, and risk. The narrative of an upcoming *Drone Age* even ascribes an epoch-making quality to these changes. Thus, scientific, popular or administrative stories about drones do not only shape the future trajectories of drones, but also the ways we think about society. Drawing on ethnographic research I conducted as part of my PhD-project, I will address the question how civil drones are entangled in the narratives and imaginations of the contemporary.

Aleš Završnik (Inštitut za kriminologijo Ljubljana/Collegium Helveticum)

Law Enforcement Drones and Surveillance of Public Space

Drones are “suitable targets” for resistance to surveillance. Monitoring from the sky seems more inappropriate than other types of omnipresent monitoring, such as surveillance on the internet. However, the legal assessment of the adequacy of police uses of drones is not that straightforward. It varies according to the manifold sensing technologies attached to these flying platforms: drones can be used for targeted monitoring or for non-targeted “mass” surveillance; they can carry audio and video recording devices, or an even subtler IMSI-catcher to indiscriminately harvest telecommunications data; they may cross-reference collected data with data from background databases and in this manner attach to other contemporary “surveillance networks”, such as SIS II or EURODAC. The legal regulation and constitutional acceptability of police drones thus greatly depend on their sensing capacities and purpose of use.

In the presentation I will show the continuum of police usages of drones from targeted to non-targeted and non-specific uses of drones, and focus specifically on the legal hurdles related to monitoring public space. In principle, an individual does not have a reasonable expectation of privacy (subjective-objective test) when in public space, while it is becoming utterly clear that even the surveillance of solely public spaces enable the police to collect and process (sensitive) personal data. This paradox can be overcome with mosaic theory, which builds on the insight that information becomes much more telling about a person when combined with other data. In other words, the whole may be more revealing than the individual parts and aggregated location data may reveal the “substance of life” (cf. *United*

Stated v. Maynard), which the law needs to protect in order to balance the usages of police drones.

David Henseler (UZH)

Processing of Personal Data by means of Drones and the Enforcement of Data Protection Rights

Every person has the right to be protected against the misuse of their personal data. This encompasses a right to informational self-determination. The Federal Act on Data Protection (FADP) contains a right to information, pursuant to which any person may request information from the controller of a data file as to whether data concerning them is being processed. In order to be able to exercise said rights, the person concerned has to know who the controller of the data is. Considering processing of data by means of drones, this aspect can be complicated as most drone pilots are hard to identify.

Authorities in Switzerland therefore have to ensure that the fundamental right to informational self-determination is enforceable. At the moment, the identification of drone users is not easily feasible. Therefore, one aspect of the right to informational self-determination is not (or only to a very limited extent) enforceable in relationships among private persons. But up to now, the Swiss Federal Council has not seen the necessity of additional drone regulations.

I argue that the state has an obligation to protect private persons and their right to informational self-determina-

tion and therefore has to take measures in order to achieve enforceability of the rights under the FADP. This means that the Swiss authorities have to provide means for the identification of persons who process personal data by means of drones. In this presentation, some aspects of a possible “identification process” shall be discussed.

The preeminent solution is a drone registry. But how exactly should it be designed? Should all drones currently in operation be registered ex post? Or should this obligation only apply to drones acquired in the future? Should there be an alternative or additional identification system put in place for those drones that are “already out there”? Who should be responsible for the registration? Should the registration be decentralized (as, e.g., with mobile phones)? As the number of drones flying in Switzerland is rising, the need for enforceable rules regarding processing of personal data by means of drones will increase.

Silvio Hänsenberger (HSG)

Civil-Law Liability for Autonomous Drones

The characteristics and abilities of autonomous drones pose major challenges for liability law, where a distinction is made between fault-based liability and strict liability. A strict liability is an absolute legal responsibility that can be imposed on the liable party without proof of carelessness or fault. In contrast, fault-based liability presupposes negligent or intentional misconduct.

Nowadays, Swiss aviation law covers only personal injury and damage to property on the ground by strict liability. In

these cases the operator is liable. Other damages caused by unmanned aerial vehicles have to be claimed through fault-based liability or product liability. Injured parties are in danger of being left without legal protection in the event of mid-air collisions, as claims for damages cannot be asserted on the basis of erroneous decisions by an algorithm, either through liability for willful or negligent wrongdoing or product liability. The same applies to purely pecuniary loss. The question of liability for willful or negligent wrongdoing arises only if duties of care were violated when using autonomous drones. Such duties of care may ensue from permit and operating regulations.

Currently autonomous flights without the possibility of direct control and beyond a pilot’s field of vision are allowed only with special permits. As international efforts show, such barriers will come down in future. Appropriate licensing and operating regulations will therefore be required. At the same time it will be necessary to extend strict liability under aviation law for unmanned aircraft that are not steered by a pilot to damage in the event of mid-air collisions and to purely pecuniary damage.

Benoit Curdy (GUTMA, xPression)

U-Space: Unlocking the Full Potential of Commercial Drones

The talk will present the latest development of the U-Space concept developed at European level to safely integrate drones in national airspace systems. It will cover the different services of the concept, a review of demonstrators

in Switzerland and in the world, an update on the relevant European regulation as well as an overview of Unmanned Traffic Management (UTM) in the USA and in Japan.

Max Ruppert (HdM Stuttgart)

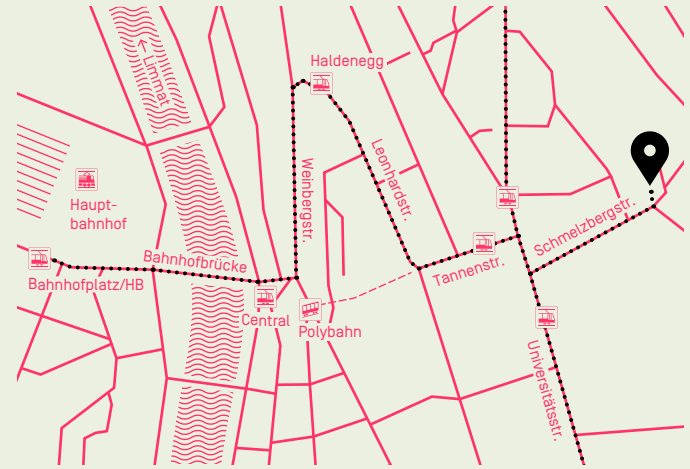
Copter Communication – Perspectives for Journalism Practice, Education, and Research

The use of multicopters in journalism and media production has become standard in recent years. Inspired by the use of camera copters in fictional films, ever more (Web-)TV journalists want to use flying cameras to spice up their material. Although the technology is known and used in nearly every television newsroom in Europe, reflection on and academic engagement with this issue is rather underdeveloped. Also in journalism education, there are only very few examples of dealing with this innovation in journalism. A reason for this could be the very interdisciplinary character of drone-use in the public and for the public. At least three main aspects come inevitably together: 1. technology, which is unknown and poses a barrier for many journalists/journalism students, but also for lecturers; 2. law and ethics, a relatively new and currently emerging field with very few experts; 3. journalistic skills, which have to be developed while doing Copter Communication.

Drawing from experiences made from my blog project *Volledrohnung.de* and from an interdisciplinary workshop format *Copter Communication Camp* in 2014/15, this presentation addresses questions of *drone culture* from a journalistic an-

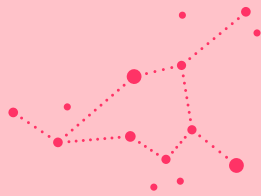
gle: How are copters currently used in journalism and media production? How does the legal situation for journalists look like, after the new legislation on drones in Germany? How can ethics of Copter Communication be developed? What are chances and opportunity areas for innovation for journalism and journalism education/research? Should a specific academic field of *Drone Journalism* should emerge in journalism studies?

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