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Master thesis

2023 **Nils Benjamin Hindrichs**

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Combatants, civilians, activists or journalists? The role-orientation of citizen OSINT investigators in participative warfare in Ukraine

Master Thesis

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Abstract

The 2022 Russian invasion of Ukraine has given rise to an unprecedented scale of so-called citizen OSINT investigations. Private citizens from all over the world, organizing online, use publicly available information and data such as satellite imagery, social media, or flight tracking, to investigate human-rights violations, war crimes, misinformation campaigns and troop movements. But what is their role in a context of participative war? Through seven semi-structured interviews, this thesis explores and maps the role-orientation of citizen OSINT investigators in the context of the war in Ukraine, finding that they specifically value and try to follow self-imposed rules of verification, impartiality and responsibility towards themselves and others. Bringing together specialized skills, knowledge, and routines, the findings also point towards a community that consists of "unprofessional professionals", bringing about a comparative advantage of the citizen OSINT community over legacy media. Moreover, based on the interviews, a typology of four different but intersecting cognitive role-orientations is suggested, contributing to the exploration of a phenomenon that yet needs to be examined academically.

Keywords

OSINT, open-source intelligence, citizen journalism, participative war, journalistic roles, journalistic role-orientation

Abstrakt

Ruská invaze na Ukrajinu v roce 2022 dala podnět k nebývalému rozsahu takzvaných občanských OSINT vyšetřování. Soukromí občané z celého světa, kteří se organizují online, využívají veřejně dostupné informace a data, jako jsou satelitní snímky, sociální média nebo sledování letů, k vyšetřování porušování lidských práv, válečných zločinů, dezinformačních kampaní a pohybů vojsk. Jaká je však jejich role v kontextu participativní války? Tato práce prostřednictvím sedmi polostrukturovaných rozhovorů zkoumá a mapuje orientaci občanských vyšetřovatelů OSINT na roli v kontextu války na Ukrajině a zjišťuje, že si specificky cení a snaží se dodržovat pravidla ověřování, nestrannosti a odpovědnosti vůči sobě i ostatním, která si sami stanovili. Spojením specializovaných dovedností, znalostí a rutinních postupů zjištění rovněž poukazují na komunitu, která se skládá z "neprofesionálních profesionálů", což přináší komparativní výhodu komunity občanů OSINT oproti starším médiím. Na základě rozhovorů je navíc navržena typologie čtyř různých, ale vzájemně se prolínajících kognitivních rolových orientací, což přispívá ke zkoumání fenoménu, který je třeba ještě akademicky prozkoumat.

Klíčová slova

OSINT, zpravodajství s použitím otevřených zdrojů, občanská žurnalistika, participativní válka, novinářské role, orientace na novinářské role

Range of thesis: 68 pages and 132.000 characters

Declaration of Authorship

1. The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.

2. The author hereby declares that all the sources and literature used have been properly cited.

3. The author hereby declares that the thesis has not been used to obtain a different or the same degree.

4. I fully agree to my work being used for study and scientific purposes.

Prague, 01.05.2023 Nils Benjamin Hindrichs

Acknowledgments

I would like to thank my supervisor PhDr. Michal Dimitrov, Ph.D. for his critical and constructive feedback and his helpful thoughts which shaped this thesis throughout the whole process of writing it. In addition, I would like to thank all my interview-partners for sharing their reflections and thoughts on their own role and OSINT activities.

Institute of Communication Studies and Journalism
Approved research proposal

Institute of Communication Studies and Journalism FSV UK
Research proposal for Erasmus Mundus Journalism Diploma Thesis

THIS PART TO BE FILLED BY STUDENT:

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Start of studies for EMJ (in Aarhus): 09/2021

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Thesis title in English: Combatants or journalists? The role-orientation of non-professional open-source intelligence (OSINT) volunteers in participative warfare in Ukraine.

Expected date of submission (semester, academic year – example: *SS 2021/2022*)
(Thesis must be submitted according to the Academic Calendar.) SS 2023 (May 2023)

Main research question (max. 250 characters)**:** What is the role orientation of non-professional Open-Source Intelligence (OSINT) volunteers in participative warfare in Ukraine?

Current state of research on the topic (max. 1800 characters)**:**

During the last decade, open-source actors, investigating and documenting war crimes, verifying eyewitness videos, mapping troops and debunking misinformation have deeply revolutionized the fields of journalism and international conflict. Meanwhile, scholars have started to explore this development. Whereas Ristovska (2022) sheds light on open-source investigations by the Visual Investigations Team of the *New York Times* as a form of conflict-reporting, Müller and Wiik (2021) elucidate implications of the emergence of open-source actors for traditional journalist's role. Belghith, Venkatagiri and Luther (2022), through interviews with 14 expert OSINT investigators from nine different organizations, examine the social dynamics of this community and their patterns collaboration and competition. Cooper and Mutsvairo (2022) shed light on the broader development of citizen journalists and ask whether investigative project *Bellingcat* is revolutionizing conflict journalism.

However, previous studies have mainly focused on the work of (semi)-professional actors while leaving out the role of non-professional OSINT volunteers who conduct investigations in their free time. One exception is the M.A. thesis of Cochrane (2022), who studied the motivation of non-professional open-source intelligence volunteers and their perception of legacy media. There is, however, still a huge blank spot with several open questions to be evaluated. As Cochrane (2022) points out, further research is needed to explore the novel phenomenon of citizen OSINT volunteers in the specific context of a war-related case study. Drawing on a theoretical framework of "radical war" and boundary work, this study aims to contribute to the field of meta-journalistic discourse by investigating the role orientation of non-professional OSINT volunteers in the context of the current war in Ukraine.

Expected theoretical framework (max. 1800 characters):
This study draws on a theoretical framework combining journalism and media studies with the area of war and conflict studies. More specifically, it combines the theory of participative, "radical war" with the meta-journalistic field of boundary work.

Until recently, most scholars analyzed digital technologies primarily as communication tools. However, as Boichak (2021) argues, digital technologies in the context of war do not simply offer new possibilities in perceiving war or conducting military operations. They extend "the battlefronts into the realms of communication and perception, they reconstitute the social conditions shaping people's relationship to wars" (Boichak 2021, p. 512). Digital technologies have created diverse modes of public participation in wars in the 21st century (Ford and Hoskins 2020). Theorizing this new form of participative, "radical war", Hoskins and Ford (2022, p. 12) state that it "is participative in that everyone has the potential to be involved through the data they create". And this has profound implications for the study of war and journalism as it "removes the bystander from war and collapses the relationship between audience and actor, soldier and civilian, media and weapon" (Hoskins and Ford 2022, p. 12). One phenomenon within this "new war ecology" is the mass-scale involvement of non-professional OSINT-volunteers who do not belong to any of the physically direct involved conflict-parties, but participate in the conflict from all over the world in their freetime. Being scarcely studied until now, their poses once more the question of what constitutes journalism, or "acts of journalism" (Stearns 2013), especially in the context of participative war? Do they see themselves as journalists, activists, civilians, or combatants? How do they perceive their own role? What are the norms, ethical considerations, and rules of practice they follow – and what do they imply about their role in participative war?

To shed light on these questions, this thesis will draw on the meta-journalistic field of boundary work that understands journalism as a "variable practice situated within shifting social, economic, and technological contexts" (Carlson 2015). More specifically, it will draw on the concepts of journalistic roles and professionalism (Hanitzsch and Örnebring, 2020; Vos and Hanitzsch, 2017) to explore the blurring boundaries between the participant and the bystander in participative war in the 21st century.

Expected methodology, and methods for data gathering and analysis (max. 1800 characters):

This thesis explores non-professional OSINT volunteers' role-orientation in the context of the 2022 war in Ukraine. More specifically, it will look only at people who do not belong to one of the directly involved conflict parties, so no Ukrainians and Russians will be interviewed. Given the novelty of the research object and the aim of gaining an understanding of the cultural construction of journalism and its boundaries within participative war, it will be an exploratory study using qualitative methods.

Qualitative research using interviews as a primary source seems to be particularly useful as understanding and insight into this field is currently very limited. Therefore, the data will be collected from semi-structured online interviews with 7-10 citizen OSINT volunteers, with the term referring to people who have conducted or participated in at least three OSINT investigations in the context of the 2022 war in Ukraine in their free time, without forming part of an organization and without being paid for it (and without being a citizen of Ukraine or Russia). The study will use convenience sampling, approaching individual non-participant OSINT volunteers via various platforms the OSINT community frequently

uses to organize, conduct and publish investigations, such as Twitter, Discord, LinkedIn and Telegram. The approach of using semi-structured interviews incentivize flexibility in the interview while, at the same time, allowing to focus on the relevant questions (Stokes, 2021).

The interviews will be digitally recorded and will be conducted in English. After being transcribed, the data will be analyzed using a thematic analysis approach (Braun and Clarke, 2006), identifying, coding, and interpreting the key themes in the data to learn more about the role orientation of non-professional OSINT volunteers in participative warfare in Ukraine.

Expected research design (data to be analyzed, for example, the titles of analyzed newspapers and selected time period):

Using semi-structured interview based on convenience sampling, the data to be analyzed will consist of 7-10 interviews with citizen OSINT volunteers.

Expected thesis structure (chapters and subchapters with brief description of their content):

- Abstract
- Introduction
- Context
  - The war in Ukraine
  - The history and development of Open-Source Intelligence and citizen journalism
    - Background information on the use of OSINT in the war in Ukraine and about how digital technologies and the emergence of new forms of non-professional participation have challenged and influenced journalism in the last decade.
- Literature Review
- Theoretical Framework
  - Participative War / Radical War
  - Meta-journalistic Discourse: Boundary Work
  - Professionalism and Role Perception
- Methodology, Methods, Research Design
  - Qualitative research, semi-structured interviews, sampling, data collection, thematic analysis.
- Results
- Discussion
- Conclusion
- Limitations, Challenges and Future Research
- References
- Appendices

Basic literature list (at least 5 most important works related to the topic and the method(s) of analysis; all works should be briefly characterized on 2-5 lines):

- Matthew Ford, Andrew Hoskins (2022): Radical War. Data, attention, and control in the 21st century
    - As digital technologies have profoundly shaped how we perceive and participate in war, Ford and Hosking propose a theoretical framework to understand and map warfare in the 21st century. Their concept, "radical war" suggests that digital technologies have removed the bystander from war, meaning that a clear differentiation between participants and non-participants is not possible anymore. This implies essential questions for the field of Journalism studies.
- Olga Boichak (2021): Digital War: Mediatized Conflicts in Sociological Perspective
    - Boichak maps the emerging field and research questions of the intersection of media sociology and war and conflict studies in the course of digital war, which blurs the boundaries between "military and civilian actors, physical and mediated battlefronts, weapons and witnesses" and, at the same time, afford unprecedented opportunities for remote participation in wars.
- Thomas Hanitzsch, Henrik Örnebring (2020): Professionalism, Professional Identity, and Journalistic Roles
    - In their paper, Hanitzsch and Örnebring present a conceptual framework for studying the concepts of professionalism, professional identity, and journalistic roles. Studying professionalism, therefore, means studying the "system of shared norms, rules, and practices that members of a profession adhere to and live by". They also present journalistic roles and emphasize the importance of bringing different research field into conversation with each other.
- Matt Carlson, Seth C. Lewis (2020): Boundary Work
    - Understanding Journalism as a varied cultural practice embedded within its social context, Carlson and Lewis present a theoretical framework to study the boundaries of Journalism. More specifically, they map out a frame to study participants, practices, and professionalism as well as journalism's expansion, expulsion and protection of autonomy.
- Thomas Hanitzsch & Tim P. Vos (2017): Journalistic Roles and the Struggle Over Institutional Identity: The Discursive Constitution of Journalism: Journalistic Roles and Institutional Identity
    - Hanitzsch and Vos state that a "struggle over discursive authority in conversations about the meaning and role of journalism in society takes place" when journalistic roles are constituted. Within that process, dominant understandings of journalism can be challenged by different forms of journalism, such as citizen journalism. These roles, they conceptualize, "may be studied with regard to normative ideas (what journalists should do), cognitive orientations (what they want to do), professional practice (what journalists really do), and narrated performance (what they say they do)."
- Matt Carlson (2015): Metajournalistic Discourse and the Meanings of Journalism: Definitional Control, Boundary Work, and Legitimation
    - Meta-journalistic discourse is about the question who is a journalist and what is journalism and what is not? Carlson's theoretical model is about the discursive processes that lie beyond our understanding of journalism, understood as a culturally constructed set of practices.

Related theses and dissertations (list of B.A., M.A. and Ph.D. theses defended at Charles University or other academic institutions in the last five years):

- Josie Cochrane (2022): Citizen OSINT Analysists. Motivations of Open-Source Intelligence Volunteers
- Bartoš Vojtěch (2022): Open-source Intelligence in the Czech Media Landscape
- Manisha Ganguly (2022): The Future of Investigative Journalism in the age of automation, Open Source Intelligence (OSINT) and Artificial Intelligence (AI)

Date / Signature of the student: 28.11.2022

THIS PART TO BE FILLED BY THE ACADEMIC SUPERVISOR:

I confirm that I have consulted this research proposal with the author and that the proposal is related to my field of expertise at the Faculty of Social Sciences.

I agree to be the Thesis supervisor.

PhDr. Michal Dimitrov, Ph.D. 28.11.20222

Surname and name of the supervisor **Date / Signature of the supervisor**

Further recommendations related to the topic, structure and methods for analysis:

Further recommendations of literature related to the topic:

The research proposal has to be printed, signed and submitted to the FSV UK registry office (podatelna) in two copies, **by November 15, 2021**, addressed to the Program Coordinator. Accepted research proposals have to be picked up at the Program Coordinator's Office, Mgr. Sandra Štefaniková. The accepted research proposal needs to be included in the hard copy version of the submitted thesis.

RESEARCH PROPOSALS NEED TO BE APPROVED BY THE HEAD OF ERASMUS MUNDUS JOURNALISM PROGRAM.

Contents

Introduction

Over the last two decades, digital activities such as posting, buying, and communicating online have seen an unprecedented rise. In 2022, 213,4 million emails have been sent, 347,200 Tweets have been posted, 1,1 million swipes on Tinder made and 500 hours of video been uploaded – per minute (Domo, 2022). The datafication of every aspect of human life has led to more information than ever being publicly available, creating a digital ecosystem that also enables new ways of conducting investigations into the potential violation of human rights, corruption, or organized crime (United Nations Publications, 2022, p. vii). “Nowadays there is an abundance of documentary evidence that is visual, that you can see for yourself, that you can analyze and connect dots between the different fragments of evidence, and that allows you to reconstruct…a picture of what happened”, Malachy Browne, member of the V*isual Investigations* unit at *The New York Times*, explains (Ristovka, 2022, p. 633). In other words, the vast amount of easily accessible information online enables a way of investigating to which journalists, legal investigators, and civil society now more and more turn to when physical access to the scene of a certain event is not possible (Ristovka, 2022). This development has radically changed how wars are represented and investigated, bringing about an open-source intelligence (OSINT) revolution.

On February 24th, 2022, Russia launched its full-scale invasion of Ukraine, starting what is arguably the most documented war in human history. “In no time in history has the conflict been documented in such detail as the wars of today”, Zegart (2022) explains in an essay for *Foreign Affairs*, shedding light on the different ways in which the ubiquity of audiovisual accounts from the war in Ukraine is shaping how it is fought, represented, communicated, and investigated. Whereas in the past, evidence from a war zone was primarily collected by mandated investigators who interviewed

witnesses and gathered physical evidence on the ground, now, a diverse network of individuals and organizations use publicly available information for fact-finding and digital documentation of the events unfolding (Koenig, 2022, p. 831) – and private citizens play a central role within that development.

While, on one side, private citizens who live within the conflict zones in Ukraine share their experiences and imagery online, the created data can be, on the other side, gathered, explored and analyzed by other people from all over the world. Anybody with internet access can participate, no matter where they live. That has given rise to an unprecedented scale of so-called citizen OSINT investigations, a term referring to private citizens using publicly available information and data, such as satellite imagery, social media profiles or flight tracking, for investigations. Organizing on messenger apps and platforms like Telegram, Twitter and Discord, private citizens from all over the world now gather and collaborate online for their crowdsourced investigations into the events unfolding on the ground. In the context of the war on Ukraine, citizen OSINT investigators have been involved in, amongst others, investigating and documenting war crimes, verifying eyewitness videos, mapping troop movements and debunking misinformation related to the war. Academic insights into their activities, however, are still scarce. Previous studies have mainly focused on the work of professional OSINT actors, leaving out the role of citizen OSINT investigators who conduct investigations in their free time. This thesis aims to contribute to filling that gap. Building on the notion of participative or radical war, it will use semi-structured interviews with seven citizen OSINT investigators to examine their cognitive role-orientation.

The importance of that is based on three pillars. First, academic research on private citizens' involvement in crowdsourced OSINT investigations is still a largely blank spot – generally, but also in war contexts. Second, the war in Ukraine has given

rise to an unprecedented scale of citizen OSINT investigations. At the same time, building on the theoretical concept of radical war, their role in a participative war, in which digital technologies have disrupted and absorbed war and thus changed its nature and representation, is yet to be negotiated and mapped out. Third, according to Hanitzsch and Vos (2019) cognitive-role orientations provides the mental guidelines and beliefs that shape action and role-performance. A first profound insight into citizen OSINT investigators role-orientation therefore offers hints at the potential characteristics, aspirations, and guidelines of their practice. Thus, the research question of this thesis is the following:

RQ: What is the cognitive role-orientation of citizen OSINT investigators in participative war in Ukraine?

With the aim of answering that question, this thesis will first provide an overview over the existing literature on OSINT, private citizens' involvement in the production of news, previous research on professional OSINT actors and the unprecedented rise of OSINT investigations in the context of the 2022 war in Ukraine. It will then present the theoretical concept of radical war and how citizen OSINT investigators are part of it, touching upon the importance of gaining an understanding of their role within the participative wars of the 21st century. Then, the theoretical framework of role-orientations will be outlined, through which the semi-structured interviews with seven citizen OSINT investigators who participated in investigations related to the war in Ukraine were thematically coded and analyzed. Then, the findings, including a suggested typology of four different types of role-orientations, are presented, followed by the conclusion, a reflection on the limitation of this thesis and suggestions for further research.

Literature review

Introduction

Long before becoming a Nobel laureate, Bob Dylan recorded his popular song "The times they are a-changin" in the early sixties of the twentieth century, campaigning for society to adapt to a present full of multiple and intersecting upheavals. Now, almost six decades after publishing the corresponding album, his diagnosis seems to be more accurate than ever before – and that applies to the field of journalism, too. The rise of digital technology and the advent of open-source investigations brought an enormous cultural shift to processes of investigative news production (Ganguly, 2022).

At first sight, that does not seem to be something new. The ways in which journalists work, the content of news, the structure and organization of media outlets, and the relationship between news organizations, journalists, and the public have always been influenced by technological developments (Pavlik, 2000). Now, however, in the digital age, with massive amounts of easily accessible data material, novel methods and instruments "integrate a new set of actors, competencies and technologies into journalistic practice, renegotiating and transcending professional boundaries" (Müller & Wiik, 2021, p.1). The rise of OSINT-investigations is one of these new facets.

Actors such as the investigative team of *Bellingcat* or *Forensic Architecture* are now attracting more and more attention from scholars who set out to explore a still new and thus under-illuminated field of academia, mapping the shifting boundaries of journalism. However, private citizen open-source intelligence investigators, who are collectively gathering, analyzing, verifying, and disseminating documentation of potential human rights violations, disinformation, or environmental crimes all over the world or are still almost non-existent in research. This is even more striking now, as the

war in Ukraine has witnessed an unprecedented scale of private citizen's participation in online OSINT investigations.

Therefore, using the case study of the 2022 full scale invasion of Ukraine, the purpose of the literature review is to provide an overview of existing research on the intersection of open-source intelligence (OSINT), citizen journalism, participative war, and journalistic role-orientations, allowing not only the outline of existing knowledge, but also identifying important gaps while crystallizing the relevance of this thesis.

The chapter is divided into two sections: the first section starts with an outline and definition of OSINT. It then maps out citizens' involvement in journalistic practices and the rise of OSINT-actors, before outlining the scale and role of OSINT in the 2022 invasion of Ukraine. The second section summarizes and synthesizes the concept of radical or participative war, pointing towards the relevance of the addressed research question. Afterwards, the concept of journalistic role-orientations, as proposed by Hanitzsch and Vos (2017), will be mapped out. This is the theoretical framework through which the following semi-structured interviews with citizen OSINT investigators in the context of participative war in Ukraine will be analyzed.

OSINT, citizen journalism and the case of Ukraine

Brave new world: open-source intelligence in the digital age

The collection, analysis, and sharing of information have long been a central characteristic of the human species. As such, gathering and processing information from publicly available sources has been done for centuries, dating back to ancient explorers, soldiers, and traders who would observe their surroundings, attempt to comprehend it, and then communicate what they learned and observed to others (Westcott, 2019, p. 383). However, over the last two decades, the use of publicly available information has

seen a seismic shift. The advent of the internet and the development of digital technologies have brought about an open-source intelligence revolution in which the development of satellites, social media, and smartphones have been essential in enabling its rise as a common practice in civil society, criminal investigations and journalism (Koettl et al., 2020, p. 13).

There are several definitions of open-source intelligence. According to Williams and Blum (2018), an open-source intelligence investigation involves the "collection and analysis of publicly available data to generate intelligence that addresses a specific need" (p. 8). *The Berkeley Protocol on Digital Open Source Investigations* states that OSINT investigations "are investigations that rely, in whole or in part, on publicly available information to conduct formal and systematic online inquiries into alleged wrongdoing" (United Nations Publications, 2022, p. vii). Christiaan Triebert, an award-winning OSINT-investigator at the *Visual Investigations* team of *The New York Times*, defines OSINT investigations as "reporting but using any kind of openly available source" (Ristovka, 2022, p. 632). Elaborating further on that, he explains: "So, think of a Facebook post or a tweet, a YouTube video, or just a database – anything you can find online, openly, and for free" (Ristovka, 2022, p. 632). Ganguly (2022, p. 23) points out that the term "open-source intelligence" originates in the intelligence community and includes all publicly available sources that can be acquired legally and ethically, contrasting information gathering and processing that is based on illegally acquired data.

Though slightly different, all these definitions share certain criteria, according to which OSINT investigations consist of the process of gathering and analyzing all sorts of publicly available information. In online OSINT investigations, this information can be found on the internet. Moreover, the term "open-source intelligence" describes the

explicit result of a procedure of processing and/or analyzing publicly available information: most of the material would be of very little value in and of itself, but can be of value if collected, processed, and analyzed. As Zegart (2023) puts it in an essay for *Foreign Affairs*:

> Raw information—secret or not—is rarely valuable on its own because it is often incomplete, ambiguous, contradictory, poorly sourced, misleading, deliberately deceptive, or just plain wrong. Analysis is what turns uncertain findings into insight by synthesizing disparate pieces of information and assessing its context, credibility, and meaning (para. 18).

Making analytical sense of raw information is crucial for OSINT investigations. Williams and Blum (2018) note that the aim of any investigative process is to validate the available information as "relevant, accurate, and actionable" (p. 8) for the needs of the respective analyst, whether it is a journalist, a criminal investigator, an entrepreneur, or a human rights activist. In consequence, the specific criteria to validate and assess raw open-source information depend on who exactly is conducting an OSINT investigation for what purpose. McKeown et al. (2014, p. 183) underline that any OSINT investigation is shaped and influenced by its specific goal and object of investigation, as this determines the methodology employed, the data collection and analysis techniques utilized, the tools and instruments utilized, the behaviour and routines of the investigators, and the resulting outputs, including reports or media coverage.

Since an unprecedented increase in digitally mediated social interaction has also democratized access to vast amounts of information, as well as tools to analyze it (Glassman & Ju Kang, 2012, p. 675), OSINT investigations, and the respective online community have undergone a wave of professionalization. Nine years ago, Loewenthal

(2014) described the state of the art of OSINT as an "artless state" (p. 64) and declared it to be in urgent need of a clear and consistent methodology. Now, OSINT investigations come along with a diverse set of rules, guidelines, and methods to follow. A milestone of that process took place in 2020, when the *United Nations Office* of the *High Commissioner for Human Rights* at *UC Berkeley's Human Rights Center* published *The Berkeley Protocol on Digital Open Source Investigations* (United Nations Publications, 2022). With the goal of elaborating a consistent way of using OSINT in formal and legal investigations in international criminal and human rights investigations, the *Berkeley Protocol* provides a detailed outline for professional standards, guidelines, and a consistent methodology for investigators to "strengthen the accuracy of their findings and allow judges and other factfinders to better evaluate the quality of the investigation process itself" (United Nations Publications, 2022, p. vii). Despite being created to offer guidance and standards for OSINT-researchers in the areas of international human rights and criminal justice, the Berkeley Protocol has gained wide popularity and is now commonly regarded to be a standard set of guidelines for OSINT activities.

One of the key elements within what is now considered to be a standard set of methods for OSINT investigations is the so-called OSINT cycle, a step-by-step way to structure any investigation with the aim of transforming raw information into OSINT. According to the *Berkeley Protocol*, this process consists of six main phases: an initial online inquiry, preliminary assessment, collection, preservation, verification, and the investigative analysis. Instead of a linear procedure, these steps are considered to form a cycle that can be repeated continuously throughout an investigation, rather than a linear process (United Nations Publications, 2022, p. 53).

Similarly, William and Blum (2018, pp. 12-15) elaborate an OSINT cycle that consists of four steps: content discovery, verification, preservation, and publication. The first step includes the physical or electronic collection of information. The second step consists of validating the information and making it usable. The third step aims at determining the validity and value of the information. In the final step, the information is shared with an audience or a consumer in a "usable form" (Williams & Blum, 2018, p. 19).

Over the course of this process, investigators use tools that meet the requirements of the specific stage of their investigation and its target. Based on the model of the OSINT cycle, Ganguly (2022, p. 192) states that these tools have been implemented in a variety of ways within the workflow, being designed and used to meet different goals in an investigation, such as the discovery of human sources or comprehending the impact of a documented online phenomenon, the collection of evidence of criminal offenses or human rights violations, countering misinformation, reconstructing crime scenes, exposing those responsible for documented wrongdoing, or bringing to light severe or systemic criminal misconduct. Thus, Ganguly (2022, p. 144) classifies OSINT tools into three categories. The first category of OSINT tools are discovery tools, "which consist of various monitoring tools or involve search engines for direct searches" (Ganguly, 2022, p. 144). The second category consists of analysis tools, which involve "the most number of tools for various pathways of inquiry" that later "aid in human analysis, as opposed to purely automated machine analysis unaided by human interference, such as for the verification of images or video found during the discovering process" (Ganguly, 2022, p. 144). The third category consists of visualization or presentation tools, "used to lay out the findings or what the data fetched implies" (Ganguly, 2022, p. 144). Finally, Ganguly (2022, p. 143) also mentions tools

that are not directly linked to OSINT but make the investigative process feasible, such as tools for online communication and collaboration.

As mentioned, nowadays, most OSINT investigations are conducted online. They are, however, sometimes supplemented by a range of additional data sources, such as freedom of Information requests, tax records, meeting minutes, or material from whistleblowing platforms and hacks. The very nature of this publicly available information shows how the advent of the Web 2.0 has ushered in a new era of OSINT, that has been both accompanied by and shaped another crucial phenomenon: the rise of citizens' involvement in the creation, production, and dissemination of OSINT investigations.

From citizen journalism to participatory citizen OSINT investigations

With the rise of the Internet, the process of news production has undergone profound changes that have allowed for greater participation from and involvement of ordinary citizens. This phenomenon has been described and analyzed as participatory journalism, crowd-sourced journalism, and citizen journalism (Scott et al., 2015, p. 737). However, while some scholars declare citizens' involvement in news production to be a journalistic act (Scott et al., 2015), others regard it to be a form of empowerment (Berger, 2011) or a tool of democratization (Mutsvairo & Salgado, 2020). Regardless of its specific function or nature, according to Allan (2013), citizen journalists are ordinary citizens who use digital media to "temporarily adopt the role of a journalist to participate in news-making, often spontaneously during a time of crisis, accident, tragedy or disaster when they happen to be present on the scene" (p. 9). However, acts of journalism by private citizens do not necessarily depend on them being on the ground. Nowadays, private citizens, without being paid, comment, share, like, write, blog and post written or audiovisual material on social media, contributing willingly or

not to the process of news creation – and this phenomenon has reached into and significantly shaped the sphere of OSINT investigations as well, especially in the last decade.

The Arab Spring, a wave of anti-government protests, uprisings and rebellions that spread across a variety of Arab countries in the early 2010s, is regarded to mark the first big spark of citizens' involvement in news creation (Ganguly, 2022, p. 26). Enabled by widespread digital technologies, facing violence and censorship by authoritarian or dictatorial regimes, citizens in countries such as Syria, Tunisia or Egypt used the internet, especially social media platforms, to post audiovisual accounts of the protests and human rights violations to voice their opposition to corruption, misrule and authoritarianism (Tufekci, 2018). According to Hauser (2018), the activities of private citizens who gather and disseminate user-generated content has been crucial in providing information about the Syrian War. But while some citizens did provide information about the events unfolding, others, at the same time, started to analyze the sheer infinite amount of publicly available information, giving rise to what has become known as citizen OSINT investigations.

Even though early forms of OSINT already appeared in 2009, when an Irish social media intelligence agency *Storyful* was founded to develop novel methods of mining, verifying, and monitoring social media, the Arab Spring was a turning point in the OSINT development (Koettl et al., 2020, p. 13). New actors emerged who completely focused on OSINT investigations. Among them were now prominent and outstanding organizations like *Forensic Architecture*, *Bellingcat*, *Airwars* and S*yrian Archive*, who employed OSINT techniques and tools to investigate war crimes, violence, and human rights violations, creating investigative archives, reports, journalistic pieces, and even exhibitions. To engage with a broader audience, several

emerging OSINT actors also started to work closely with legacy media and professionals from fields such as law, social sciences, and the arts, creating a unique intersection between journalism and other disciplines (Müller & Wiik, 2021, p. 2).

In 2011, Eyal Weizman, Professor of Spatial and Visual Cultures and founding director of the *Centre for Research Architecture at Goldsmiths, University of London*, founded *Forensic Architecture*. *Forensic Architecture*, which specializes in human rights investigations, is composed of professionals from diverse fields, including architecture, software development, filmmaking, investigative journalism, art, and law. Using photographs, videos, audio files, 3D modeling and personal testimonies, *Forensic Architecture* locates and analyzes evidence of potential human rights violations. Moreover, it is a member of the *Technology Advisory Board* of the *International Criminal Court* and collaborates with academic, cultural and media organizations (Weizman, 2017).

In the same year, London based investigative reporter Chris Woods founded *Airwars*, a collaborative organization that is especially focused on monitoring, evaluating, and cataloging military operations and associated civilian casualties in regions of conflict and war such as Iraq, Syria, and Libya (Salyk-Virk, 2020).

Also in 2014, Hadi Al Khatib founded the *Syrian Archive*, an organization that consists of researchers, programmers, journalists, and human rights activists. The *Syrian Archive* supports human rights investigators and journalists who document human rights violations by creating open-source tools and, at the same time, by providing a consistent methodology for gathering, safeguarding, verifying, and analyzing visual evidence from war and conflict zones (Ristovska, 2019, p. 339).

Again in 2014, the British blogger Eliot Higgins founded *Bellingcat*, which came to be the most prominent actor in the field of OSINT investigations. In their own

words, *Bellingcat* works on investigations in “a unique field where advanced technology, forensic research, journalism, investigations, transparency and accountability come together” (Bellingcat, n.d.). Before collecting donations to found *Bellingcat*, Higgins began publishing information online about weapons that were used in Syria. Today, *Bellingcat* collaborates with international researchers, legal investigators, citizen journalists and volunteers from all over the world. Using publicly available data, the team investigates conflicts, crimes, and human rights abuses. Their investigations are published on their own website and by major international media outlets. “We proved that the Syrian dictator Bashar al-Assad fired chemical weapons at his own people. We showed who was behind the downing of Flight MH17. We located ISIS supporters in Europe. We identified neo-Nazis rampaging through Charlottesville, Virginia. We helped quash the floods of disinformation spreading alongside Covid-19. And we exposed a Kremlin ‘kill team’”, Higgins (2021, pp. 6-7) writes. *Bellingcat* also managed to investigate the secret agents who were behind the poisonings of Alexei Navalny in 2020 and Sergei Skripal and his daughter in the UK in 2018. Apart from their investigations, *Bellingcat* gives OSINT workshops and promotes the exchange of OSINT techniques, methodology and investigations on their public *Discord* server (Butler, 2023). Conducting groundbreaking investigations, Bellingcat also realized that their investigations could potentially be used in court. As Higgins (2021) explains: “Whether we considered it or not, we dealt in legal evidence now, often the first in the world to discover it, and the only ones archiving it. Our responsibilities had grown” (p. 173). That thought process led *Bellingcat* to apply an OSINT methodology in their investigations that could stand up in criminal processes, thereby reflecting a broader development: now, OSINT has fully reached the sphere of legal investigations (Suárez, 2023).

According to Ganguly (2022, p. 28), there has been a noticeable surge in the utilization of OSINT evidence for legal investigations at the *International Criminal Court* (ICC). In one prominent case, the ICC used a range of digital sources, including satellite imagery, audiovisual footage, and geolocation data gathered online to convict islamist Ahmad Al-Faqi Al-Mahdi for the destruction of cultural property in Mali. Later, the ICC also issued an arrest warrant for Mahmoud Al-Werfalli, a special forces commander of the Libyan National Army, for committing thirty-three cases of murder. The evidence included videos of executions uploaded on social media (Deutsche Welle, 2021). According to the Global Investigative Journalism Network (GIJN), this case "is seen as one of the first to acknowledge that open-source information can be used as evidence for legal proceedings concerning violations of international humanitarian law or international crimes, namely, for war crimes, crimes against humanity, and genocide" (Dubberly & Çalı, 2023, para. 1).

In sum, by 2023, online OSINT investigations have fully reached the professional practice of legacy media as well as the area of legal accountability. However, as Cochrane (2022, p. 8) states, the field and practice of OSINT has not only grown amongst governments, legal institutions, and the media, but prominently also amongst private citizens. And while the job of an OSINT investigator is now a paid profession, the field does, however, rely heavily on private volunteers who crowdsource intelligence and conduct OSINT investigations in their free time, using online-servers, messenger apps and social media platforms to organize themselves and their investigations. This phenomenon has witnessed an unprecedented spark in the context of the Russian invasion in Ukraine in 2022. Before assessing the role of citizen OSINT investigators in the ongoing war in Ukraine, however, light needs to be shed on recent research on professional and paid OSINT investigators.

Opening gates, shifting boundaries: the OSINT mindset and its impact on investigative journalism

During the last few years, scholars have started to explore OSINT investigation units, its members, and its intersection with journalism. However, as the field is still quite young, academic insights are still scarce and limited to professional and paid actors.

Hanham and Shin (2020) state that the work ethos of those involved in OSINT investigations is based on the will "to serve the global good, and to uphold transparency, accuracy, and independence" (p. 5). Dubberley et al. (2020) hold that this ethos opposes the use of deception and restricts investigations to non-invasive methods of gathering information. Based on interviews with members of the *Visual Investigations* unit at *The New York Times* and an analysis of their video investigations, Ristovska (2022) sheds light on open-source investigations as a form of conflict-reporting, focusing especially on OSINT investigations' reliance on eyewitness visual imagery from war and conflict zones, such as videos shot by bystanders who operate outside of formal institutions. As Ristovska (2022) concludes:

> On the one hand, rigorous verification practices grant eyewitness images the status of truth claims, creating possibilities for the inclusion of a wider range of civic voices in conflict news. On the other hand, old power formations are reappearing in new contexts, which may be narrowing the potential of those voices to achieve social recognition and agency (p. 633).

Even though reporters who use OSINT at *The New York Times* strive for innovation, Ristovska (2022, p. 633) finds that the influence of institutional practices, the corporate culture of social media platforms, and the impact of geopolitics on their practice all play a significant role in shaping their use of OSINT in conflict reporting.

Belghith et al. (2022) map and examine the social dynamics that underlie and shape the investigations of expert OSINT investigators outside of legacy media, shedding light on the organizational structure and the collaboration and competition patterns that underlie OSINT investigations. “Conducting OSINT investigations involves more than just the type of data or techniques used”, they state (Belghith et al., 2022, p. 2), finding that among different types of organizations, there are three central elements that characterize the OSINT community: A culture of transparency in their work, an adversarial mindset of those who conduct investigations, and the emphasis on collaboration among investigators with different motivations and backgrounds (Belghith et al., 2022, p. 14). Ganguly (2022) names transparency “one of the critical aspects of OSINT, due to the public nature of information” (p. 28) that the investigations use. Observing OSINT organizations as communities of practice and focusing on social dynamics that emerged as behavioral patterns, Belghith et al. (2022, pp. 6-7) also found that a high share of their interview partners from the expert OSINT community named education, the urge to give back to the community, the goal of incentivizing policy and social change, as well as wanting to combat criminal activity, and the thrill of solving a case as their main motivation for participating in OSINT investigations. Apart from that, another common theme among their interviewees was that they wanted to educate the public on topics such as cybersecurity, digital privacy and security awareness (Belghith et al., 2022, pp. 6-7). Respondents also acknowledged that OSINT investigations can be time-consuming, frustrating, and even risky for their own mental health, which is also one of the key findings of Ganguly (2022). OSINT investigators find themselves exposed to “an increased risk of vicarious trauma due to the graphic content of OSINT investigations into human rights abuses, which, when coupled with an unsupportive

work environment, did result in PTSD", Ganguly (2022, p. 281) finds. This is especially the case for freelancers without institutional support, and people of color.

In sum, different studies show that the OSINT community emphasizes values such as a culture of transparency, accuracy and collaboration (Belghith et al., 2022, p. 14), while the motivation to participate in OSINT investigations is often framed around striving to participate in a common cause and serving the public good. These central values can be regarded to mirror the nature of the object that OSINT investigators deal with: Collaboration simply is a key requirement in digital investigations nowadays, as the amount of available data is simply too huge for single investigators (Vuleta, 2021). This logically requires collaboration, as no single investigator possesses the expertise or capacity to scan and monitor all platforms or retrieve digital content quickly enough before its deletion or destruction (Koenig, 2022, p. 835). The question is, however, how the OSINT community, its ethos, mindset and practice do influence traditional journalism.

Elucidating implications of the emergence of OSINT actors for traditional journalists' roles, Müller and Wiik (2021) found that OSINT practices breaks with the professional exclusivity that has been playing a big role in journalism, and, at the same time, reinforces values of public interest, democracy, and accountability. By doing so, OSINT investigators "transform the traditional role of the journalist as 'controller' and 'gatekeeper' into an enabler of free collaboration, opening 'gates' towards new spaces and actors" (Müller & Wiik, 2021, p. 1). Thus, the new role of journalists that is being shaped now can be defined as "to act as gate opener for different skills and competencies, perspectives, actors and actants, that is, coordinating collaborations and efforts to forward public interest" (Müller & Wiik, 2021, p. 18). However, they underline that OSINT-practices "may transform the journalistic role, but do not dissolve

or discard it" (Müller & Wiik, 2021, p. 18). Coining this process a "collaborative turn" in cross-border journalism, Müller and Wiik (2021, p. 18) state that collaboration as practiced in OSINT communities is becoming the new norm in investigative reporting. This can also be observed in conflict reporting in general, where the boundaries of journalism are permanently being questioned as journalists, citizens and human-rights-activists collectively partake in the production and circulation of stories (Powers, 2018, p. 17). Based on the observation that NGOs and human rights activists have become experts and go-to sources for journalists on the ground when it comes to visual imagery in conflict reporting, Ristovska (2021, p. 3) speaks about a "proxy profession". Ganguly (2022, p. 28) comes to a similar conclusion when examining the influence of OSINT on the future of investigative journalism, which has usually drawn its information from closed sources. OSINT, in contrast, uses publicly available information and is therefore hard to dismiss. Moreover, Ganguly (2022, p. 28), notices that the adoption of OSINT tools in investigative journalism has enabled insights into a multitude of human rights abuses from locations that previously had hardly been accessible. "However, it is human expertise, creativity and methodology in implementation of tools that are critical to such investigations, instead of the tools themselves, which are often flawed and require human intervention when augmenting workflows", she states (Ganguly, 2022, p. 2).

Thus, while the use of OSINT certainly has an impact on the practice of investigative journalism in legacy media, it does not replace it. It simply changes it. What is striking, though, is the fact that up until now, academic work almost exclusively has focused on expert OSINT investigators: people who work for well-known OSINT actors such as *Bellingcat*, *the Syrian Archive* or *Forensic Architecture*, or for traditional news outlets where they use OSINT. One outstanding exception is Cochrane (2022), who, in her M.A. thesis, examines the motivation of citizen OSINT volunteers who do

not get paid for their work, but conduct investigations in their free time alongside other paid occupations. Similar to Müller and Wiik (2021), who only interviewed expert OSINT investigators, Cochrane (2022) finds that citizen OSINT volunteers are motivated by curiosity and the desire for collaboration (Cochrane, 2022, p. 47). However, in contrast to professional OSINT investigators, citizen OSINT volunteers also declared to be motivated by the joy of learning as well as the desire to address injustices and societal challenges such as misinformation, contributing therefore to a "greater purpose" (Cochrane, 2022, pp. 44-45). Many citizen OSINT volunteers chose to do their work anonymously and do not seek public recognition (Cochrane, 2022, p. 46). Though insightful, the knowledge about citizen OSINT investigators is still scarce and Cochrane (2022, p. 48) points to the fact that future research is needed, especially in the context of the 2022 Russian invasion of Ukraine, to examine the unprecedented phenomenon of thousands of individuals from all over the globe coming digitally together, helping to verify and document the unfolding events. Shedding further light on this phenomenon is the aim of this study. As Koenig (2022) states:

> Each major conflict of the past decade has resulted in a significant jump forward in organizations' ability — and willingness — to cooperate and collaborate on the collection, preservation, analysis and presentation of digital evidence. That process has reached a new milestone in the context of Ukraine (p. 842).

The 2022 Russian invasion of Ukraine: ushering in a new era of open-source intelligence

In the early morning of February 24, 2022, Vladimir Putin declared the start of a specialized "military operation" in Ukraine. The announcement, made shortly before 6am, was followed by a devastating airstrike on Ukraine and Russian troops flooding

into the country from various directions, marking a significant and still ongoing escalation of a war that had been simmering for eight years. The response was not less significant, though. In a matter of hours, various civil society actors such as humanitarian groups, human rights activists, journalists, and lawyers formed the “5 AM Coalition”, a group that aims to document potential war crimes committed by Russian troops (Koenig, 2022, p. 830). In an unprecedented call, the coalition asked for volunteers from all over the world to join their cause to help “protect the victims and punish the top leadership of the Russian Federation and the direct perpetrators of war crimes and crimes against humanity in Ukraine” (5 AM Coalition, 2022). What seems to be an outstanding case is only a fraction of a remarkable development that has shaped both the public perception of the war and investigations into potential crimes committed in Ukraine.

Since the Russian invasion of Ukraine started, thousands of volunteers have been participating in OSINT investigations into the war. Private citizens and groups from all over the world are using OSINT to monitor Russia's actions in unprecedented ways. Organizing on platforms and messengers like Signal, Twitter, and Discord, these “non- and semi-professional actors” (Wallace, 2018, p. 274) gather and collaborate online and have been involved in, amongst others, investigating and documenting war crimes, verifying eyewitness videos, mapping troop movements and debunking misinformation (Basu, 2022). As Reuter (2022) puts it: “A global community systematically evaluates publicly available information of all kinds and feeds it into the news flow” (para. 1). Moran (2022) speaks of “a large and very active community of digital sleuths” that “has been closely tracking the escalating crisis in Ukraine” (para. 1).

Given the unprecedented scale of private volunteers’ involvement in cross-border OSINT investigations into an ongoing armed conflict, Zegart (2022) has called

the war “a watershed moment for the world of intelligence” (para. 1). Building on social media data, satellite imagery, and other technological breakthroughs that have enabled private citizens to collect, analyze, and publish intelligence, Zegart (2022) writes,

> Journalists have reported battlefield developments using imagery from commercial space satellites. Former government and military officials have been monitoring on-the-ground daily events and offering over-the-horizon analyses about where the war is headed on Twitter. A volunteer team of students at Stanford University, led by former U.S. Army and open-source imagery analyst Allison Puccioni, has been providing reports to the United Nations about Russian human rights atrocities in Ukraine—uncovering and verifying events using commercial-satellite thermal and electro-optical imaging, TikTok videos, geolocation tools, and more. At the Institute for the Study of War, a go-to source for military experts and analysts, researchers have even created an interactive map of the conflict based entirely on unclassified, or open-source, intelligence (para. 4).

Examining the role of OSINT investigations before and after the breakout of the war, Bellingcat-founder Elliot Higgins (2023) describes the outstanding role of an “engaged online community made of individuals from a wide variety of backgrounds, including journalists, activists, human rights workers, disinformation researchers, and ordinary people” (para. 11). Higgins (2023) says:

> In the weeks before the invasion, parts of that community, as well as people who were newly engaging with information from Ukraine, began to document the Russian build-up along the border with Ukraine, with Russian TikTok users helpfully documenting the movement of Russian troops and equipment into positions along the border. While the Russian government claimed the build-up

> was related to training exercises, it was clear from the types of units and vehicles being transported to the border that this was not the typical military build-up you'd see around training exercises" (para. 12).

Higgins and his team as well as thousands of citizen OSINT volunteers have been examining and debunking desinformation, troop movements, allegations of war crimes and other war-related incidents. To log and map civilian harm in Ukraine, *Bellingcat* also founded the *Global Authentication Project* (GAP), a project curated by OSINT researchers and volunteers from around the world (Bellingcat, 2022).

Citizen OSINT volunteers and OSINT organizations are also working together with official actors to pursue accountability using both traditional and digital evidence (Koenig, 2022, pp. 830-831). The *United Nations* proposed to build a permanent mechanism for "preserving evidence of atrocity crimes", stating that "prosecuting authorities [are] now looking to both civil society actors and UN Investigative mandates for collaboration" (D'Alessandra et al., 2022, p. 1). In Ukraine, not only the *International Criminal Court* (ICC) and Ukraine's prosecutor are investigating alleged war crimes: "Thousands of Ukrainian investigators, numerous teams from other countries, and individuals from local and international nonprofit groups are compiling evidence of war crimes and crimes against humanity at an unprecedented rate" (Goldston, 2022, para. 6). Murray et al. (2022, p. 575) examine that in Ukraine, conventional methods of gathering facts are complemented by a global network of digital investigators from fields like journalism, computer science, architecture, law, activism, and other disciplines.

This development, which might pave the way towards a new crowdsourcing-standard of investigating violence and crimes, also comes along with several challenges. Koenig (2022, pp. 839 - 841) identifies various risks related to the surge of volunteers

who collect and analyze digital OSINT evidence of potential war crimes and other atrocities in Ukraine.

First and foremost, if citizen OSINT investigators lack the required knowledge, they may reach conclusions beyond the scope of their expertise (Koenig, 2022, p. 839). A consequence could be that courts could accept certain conclusions without sufficiently questioning the quality of the analysis, including the credibility and validity of the data. This could give rise to substantial concerns regarding the fairness of the trial, particularly if the defense does not have access to training in and assistance to conduct their own, independent analysis (Zamsky & Mionki, 2023).

The second risk is over-documentation (Koenig, 2022, p. 840). Excessive documentation of the events unfolding can result in organizational challenges, such as the need for extensive server space to store millions of digital data points. Moreover, prosecution teams run the risk to not know the precise content of the data they possess. Over-documentation could also be a privacy and legal issue, for instance when prosecutors are not aware of the full extent of the data that they have. To mitigate these risks, the ICC recently released practical guidelines for organizations involved in archiving evidence of potential crimes (Eurojust, 2022).

A third issue “is the need for resiliency strategies and psychosocial support for the breadth of actors engaged in accountability processes” (Koenig, 2022, p. 841). In Ukraine, digital investigators are facing a flood of graphic content of atrocities at a yet unknown pace, often transmitting such disturbing content to their colleagues as part of the collaborative investigation.

In sum, the 2022 Russian invasion of Ukraine has ushered in a new era of OSINT. In an unprecedented scale, private citizens from all over the world use their free time to get involved in OSINT investigations that aim at documenting, verifying, and

analyzing potential war crimes. The technology that has enabled this development is an essential part of this revolution, but so is the voluntary and non-paid participation of citizen OSINT volunteers from all over the world. Given the double novelty of both the mass involvement of private citizens in OSINT investigations and the war in Ukraine, there still is a lack of scholarly research into that field which requires further academic insights, as it is shaping and changing the profession of journalism as well as the war itself (Cochrane, 2022, p. 48). Therefore, building on a theoretical framework of participative war and journalistic role-orientation, this study aims at elucidating the role of citizen OSINT volunteers in the Ukraine war.

Theoretical framework: radical war and journalistic role-orientations

Participative warfare and the new war ecology of the 21st century

In the 21st century, war and conflict have been fundamentally affected and absorbed by the influence of digital technologies, changing what exactly "war" nowadays is, as well as how we understand, experience, represent, observe, communicate, and fight it (Merrin, 2019, p. 289). One major change is that, in a time when "every battle seems personal, but every conflict is global" (Singer & Brooking, 2018, p. 22), war is now profoundly participative. Offering unprecedented possibilities for involvement and engagement, digital technologies have extended the battlefronts into our daily life, reshaping our relationship to, perception of, and participation in war, therefore "blurring the boundaries between military and civilian actors, physical and virtual battlefronts, weapons and witnesses" (Boichak, 2020, p. 512). The rise of citizen OSINT investigations into war and conflict are part of that development.

Nowadays, whether living in a conflict-affected area or not, people from all over the world scroll through battlefield updates from any conflict on their feeds. They

comment, spread and interact with videos from the frontline, share geolocations and metadata and debunk war-related misinformation, all of which can be weaponized to be "nodes in the kill chain" (Ford & Hoskins, 2022, p. 6): Devices like smartphones, Ford and Hoskins (2022) explain, make it "possible to track whom you talk to, where you go, whom you meet, how you travel and what you buy" (p. 6). This, in turn, can be used to "identify targets who can then be engaged kinetically or influenced politically" (Ford & Hoskins, 2022, p. 6). Therefore, everyone who owns a connected device can be turned into a sensor (Ford & Hoskins, 2022, p. 512). And while this in and of itself already offers new possibilities oof remote participation in wars, the use of social media has become central to wars and conflict,

> to simultaneously capture it, promote it, denounce it, deny it, spread images, videos, bloopers, memes, jokes, graphics, gifs, and comments, help organise it, raise funds, raise awareness, accrue new recruits, direct combat operations, spread disinformation and propaganda, and rally aid and help for its victims (Merrin & Hoskins, 2020, p. 189).

The consequence is simple, yet far-reaching: enabled by a novel digital infrastructure, the reality and nature of war has been absorbed, expanded, and changed in a way that has led to a deterritorialization and of war. This development has not only created a participative battlefield in which anyone from anywhere can get involved, willingly or not, in war, but also a confusing potpourri of ambiguous and fragmented perceptions, propaganda and excitement that Pomerantsev (2015) mapped out as a permanent spectacle in which "nothing is true but everything is possible" (p. 6). Outlining this ubiquitous confusion and deterritorialization of war, Merrin and Hoskins (2020) declare that "because digital media empower everybody, everybody now gets involved" (p. 190) in it. "Anyone with an opinion, a patriotic or political conviction, or just a grudge

can now let fly their likes and comments and gifs and memes and burns whilst picking the kids up from school or doing the shopping" (Merrin & Hoskins, 2020, p. 190).

In simple words: war nowadays is participative and deterritorialized because anyone with a connected device and an internet access can participate though the data they create online. It includes human and non-human actors, such as the algorithms: For example, private citizens pick up user-generated video footage by other private citizens from the frontline that washed up at the shores of their news feeds and messenger apps, brought to them by a diffuse interaction of an algorithm and fellow social media accounts' feed. They use digital tools to collaboratively geolocate, debunk or verify the material, and then feed it back into the news cycle, where media, military and intelligence communities can pick that information up and use it, for example for precise strikes against their enemy or for the purpose of information warfare. This new nature of war blurs the boundary between combatants, activists, civilians, and journalists.

Matthew and Hoskins (2022) propose the concept of "radical war" to understand and analyze this new, participative nature of war. Building on the democratization of perception through the widespread use of digital technologies, radical war is understood as "contemporary war that is legitimized, planned, fought, experienced, remembered and forgotten in a continuous and connected way, through digitally saturated fields of perception" (Matthew & Hoskins, 2022, p. xix). The characteristics and dynamics of this new nature of war are yet to be fully examined, but some are already clear.

In a time where connected devices are used as both a way to represent war and an instrument in its practice, "war and its representation have collapsed into each other" (Matthew & Hoskins, 2022, pp. 6-7). That means that the representation of and participation in war are now almost impossible to distinguish as they are enabled and

realized by and rely on the same digital infrastructure, which transcends national borders and jurisdictions. People from all over the world can produce, consume and analyze data points at the same time, which afterwards are being fed into the obscure algorithms of big tech platforms and then picked up by other actors involved who potentially use it with lethal consequences. Thus, nowadays, the battlefield is everywhere, brought to the most remote parts of the world by the immense power of a digital information infrastructure that removes bystanders from conflicts: the information infrastructure that enables the production and consumption of data can also help to target individuals. Therefore, the boundaries between combatants, journalists, civilians, and activists are blurring. According to Merrin and Hoskins (2022), everyone is either victim or perpetrator, rendering the "distinction between audience and actor, soldier and civilian, media and weapon becomes meaningless" p. 10).

All of this is happening in a battle and information space that Matthew and Hoskins (2022) call "the new war ecology" (p. 12), an environment in which mobile, connected devices like the smartphone enable digital individuals to share and create content that can influence politics and produce lethal effects. This may happen willingly or unwillingly, knowing, or unknowing. "Radical war is participative in that everyone has the potential to be involved though the data they create", Matthew and Hoskins (2022, pp. 12) say. Actors, representations, and acts of violence collapse into each other. People who are connected to the internet become both a part of and subject to participative warfare.

> They can record and transmit data that is useful to those generating targets for the battlefield. The emergence of Web 2.0, smart devices, and the Internet of Things creates new structures of participation, allowing various actors such as militaries, states, journalists, NGOs, citizens, and victims to participate in

> warfare immediately and continuously. However, this participation blurs the line between observers and combatants, leading actors to believe they are making a difference when they are actually just regurgitating data. These participant-combatants produce new types and scales of warfare through their continuous production and dissemination of information" (Matthew & Hoskins, 2022, p. 47).

Investigating potential violations of human rights without having on-the-ground access to the battlefield, using publicly available imagery, videos, messages, posts, archives and accounts, relying on digital tools and communication infrastructure, citizen OSINT investigators are a crucial part of this "new war ecology" and its blurring boundaries. But what is their role within it? How do they reflect on their activities, their ethics, and their role in a deterritorialized and participative war? For what reason does one want to voluntarily investigate war-related incidents in their free time that are happening hundreds or thousands of miles away? And do they consider themselves to be journalists, civilians, combatants, or activists? To understand that and shed further light on the fluid and evolving nature of participative war and the place of citizen OSINT investigators within it, this thesis will use the framework of journalistic role-orientation to deepen the understanding of the emergence, ethics, and role of citizen OSINT investigators in the context of the war in Ukraine.

Journalistic roles

Attitudes and beliefs shape behavior. This is the presumption of the study of journalistic role-orientations, a concept which is used in this thesis to examine the role-orientation of citizen OSINT investigators. Even though they explicitly are not professional journalists, using this theoretical framework provides a clear map to shed

light on the attitudes and beliefs that shape citizen OSINT investigators role-orientation and thus their activities within a context of participative war. Moreover, the empirical findings also allow to be compared and analyzed in the light of journalistic roles.

At first sight, it seems to be common sense that journalists or those who want to be one foster democracy and dialogue, giving people the tools to critically engage in society and hold leaders accountable. However, as Hanitzsch et al. (2019) state, "it would be misguided to assume that journalists everywhere agree with these norms or value them in similar ways" (p. 161). There are different ways in which journalists perceive and enact their role, and understanding journalists' role-orientation can provide useful insights into how they navigate their duties and define their responsibilities in society (Vos, 2017). However, as Şahin (2022) underlines: „What journalists believe they should do, what they think they do and what they actually do can be different things" (p. 555). Moreover, while attitudes, norms and rules seem to be decisive for journalistic role orientations, local political, economic, and cultural factors also shape journalism. Comparative studies have shown that journalistic roles differ across the globe (Hanitzsch et al., 2019), indicating that journalists' normative and cognitive ideas about their role are also influenced by the societal structures in which they operate.

Up until relatively recently, the study of journalistic roles was comparatively thin on theory. Mellado et al. (2017) differentiate between journalistic role conceptions, role perceptions, role enactment, and role performance. Building on the notion of journalism as a social and discursive institution, Hanitzsch and Vos (2017) differentiate between "what journalists ought to do, what they want to do, what they do in practice and what they think or say they do" (p. 214). They propose that journalistic roles are articulated and enacted on two different but interconnected analytical levels. The first level, journalistic role orientations, includes normative and cognitive roles. The second

level is the role performance and includes practiced and narrated journalistic roles (Hanitzsch & Vos, 2017, p. 123).

Role-performance

Role performance refers to the behavioral dimension of journalists' roles and includes practiced and narrated roles. Narrated roles describe what journalists think they do, practiced roles describe what journalists really do. While both dimensions of role performance consider how journalists execute their role in practice, there are crucial differences. Narrated roles are observed, analyzed and self-reported by the journalists themselves. Practiced roles can only be observed and analyzed by direct observation of journalists' work (Hanitzsch & Vos, 2017, p. 124).

Role-orientations

Role-orientations refer to the institutional principles, attitudes, and beliefs regarding journalisms' position in society as well as the ideals that journalists uphold. Normative roles touch upon what journalists think they ought to do. Cognitive roles touch upon what journalists want to do and think they do themselves. In other words: normative roles describe what is generally desirable to think or do as a journalist, cognitive roles provide the personal recipes, guidelines, and maps for individual action (Hanitzsch & Vos, 2017, p. 123). Thus, while normative role conceptions "articulate a framework of desirable practice, cognitive roles represent journalists' own professional aspirations and ambitions" (Hanitzsch et al., 2019, p. 168).

Examining cognitive role orientations of journalists in 67 countries, Hanitzsch et al. (2019, p. 168) not only found that these reflect the values, attitudes, and beliefs learned through occupational socialization while serving to maintain professional

boundaries to non-professionals, but also that the cognitive role orientation of journalists across the globe primarily falls into four general role dimensions: monitorial, collaborative, interventionist, and accommodative.

The monitorial role

In both democratic and less democratic countries, the monitorial role represents the core of most journalist's identity. It sees journalism as a "Fourth Estate", where journalists criticize politicians and hold those in power accountable, promoting critical thinking among citizens. According to this role, journalism is a counterbalance to political authority and moves around the idea of practicing watchdog journalism and seeing journalists as agents of empowerment (Hanitzsch et al., 2019, p. 169).

The collaborative role

According to the collaborative role, journalists act as partners of the government and accompany and assist it in promoting social progress and well-being. Thus, this role dimension contrasts the monitorial role and focuses on journalists' support for political authorities in maintaining and protecting the social order against criminal activity, conflict, and natural catastrophes (Hanitzsch et al., 2019, p. 169).

The interventionist role

The interventionist role orientation is essentially defined by a journalist’s desire to pursue a specific mission and promote values. Professionals holding this role orientation are socially committed and motivated to engage in social affairs, viewing themselves as active participants in political life rather than impartial bystanders. As

advocates for specific causes or groups, they may want to promote certain values and ideologies and see themselves as agents of change (Hanitzsch & Vos, 2019, pp. 169-170).

The accommodative role

The accommodative role sees the audience as consumers and mostly seeks to provide orientation in everyday life. Journalists who share an accommodative role orientation want to provide their audiences with the information that they want the most, thus especially valuing the needs of their audience (Hanitzsch & Vos, 2019, p. 170).

All these four roles have a strong disposition towards involvement and social commitment in common. They relate to one another, lying on a two-dimensional axis of greater versus smaller power distance and self-determination versus audience-determination (Hanitzsch & Vos, 2019, p. 171). They are important, because role-orientations shape and provide the guidelines for role performance (Hanitzsch & Vos, 2019, p. 171). Thus, these role orientations drive journalists' practice.

Even though citizen OSINT investigators are explicitly not professional journalists, examining their role-orientations promises to help reach a deeper understanding of a yet under-examined phenomenon, especially which attitudes and beliefs shape the role-performance of citizen OSINT investigators. That means that the outlined theoretical framework will be adapted and applied to the context of citizen OSINT investigations in the war in Ukraine, since understanding citizen OSINT investigators role-orientation consequently also contributes to the process of understanding the blurring boundaries between civilians, combatants, activists, and journalists in the new war ecology in Ukraine. Ultimately, knowing the role-orientation

of new actors in the field also helps to renegotiate journalists own role-orientations and their professional identities. Therefore, building on semi-structured interviews with citizen OSINT investigators, this thesis will try to map out the cognitive role-orientations they follow. The examination of what they think they do also hint towards how they perceive their role in participative war.

Conclusion

After presenting definitions of OSINT, this chapter has outlined how the advent of the internet has brought about both a revolution in citizens' involvement in news production and how publicly available information is being used in online investigations into war crimes and human-rights violations. While there are some studies about professional OSINT actors, academic insights into private citizens' involvement in OSINT investigations are still rare. This is even more striking as the 2022 full-scale invasion of Ukraine by Russian troops has been accompanied by an unprecedented rise in private citizens from all over the world coming together to conduct OSINT investigations. This development needs to be seen from a broader perspective, through the concept of participative or radical war. Social media and digital devices have deterritorialized war and conflict, creating a "new war ecology" in which the boundaries between journalists, activists, civilians and combatants are blurring since everybody can be involved in participative war by creating, sharing, posting, consuming and analyzing data. Citizen OSINT investigators are an essential part of this new war ecology. However, insights into how they perceive their role within that context are still missing. Thus, applying the theoretical concept of cognitive role-orientation that is usually used to study journalists, this study will examine the attitudes and beliefs that not only

influences how citizen OSINT investigators perceive their role, but ultimately also how they perform it.

Methodology

The following section outlines the qualitative methodology used in this thesis, exploring citizen OSINT investigator's reflection on their role in the context of participative warfare in Ukraine. Moreover, it also explains the process of recruiting interview partners and the chosen way of analysis.

For the purpose of this thesis, citizen OSINT investigators are defined as people who conduct or participate in crowdsourced online OSINT investigations in their free time and do not receive any financial or material remuneration for it. Moreover, as this thesis specifically looks at the case of the 2022 full scale invasion of Ukraine, only participants who did declare to regularly investigate incidents related to that war were selected. Ukrainian citizens were explicitly not included in the sample as their role-orientation and motivation might differ from those who decide to invest their freetime in investigating incidents from a war that does not physically threaten their home country.

As the topic addressed is still under explored in academic terms, a qualitative approach using semi-structured interviews was chosen to gain a more profound understanding of it. Qualitative research aims at exploring "the meaning individuals attribute to their given social situation" (Hesse-Biber, 2007, p. 119) and is considered to provide essential in-depth insights into the respective object of analysis. These new insights are especially valuable when examining new phenomena as it is given with the aim of examining and exploring the following research question:

RQ: What is the (cognitive) role-orientation of citizen OSINT investigators in participative warfare in Ukraine?

Research design

The data used to explore the research question comes from rich descriptions that were gathered through the inductive coding of semi-structured online interviews with seven citizen OSINT investigators. As Lunenburg and Irby (2008) state, semi-structured interviews "seek to describe the meanings of central themes in the life world of the subjects" (p. 91), thus providing profound insight into how the interviewees construct their reality. This research approach promises to allow major first insights into a highly under researched phenomenon, which is the goal of this thesis. According to Guest et. al (2006, p. 73), data saturation in qualitative research using interviews occurs within the first twelve interviews, with up to 94 % of the relevant themes already surfacing within the first six interviews. In other words: Most prevalent themes of interest occur already within the first six interviews of a qualitative study. Thus, a sample size of seven allows a first major insight into citizen OSINT investigators role-perception in a specific context of war, even though it does not represent a fully saturated data set and therefore needs to be seen and analyzed in the context of its own limitations.

The interview partners for this thesis were found through convenience sampling, which does not allow the sample to be representative. More precisely, potential interview partners were approached and found online. On Twitter, self-declared OSINT-activity in accounts were used as a first orientation to reach out to 40 individuals. On Discord, potential interview partners were approached via the *Bellingcat* and the *Project Owl* channels with respectively more than 15.000-30.000 members.

All potential interview partners were approached with a variation of the same message, explaining the topic of the thesis and the requirements to participate. On that note, it is important to mention limitations that influenced the recruitment of interview partners, such as to what extent people were contactable on *Twitter*. As this depends on

each profile's privacy settings, so does the ability to ask potential interview partners. Moreover, more than half of the directly contacted people on Twitter did not reply (some did later, but too late), which might point towards a certain skepticism regarding outsiders and, at the same time, towards a potentially extraordinary motivation of the final participants to share their perspective. This, again, is a major limitation of this study, as the sample is neither representative nor does it represent the full range of citizen OSINT investigators.

In the end, four interview partners were found via *Twitter*, three via *Discord*. The interview partners found via *Twitter* had between 7.000 and 190.000 followers. Participants were between 21 and 65 years old. Three interview partners were from the United States, one from the United Kingdom (living in Italy), one from Russia, one from Switzerland and one from Canada. Six identified as male, one as female, six out of seven participants were from Western countries, and in general, most interview partners considered themselves to be pro-Ukrainian. The age of the interview partners ranged from 20-25 to 60-65. The exact age is not disclosed for the purpose of not revealing the identities of the interview partners. The same applies to the interview partners' names, which have been changed into code names. Their professional jobs were quite different, ranging from a retired person who worked at the US Air Force before to a programmer and a historian. Table 1 provides an overview over the participants, their nationality, age range, their professional occupation and the self-indicated, estimated time they would spend on OSINT investigations about the Ukraine war, which varied heavily among the sample.

Table 1: Table of interview partners

Name Code	Gender	Nationality	Age	Job	OSINT activities per week
P1	Male	United States	60-65	Retired (previously US Air Force)	35-42 hours
P2	Male	Canada	35-40	Lawyer	12-15 hours
P3	Female	Russia	30-35	Historian	3-4 hours
P4	Male	British	20-25	Programmer	5 hours
P5	Male	United States	35-40	Technical writer (previously professor)	14-21 hours
P6	Male	United States	30-35	Intelligence manager	8-10 hours
P7	Male	Switzerland	20-25	Draftsman	8-10 hours

The interviews itself lasted between 27 and 71 minutes, were conducted in English between April 4th and 12th of 2023 via Zoom or Signal calls, and digitally recorded with the consent of the interview partners. The semi-structured interview-guide can be found in Appendix 2. Given the nature of the phenomenon of citizens from all over the world voluntarily spending their free time investigating incidents in a war that is not taking place in their home country, interviews were all conducted online. At the same time, it is important to highlight that aside from the global nature of the object of interest, online interviews also seem to be the most adequate process for data collection as they allow participants to feel safer and share more profound thoughts and reflections on topics that otherwise could be seen as too sensitive (Hanna & Mwale, 2017, p. 262). That might even be more the case in the context of a war and was reflected by some of the interview partners voicing their skepticism towards outsiders like the researcher approaching them.

The interview guide was designed to uncover themes of the role-orientation of the participants explicitly and implicitly through a variety of open-ended questions about their reflection on their role as citizen OSINT investigators in a participative war. Occasionally, depending on the conversation, follow up questions were asked, or some questions omitted as their content had already been covered in the course of the conversation. During the interviews, notes were taken. Afterwards, the interviews were transcribed and read several times. Notes were added and the interview-partners' answers were coded thematically.

As this thesis is an exploratory study, trying to shed light onto a new field, an inductive, thematic coding approach, which does not fully depend on pre-existing theoretical frameworks, was used to identify, analyze, and report patterns/themes within the data set (Braun & Clarke, 2006, p. 77). According to Braun and Clarke (2006), a theme "captures something important about the data in relation to the research question and represents some level of patterned response or meaning" (p. 82). Whether a theme is meaningful does not necessarily depend on quantifiable measures, such as the number of times it is mentioned in relation to the size of the dataset, but rather on "whether it captures something important in relation to the overall research question" (Braun & Clarke, 2006, p. 82). To analyze the patterns, an inductive approach was chosen, which codes the data "without trying to fit it into a preexisting coding frame, or the researcher's analytic preconceptions" (Braun & Clarke, 2006, p. 83). Patterns were identified on a semantic or explicit level, adding codes to the interview transcripts, and then proceeding to assess them in light of the theoretical review of role-orientations. Thus, a code, for this thesis, consisted of a theme that emerged during the interviews and mirrored rules, guidelines, concerns, and profound reflections on their own role by citizen OSINT investigators. It needs to be stated that "for qualitative analysts, analysis

of interview data is never complete, since data may always be subject to analysis from a different theoretical perspective or may focus on different aspects. Thus, any analysis is a partial representation of the data set" (Roulston, 2014, p. 307)

Results

Cognitive role-orientations provide the personal recipes, guidelines, and maps for professional action (Hanitzsch & Vos, 2017, p. 123), representing "journalists' own professional aspirations and ambitions" (Hanitzsch et al., 2019, p. 168). Even though citizen OSINT investigators are not professional journalists, the concept of cognitive role-orientation is used here to analyze how the interviewed subjects perceived and reflected on their activities as private citizens investigating incidents related to the 2022 invasion in Ukraine. It is a first exploratory insight into the cognitive role-orientation of people from all over the world participating in war-related online OSINT investigations, thus contributing to an ongoing discursive and practical negotiation about the shifting boundaries of journalism in the digital age.

After using an inductive, thematic coding approach, this section presents the findings. The first part presents the guidelines and rules that the interview partners declared to follow or not when conducting OSINT investigations, touching upon a major facet of the cognitive role-orientation of citizen OSINT investigators. The second section will look at how participants perceive the impact of their work, on society but also on events unfolding on the physical and digital battlefield. The third section touches upon a prevalent theme that came to surface in all interviews: how the professional jobs of the interview partners influenced and sometimes paved the way into their OSINT-related activities, making them "professional unprofessionals". This is especially interesting as it also touches upon a possible advantage that citizen OSINT

investigators have compared to traditional journalists and media outlets, explicitly mentioned by some interview partners. The fourth section then is based on the aforementioned topics and, at the same time, on the parts of the interviews when interviewees reflected on and describe their own role-orientation. Building on that, this thesis suggests a typology of four broader types of role-orientation of citizen OSINT investigators in a context of war that emerged over the course of the interviews.

The rules and guidelines of citizen OSINT investigators

Rules and guidelines are an essential part of an individual's cognitive role-orientation. They are the mental recipes that citizen OSINT investigators follow when conducting investigations. In the case of people who operate outside of formal institutions, their own personal rules and guidelines potentially also point towards the way in which they negotiate and perceive their own roles. In general, three main themes came to surface in the interviews concerning rules and guidelines. The first one repeatedly emphasized practices of rigorous fact checking and verification. The second one concerned political impartiality. The third one touched upon the theme of responsibility and ethics.

Verification and impartiality

The themes of verification and impartiality were often mentioned together as a bundle of personal rules and guidelines the interview partners declared to follow. The first rule could be summarized as being as rigorous with fact checking as possible. The second one could be summarized as trying to not let your political beliefs influence your OSINT activities.

“The only rules and guidelines I follow are good journalistic rules: source your information as much as possible and don't get involved in hyperbole”, said P1, adding

that he is “pro-Western or Ukrainian, pro NATO, pro-American, but not to the extent that some people are. I do have political beliefs, but I don't want that to influence what I do.” In a very similar way, P6 stated: “If I'm putting information out there about something significant, I need to have at least two sources and they need to be independent sources.”

P7 underlined that his main rule is to “try to get factual and correct information that I can prove with multiple sources”, while P2 said he would present his information “as carefully sourced as possible” and “as neutrally as possible”. “It's apparent if you read my profile that I support Ukraine's efforts, but in the reports, I didn't focus on that aspect of things”, he explained. At the same time, P2 mentioned that he does not “have a lot of rules other than getting as close to original source reporting as possible and just taking a conservative approach to what I put out there”, meaning that he sometimes also shares unconfirmed material but makes sure to declare it to be unconfirmed or initial reporting. “I'll just put the necessary context around it”, he said.

Elaborating on the rules and guidelines she follows, P3 stated that by default she only uses material from sources and channels that she regards to be trustworthy in any sense. Then, she said she would always cross-reference information. For example, if she uses information from a Telegram channel, she would look for other contexts where this specific channel was mentioned. Then, she would start filtering through the content, since “in both Russian and sometimes Ukrainian channels you will see just spams of paid content”. Then, she tries to see whether the information is presented in a biased way, since “either side is trying to establish moral slash philosophical dominance over each other”. “So it's just a lot of filtering, filtering, filtering and trying to keep a cool head, trying to understand what could be relevant, what is relevant, and what is definitely not relevant”, P3 summarized. Asked for the specific establishment of

relevance, P3 mentioned her academic skills as a filter mechanism. However, she also mentioned that the process of evaluating relevance could not be fully detached from her own biases: “This is information that goes through my own filters, my own bias, my own preconceived notions, because as a human, I am not able to completely remove them”, she said. Describing the practical side of things, P4 mentioned to have only two basic rules he follows when doing OSINT: “Do the action which you think will have the most chance of giving you success and then just repeat, repeat, repeat until success.”

Responsibility and ethics

The reflection on ethical rules and guidelines was especially critically assessed by two interview partners. The theme that emerges could be summarized as a rule to try to not do any harm, neither to yourself nor to others.

P5 assessed his own rules in a very critical way. First and foremost, “I didn't ever want to put myself in a position where I felt like I was watching just to watch. I didn't want to be a voyeur, basically”, he explained. However, that does not always work out: “I found myself straying out of that a few times and had to pull myself back and say, you know, hey, you're just looking at this because it's an interesting video of somebody dying. You're just watching it out of fascination or fear or whatever.”

P5’s second rule is trying to never “do anything that I felt would sort of directly expose anyone on either side to direct threat, direct danger. I think for the most part, I managed it”, he said. Elaborating on when he might have broken this rule, he mentioned sharing the exact geolocation of troops, pointing towards the fact that sometimes, information shared by citizen OSINT investigators can find its way into the kill chain of war, especially when it is picked up by armed forces on the ground or their intelligence partners. For that reason, P2 stated that he would not “report on troop movements and those sorts of things in a way that would reveal information that's risky to individuals”.

The third guideline that P5 tries to follow is one of self-preservation: “There were some things that I saw that I wish I hadn't, and that forced me to be more cautious. In the months since [Bucha], I have been a lot more hesitant to sort of go down the rabbit hole (...). There are places I can't go for my own personal sanity,” he explained, saying that he would now be more cautious with graphic content that could potentially cause vicarious trauma.

P7 reflected on similar topics. After some time being invested in OSINT, he realized that “you also need to put safeguards for your own personal mental health”. Explaining that, he asked: “You heard about the video that came out today [which showed the decapitation of a Ukrainian soldier by Russian forces]? That's something I'm not going to watch unless I'm really investigating it. (...)”. Elaborating on the process of coming to focus more on his own mental health, he said that it has been years that he has been “looking at nasty stuff. I mean, I can watch a guy get killed and stuff like that, and I feel nothing. (...) So I really try to get away from the nasty stuff like that, because, I mean, (..) when you see a guy getting killed, you shouldn't be just okay with stuff like that. That's not a good thing for your mental health.” Referring to his own emotional numbness, he makes clear that he has now adapted and tries to have a more cautious approach to graphic content to not put himself into danger.

Like P5, P7 also expressed an uncertainty about the ethical side of some OSINT investigations: “Sometimes I'm not sure if I can publish something. Sometimes I'm not sure if I'm doing the right thing. So I’m constantly questioning my work or what I'm doing”, he said. Concluding his reflection about rules and guidelines, he explained: “You shouldn't be doing any harm, at least to civilians. Don't do anything like stalking someone or giving out personal information. That's a big no. So I guess it's similar to how a journalist works, but it's just that civilian OSINT researchers don't have a

journalist background so they are trying to find out what the codes of this work field are."

In sum, there are three main themes that emerged in different variations concerning the personal rules and guidelines of citizen OSINT investigators in a war-context. The first one is verification and fact-checking: The interview partners, in different ways, always try to cross-verify their information and do not rely on only one source. The second rule is one of impartiality: The interviewed citizen OSINT investigators try to not let their political opinions influence their OSINT activities, even though they know that they cannot completely refrain from that. The third one is one of responsibility: People try to not do harm, neither to themselves nor to others. Almost all of the interview partners, however, also stated that these are rules they make for themselves, resulting from reflections on their activities, not from institutionalized values or protocols like the Berkeley Protocol, which none of the participants mentioned. Some mentioned the similarity with journalistic rules but mentioned that this is something they are still negotiating and finding out for themselves, thus reflecting a somehow individualized practice of ethics that is still in the process of being negotiated.

The professional unprofessionals: the performative advantage of crowdsourced knowledge

A theme that was not specifically looked for in the first place, but that emerged in all interviews is the significant influence that the professional jobs and education of all interview partners had on their OSINT activities and how this, in general, benefits the OSINT community compared to classical journalism. Thus, even though the majority of the interview partners have never received institutionalized training in

OSINT, their professional job seems to have, in one way or another, a significant influence on their OSINT activities, providing private citizens with special knowledge, skills, tool, or routines that turn out to be potentially more important than the technical skills of conducting OSINT investigations. Since this theme emerged in all interviews, this section will provide an overview.

P1, a former member of the US Air Force, explained how his background in intelligence work in the Cold War and his special knowledge about ships has given him the tools to analyze disinformation campaigns as well as visual imagery from the war in Ukraine. In one example he gave, this knowledge provided him the tools to identify specific drone boats. In a very similar way, P6 already had a lot of knowledge about the Wagner group because of his work in the intelligence sector, which he then used, developed, and further elaborated on in his OSINT activities.

P2 stated that “as a lawyer, I do have training that's relevant, even if it's not been focused on the purposes of OSINT”. Elaborating on that, he explained that “the best quality OSINT work comes from people who have special skills”, such as language skills, technical skills or military experience that allows private citizens to analyze information in a detailed way that most people wouldn't be able to do. From his perspective, OSINT is most valuable when people with specialized skills (such as tracking of or the knowledge about flight data, ship data, the Wagner group, cyber matters or economic matters) collaborate. “Nobody can follow all of those things. So when everybody has one area of interest that they have been following consistently for months or years, the level of expertise that develops just can't be recreated quickly, so it's hugely valuable to have access to that depth of knowledge in your network”, he said. According to P2, the result of that crowdsourced form of intelligence is that ”in these

OSINT networks, you're often several days ahead of the news cycle". Moreover, he emphasized that the degree of detail and nuance that's available in OSINT networks offers you a level of understanding of the war that legacy media cannot offer, thus describing a comparative advantage of citizen OSINT networks to traditional journalism. On a performative level, according to P2, the diversity of specialized knowledge that citizen OSINT investigators bring along and combine online gives them a significant performative advantage over news media: "When you have dozens or hundreds of online sources, you're likely to be able to find among that group (...) sources who are better, just because there are so many more people engaging in the competition of analysis than (...) in legacy media", he said. "Legacy media can't keep up with what's being done online".

P3, a trained academic historian, described that her scientific education and practice gave her methodological tools to conduct OSINT investigations, saying that she feels "that part of my education and work life experience is useful in such circumstances".

P4, a programmer, first stated that he does not think his professional job has an influence on his OSINT activities. When trying to geolocate images "being a programmer doesn't really help with these things, unfortunately", he said. At the same time, when reflecting about the rules and guidelines he follows in his practice, he mentioned that the only two rules he follows are the ones of programming: Do the action which you think will have the most chance of success and then repeat until success. Abstracting from his own behaviour and reflecting on the helpfulness of a diverse range of knowledge within the citizen OSINT community, he said that "the more you know about almost anything, the better will be at OSINT: if you can look at

like five pixels on a screen and say that's a T-72 sort of type, I mean, there are people that can do that, that's helpful".

In a different way, P5, a former English professor, reflected on how his work in education, and the related way of critical thinking, prepared him for OSINT: "A lot of what I taught was critical thinking. (...) A big part of what I was teaching was not just how to write, but how to think, how to think critically and examine sources. Having a background in that certainly primed me for OSINT work."

P7, a former draftsman, also clearly drew a line between his professional training and his OSINT activities. His job consisted of "drawing plans and stuff like that for roads, bridges, stuff like that". The skills and knowledge he acquired about the construction of streets, bridges, buildings, and cities turned out to be very helpful for OSINT activities such as geolocation practices. "The skills I got from my previous job, I use them every day now as an OSINT researcher, which is strange, but actually I think it is linked", he said.

In conclusion, a prevalent theme was the link between citizen OSINT investigator's professional job or education and their OSINT activities. On one side, that shows a potential entry door for individuals into online OSINT investigations. A person with special knowledge, skills, or tools might be able, in a lot of cases, to make use of that in OSINT investigations. Thus, even though private citizens have not received any OSINT training, this use of their professional skills point at a community of "professional unprofessionals". This, on the other side, illuminates a significant, comparative advantage in analyzing information that the citizen OSINT community has compared to legacy media. Usually, in newsrooms, professional journalists analyze information, without having immediate access to such a knowledge or community of crowdsourced knowledge.

Perceived impact

The (potential or real) perceived impact of their OSINT activities on the ongoing war in Ukraine also hints at the role-orientation of citizen OSINT investigators. Among the sample, the perception of the impact of OSINT activities showed a lot of variations, ranging from a perception that war-related OSINT investigations almost do not have any impact outside of the OSINT community, to people forwarding their analysis to intelligence services, media outlets and judicial institutions and even providing direct help to private citizens.

Not overestimating one's influence

A recurring theme that emerged was participants stating that they try to not overestimate the impact of their OSINT activities on the ongoing war in Ukraine, either seeing themselves as small, and somehow insignificant parts of the whole OSINT community or dismissing the notion that OSINT might have an influence at all.

Talking about the information he analyzes and publishes, P1 stated: "That information is already out there, and Russians and Chinese have a lot more resources than any citizen OSINT investigator to focus on gathering that information and analyzing it. So, what contributions can I make?" His concise answer was that he could "use my personal experience, my unique set of skills and knowledge base to interpret that and provide a different perspective on what's occurring".

"If we talk about my personal contribution, I think that it's extremely low and insignificant, P3 simply explained. Similarly, P4 said: "I don't think what OSINT does actually changes what's going on the ground that much, if anything at all. You can say it in an indirect sense because it influences people. People influence their governments. Governments make decisions. But I mean, obviously everything is connected in a

sense". In his perception, the war can mostly be influenced by decisions that are made by nation state institutions such as governments, but not by private citizens analyzing and sharing war-related information. Negotiating the boundaries of his own role, he stated that "those who think that the work they're doing has a meaningful, tangible battlefield effect, could maybe be considered combatants". Then, he went on:

> Ultimately, I'm doing it for myself. I mean, you might not like the answer, but I am doing it for myself, not because I don't feel any need or desire to help, but because I don't think it helps in any way. (...) I don't have any reservations that OSINT is meaningful for anyone apart from us civilians outside the war, who then get to know what's going on.

Archiving and accountability

Some potentially meaningful perceived impacts were reported in the interviews. While P1 stated that he had been contacted by journalists and various intelligence service employees after some of his OSINT publications, P5 said that he did pass on some material to the International Criminal Court (ICC). Moreover, he said, "I know there were some that went to the FBI and there were some that went to the UNHCR". Reflecting on whether his OSINT activities could be considered participation in warfare, he said:

> I have tried never to go there. Not because I think that that would be wrong or because I don't support Ukraine fighting for their existence. I absolutely do. It's just not something I'm prepared to be. But it's a blurry line. This kind of work will expose you to moments where you find yourself on one side of a line that you thought you had said 'I'm not going to cross that'. But even with extreme diligence and extreme care, it's very easy to find yourself on the other side of that line. And it's a tough moment.

Like P1 and P5, P6 stated that whenever he comes across some information that potentially qualifies for showing war crimes, he “sent that to folks who are very involved in that type of investigation and research”. Some of the OSINT investigations that he participated in have been sent to the International Court of Justice. “I do think at the end of the day there is value to this aggregation, making sure that multiple people save these and have access to them, and they're archived for a long time”, he said.

Influencing the public sphere

Abstracting from individual cases, P3 emphasized the general potential impact of citizen OSINT investigations on the war. Even though she was describing her own impact as “minimal”, she said that “I think that civilian investigation and open source information is a very important check and balance, but it also has the ability to influence the overall course of policy if some things are made public that previously could have been just swept under the rug or stayed extremely local.”

Her statement feeds into the perceived impact of war-related OSINT investigations by P7. Talking about his work on the Bucha massacre, he stated” I wouldn't say my investigation really had a big impact, but I think OSINT did in general”. Elaborating on that, he went on to describe how OSINT made an impact in the public sphere when investigating Bucha: “There are quite a few videos, filming troops coming into Bucha on specific dates. Using OSINT, people were able, and I too, to understand which units had this sort of vehicle, which street is this vehicle driving in, etc. And when Russians left, we saw the people that got killed and could understand which army unit had been in the area. And that work really did have an impact, because now we know which units were in the area, who was commanding those units, and stuff like that. That's all work done with open-source intelligence. I think it had a quite big impact, also on public opinion, because it was pretty clear and explicit who it was. That

clarity was made possible by OSINT researchers and so I think I maybe had a small impact on that, but not as big as work done by big media outlets".

This theme of influencing not only criminal accountability, but also the public sphere, seems related to another perception of impact, which consisted in helping people to understand what is going on in the war in an almost journalistic way. P2 said that, after publishing his reports, he would get "many, many direct messages from people" to discuss his findings and its meaning. As a result, he started to carry on conversations with people from all over the world, debating the developments and implications of a war. "So I think maybe those two major impacts were just helping people have a greater context for understanding what was happening in the war and, at the same time, hopefully setting some standards for how to report on it in a detailed but neutral way."

In sum, the perceived impact of war related investigations by citizen OSINT investigators show a broad range. While some do not think their work has any meaningful impact, others mention archiving material for potential cases of criminal accountability and informing the public sphere as impact of their work. At the same time, one interview-partner also reflected on his struggle of sometimes crossing a line that he thought he would not cross.

The role-orientation of citizen OSINT investigators in the war in Ukraine: A typology

Asked about how they would describe their role-orientation as citizen OSINT investigators in a context of participative war, four broad, different but interlocking themes emerged which I decided to call "the critical civilian", "the contributor", "the human-rights interventionist", and "the citizen journalist". However, it is important to regard these four role-orientations to be broad, ideal types which, as shown by the

following rich descriptions, in reality are complex and mixed up with each other. In the beginning of each section, a description of the respective role-orientation will be given. Then, the description will be accompanied by rich descriptions from the interviews.

Here, a clarification is necessary as well. As it can be seen in appendix 2, on one side, interview partners were simply asked to describe their role-orientation as citizen OSINT investigators in the war in Ukraine. On the other side, another question asked them to place themselves within the matrix of journalists, activists, civilians, and combatants and explain their choice. None of the participants regarded their role to be one of a combatant, even though some declared to have shared data in the past that might have been used to influence the events on the ground. The following typologie was built using the themes that emerged within these conversations and represents the subjective perception of the participants. It does not claim to present objective criteria to define the boundaries between journalists, activists, civilians and combatants.

The critical civilian

The “Critical Civilian” regards his or her role as a free time OSINT investigator to be a facet of a critical and constructive citizenship that constitutes a fundamental pillar of an informed global public sphere. It is someone who is genuinely interested in and critically engages with news and political processes, wants to know the truth about unfolding events, and enjoys doing OSINT mostly as a hobby for the intellectual and/or performative stimulus, without attributing too much importance to its impact. It is someone who values specifically accuracy and verification for the sake of being an informed and responsible citizen.

P1, getting up every morning at 2AM to conduct OSINT investigations for several hours before his partner wakes up, is one example of the “critical civilian”. “I don't believe that I have any other motivation than providing information that's as

accurate as I can make it", he said, describing OSINT to be a free time activity and a hobby with a political facet: "I'm a civilian who has a passion to defend Western values; democracy, freedom, personal rights, civil rights" he said (P1, 2023). He thinks that "we all have a role to play in participating in our democracies and doing as much to protect those institutions as possible". In his case, participating in war-related OSINT investigations in his free time is a performative way to participate in the protection of democratic institutions. At the same time, even though the war does not physically threaten his life or his home country, he thinks that it does have an indirect impact on the US, regarding the 2022 invasion of Ukraine as "an existential change in global politics".

P2 is another example of someone who showed facets of the role-perception of a "critical civilian". Stating that "open-source intelligence is just the process of coming to understand what is actually happening in a way that's a little bit more verifiable", he described that, when Russia started its full-scale invasion of Ukraine in 2022, he happened to be on Twitter, which he had only joined a couple of weeks earlier. Discovering OSINT-content, he had the feeling of being on top of the news cycle: "I thought that was amazing, getting the news hours or days ahead of mainstream media", he said. Shortly afterwards, he started his own activities, producing reports that compared the officially claimed losses by Russia and Ukraine with publicly available information about killed or wounded soldiers or destroyed weapons, such as images and videos. Reflecting on his role-perception, he stated:

> I want to know what is likely to happen next. And I have a strong aversion to people saying things that are untrue or unsupported. I'm following the news for my own sake in an attempt to understand how the war is likely to develop because it has so many political implications, economic implications, you know,

> for the entire world. So while Canada is not directly threatened, it certainly will have considerable impact here for many years. So I'd like to understand what's likely to happen. And since I'm engaged in this process of evaluating what is happening, I want to see information that's true. So I'm trying to confirm it for myself. I partly see my role as trying to confirm things for my own sake as carefully as possible. But then, when I see other people saying things that either are wrong or unsupported, I provide the right information to them to the extent that I already have available to me.

First and foremost, P2, being interested in the global geopolitical consequences of the war in Ukraine, emphasized that he wants to understand the possible future outcomes of the war and thus, its potential impact. For that purpose, he seeks information that is as accurate as possible, realizing that he could provide this information to others with similar needs. Thus, his role-orientation is that of a critical and politically interested citizen who shares his own insights with others, while, at the same time, reflecting on the roots of his interest being connected to a war that indirectly also affects his home country. In a similar way, P5, a former English professor from the US, stated that he thinks that the war in Ukraine also has an impact on him and his home country: “Ukraine is very, very far from my house. But I think about the geopolitical consequences of the invasion, you know, I feel like it is my problem, even if it doesn't affect me directly”, he said.

P4, a British programmer living in Italy who had already been following the news about Ukraine before the 2022 invasion, was looking for a more accurate picture of the situation at the Ukrainian border in 2021 when he joined the Project Owl Discord server, where he quickly got involved in doing OSINT investigations: “They had a lot of stuff a lot quicker than a lot of other organizations”. That drew him into doing

OSINT himself. On the server, he said, “there's an endless firehose of Twitter images, claims and posts that constantly get sent into the server and we are using open intelligence to see what's real”. Describing how he perceives his role in that war, he said: “You know, it's not like anyone else is putting a gun to my head and making it. So I would say, it's like the desire to know, right? Like, you want to know. You want to know stuff. Stuff comes to you. You have an innate desire to know if it's true.” The strive for knowledge and the intellectual stimulus are the main characters of his role-orientation. **“**I like being on top of things. It's a nice community. It's fun. It's creative and mentally engaging. So yeah, my role is just an individual who's interested in these things and it's like a vessel for keeping on top of things”, P4 said. Then, with a slice of irony, he concluded: “I don't consider myself a journalist. I don't consider myself an activist. I've stayed away from fundraising or talking about any specific organizations that I do or do not support. I think I'm just a weird sort of person who enjoys the research aspect of it.”

P7, from Switzerland, described how his role-orientation changed over time, related to the outbreak of the war. He declared to have always been interested in geopolitics and conflicts when he got into OSINT: “I was just being curious and trying to understand what was happening in the world. Then, when I started investigating Russian deployment on Ukraine's border, that became like a puzzle (...): using my laptop, I could find out where and what type of units exactly are deployed. (...) It became a bit of a game. Like a puzzle. And then, when the war broke out, things became real very fast. I understood that actually now things have changed, it's not a game anymore, OSINT can have a real impact, for example on war crimes tribunals.” Ultimately, when Russia started its full-scale invasion, his role-orientation changed. It transformed into that of a citizen journalist.

The citizen journalist

The citizen journalist perceives their role as a citizen OSINT investigator to be an impartial aggregator and sometimes analyst of information on the line to being a journalist. Here, clarification is needed to again emphasize that this is the subjective perception of the interview partners, the category does not claim to objectively define what constitutes journalism and what does not. In most cases, those who share the citizen journalist role-orientation share their information or analysis with the broader public, directly via digital platforms or indirectly by contributing to broader investigations that are being made public by others. They value verification and truth seeking and very explicitly try to not let their own political beliefs influence their OSINT activities. At the same time, they are very aware of the possible impact of their work on public opinion and ongoing events on the ground and thus reflect on the responsibilities of their role frequently. This role-orientation overlaps with the monitorial role-orientation that Hanitzsch and Vos found (2019, p. 169), in a way in which it sees itself as agents of empowerment who form a counterbalance to sociopolitical authorities and promote critical thinking among citizens.

As described, P7 realized that the start of the full-scale invasion of Ukraine in 2022 suddenly changed his role from being a critical citizen towards being a citizen journalist. Reflecting on when he worked on analyzing footage from Bucha, he realized that “that can have a real impact on what's happening on the ground. It can influence public opinion. it's not a game anymore, it's serious work. Publishing the wrong thing on Twitter can have really bad effects”. Being asked where he would draw the line between a civilian and a citizen journalist, he said that “if you investigate stuff for your blog, you are a journalist. I mean, you are a civilian and a journalist”. This position points towards

the act of publishing OSINT as a line that citizen OSINT investigators draw to define whether their role is similar to that of a journalist.

In a similar way, P1 reflected on his OSINT activities as being very connected to journalism. “Part of what I do is journalism, it's seeking out news and providing the information to the public”, he said, adding that: “I do have political beliefs, but I don't want that to influence what I do”. Asked to further elaborate on that, he described what he refers to: “If I'm sitting around with my friends, having a beer, I will go down those paths. But my personal beliefs and my outside beliefs, I don't allow them as much as possible to influence what I do”, he said. The impartiality of his findings was also a very important point for P2. He stated that he tries to present his information as carefully and neutrally as possible. “You know, it's apparent if you read my profile that I support Ukraine's efforts. But in the reports, I didn't focus on that aspect of things very much. I don't present my own opinion very often. I focus on what's happening and how we can confirm that it's happening”, he explained. When describing his role-orientation, P2 said he would define it as “helping people have a greater context for understanding what was happening in the war and at the same time, hopefully setting some standards for how to report on it in a detailed but neutral way”. Rigorous work standards were especially important to him, especially when he would compare these of “small scale producers” like him with mainstream media who, he observed, sometimes “are not meeting the standard that you hold yourself to.”

P4, talking about the blurring line between journalists, civilians, activists and combatants in participative war, said: “Civilians and journalists, those are the two categories I would apply to myself because OSINT now means that people can be journalists”. When elaborating on why he would apply the category of journalist to himself, he described how his content has been published and republished and has made

its way around the globe. “There is content that has been put out, at least in part, under my name, that a lot of people see as authoritative, via a map which a shit ton of people see as authoritative (...) and I am contributing to it. So in a sense, I can't even deny that I'm producing content that is being put out in a way that is very similar to what news organizations do.” From his perspective, especially those citizen OSINT investigators who do have Twitter accounts, “are essentially becoming journalists.”

The contributor

The contributor role-orientation emphasizes being focused on being part of a bigger movement, wanting to provide their skills, knowledge or investigative abilities to other people or something of greater importance. The contributor usually has specific skills or knowledge that seems very valuable in the context of the war and wants to help those who do not possess that skill set. At the same time, they usually do not publish a lot of their investigations themselves. One main difference to the critical civillian is that the contributor does not mainly do OSINT as a hobby or interest, but because they are aware of their specific skills being needed.

P6 is a good example of a contributor role-orientation, saying that “most of the stuff that I do is not stuff that I'm publishing myself”. Usually, he helps other people with their investigations. “I think about myself as sort of like someone who augments or provides assistance but isn't someone who's posting a lot of the OSINT work on their own account”, he said. Providing further explanation, he described how he usually is involved with a lot of investigations behind the scenes, while not wanting his social media profiles to be OSINT accounts. “I prefer to provide information to folks that might be looking for it”, he said. He then went on to further explain his role-orientation: “My role was really born out of being someone who was very focused on the Wagner

group, specifically what they were doing in Africa. I've seen them get involved in Ukraine more heavily than they have been involved anywhere else up to this point, that really drew me, I guess, to studying this conflict and studying their role", he explained. According to his statement, following the Wagner group was relevant to his professional job, "so it made it easy" to contribute his knowledge to the broader citizen OSINT community. "It was directly tied to what I was doing for my job. So, I felt like that was somewhere I could sort of expand and maybe provide additional information that people might not have about that group."

His explanation of his role-orientation being developed out of a skill set and knowledge he already possessed, wanting to provide that to other people, is a theme that also characterizes P3, a historian living in Russia. "I would just describe myself as just a general contributor", she said. "I try to pick out the important information from this endless stream of posts and news articles that come out every day on various channels and try to gather and systematize that (...) so that other people can pull from it", Her hope is that her activity "contributes to the overall understanding of the situation", while also providing information to other citizen OSINT investigators to help them with their work. She describes her role as a general contributor to something of importance for humanity. Because of her profession, she had an in-depth knowledge in how societies deal with post-war-situations, which made her want to participate in preserving as much information about the war in Ukraine as possible, thus contributing to the construction of an archive and historical memory. "I wouldn't categorize myself as performing the actual investigation rather than contributing to the general database of news, pictures, etc., of various bits of information that either side shares before they disappear into the never-ending information cycle", she said. From her perspective, OSINT investigations consist of three steps. The first one is just gathering and organizing information and

creating a database. The second one is the analysis and systematization of data. The third one, then, is publishing the information, whether on a website, a blog, or just a long Twitter-Thread which explains the general findings. “And my general contribution is only to the first initial stage”, she explained. In the long run, she sees her role as contributing to a bigger project: archiving information from the war for future generations and thus creating documentation of what is going on on the ground. “If we were to put ourselves in a position sometime in the future, looking back at this, I think that this would be a definitely positive, huge contribution to the knowledge of humanity about itself”, she said, also describing her motivation to do so: “In 20, 30, 70 years, I don’t want any questions to be left regarding the ongoing events, what they have been, what they have been not”, she said, before mentioning that her knowledge and skill set defines and also limits her role as a citizen OSINT investigator. “I think that everybody has to have a hard think about themselves, their abilities, and therefore to try and find a place for themselves based on what they can actually do”, she said. “I limit my role and whatever I contribute based on that. And I think that it would be wonderful if more people join, if more people assess their abilities and conduct the work that otherwise would be slipping through the cracks”.

The human-rights interventionist

The human-rights interventionist is someone who, by doing OSINT, hopes to contribute to the promotion and observance of a specific set of values and the promotion of human rights. It is someone with a universalistic approach to global rights, who believes in accountability and values impact. The role-perception is especially focused on providing help to affected civilians, it can be regarded as an OSINT extension of humanitarian and civil society activism. In the desire to pursue a specific mission and promote values, this role-orientation shows similarities to that of “the interventionist”

role-orientation found by Hanitzsch and Vos (2019, pp. 169-170), in which journalists are socially committed and motivated to engage in sociopolitical affairs.

In the interviews, this role-orientation was shown by P5, a former English teacher. He described himself as someone who had always been involved in political activism, and OSINT “has felt in some ways like an extension of that”, he said. He described his role as being “sort of a responsible member of a global citizenry”. “As citizens of a global world, as human beings, I feel that we owe certain things to each other”, he explained. “And doing OSINT felt like a way to contribute my own, very small part, in a way that I felt like I wasn't doing in my daily life before I started doing OSINT”.

As it was the case with other participants as well, P5 did not plan to become a citizen OSINT investigator. “If you had asked me six months earlier, ‘do you think you'd spend hours a day looking at videos out of a war zone?’ I would have said, what are you talking about? You're out of your mind”, he explained. When elaborating on his own role-orientation, he explained that he is “very, very careful” to not overstate his role. “I just don't want anybody to get the idea that I I'm walking around saying, oh, I changed things on the ground in Ukraine”, he said. Then, he went on to tell a story of an investigation he once conducted, in which someone from Ukraine had sent him images of Russian munition spread in their town. Using OSINT, P5 managed to identify an exact model of the munition, which was extremely dangerous. Once he understood, he got in touch with the person and warned them. “If anybody picks it up, it's going to explode and kill them. Propagate this information as much as possible. Tell people these are extremely dangerous and stay away from them. And contact the Ukrainian military if you can, or or the police. But basically, just do not touch these objects. Do not mess with these objects in any way“, he told them. Then, he sent some high-quality pictures

for distribution so people could identify the respective munitions. “I don't want to give myself too much credit, but in that moment, it really did feel like I'm contributing in some way. It's not a huge amount of work, but it was worth it in that moment. (...) It was a powerful moment for me.” Then, months later, the person that he had been in contact with, messaged him, saying that they and their family were safe and alive. “And it was very moving, to be honest. You know, I won't claim any kind of friendship or relationship with this person, but just to have known someone who endured that and to know they were fine, it was powerful”, P5 explained.

He also went on to describe other examples of citizen OSINT investigators helping civilians on the ground in Ukraine in different ways. In the beginning of the war, there was “a user on the Project Owl Discord who helped code some kind of a warning system for incoming missile strikes that interfaced with the Ukrainian emergency services”. Basically, he explained, “it gave Project Owl members kind of a red button to press, like, hey, we're hearing stuff on Russian radio channels, maybe people should go to shelters. (...) It's pretty incredible that we live in a world where that's even possible”, he said. “And it also gives me a lot of hope that so many people are willing to volunteer their time, their energy, their expertise, just to help people on the other side of the planet that they've never even met and, in all likelihood, will never meet. It's pretty cool.”

Reflecting further on his role in a participative war, he also described the process of elaborating on it for himself, a process in constant renegotiation and personal struggle. Describing moments in which he might have crossed his own lines and boundaries, he explained how he asked himself:

> Am I comfortable with saying: hey, the Russians are over there, tell your Ukrainian friends so they can drop a bomb on them? That's a very different

political position than I support the Ukrainians. And I'm not sure I ever made peace with where that line exists exactly. It's something I still struggle with.

Conclusion

What is the role-orientation of citizen OSINT investigators in participative warfare in Ukraine? This was the research question standing in the spotlight of this thesis. After reviewing the existing literature on OSINT, the development of citizens' involvement in news production and the unprecedented rise of private citizen OSINT investigations into the 2022 Russian invasion of Ukraine were outlined. Then, in the theoretical section of the literature review, the war in Ukraine was put into the broader context of the concept of radical war, in which war and its representation have collapsed into each other, blurring the boundaries between combatants, journalists, activists and civilians. Both the unprecedented emergence of citizen OSINT investigations in the context of war and their yet under-examined activities point towards the importance of illuminating how citizen OSINT investigators see their role in a participative war. Adapting the concept of journalistic role-orientations, which provide the mental recipes and guidelines for journalists' action, to the context of citizen OSINT investigations in the context of the war in Ukraine, semi-structured interviews with seven of them were conducted. Afterwards, a thematic and inductive coding approach was used to analyze them. The results point towards several findings.

Discussion of the central findings

First, when reflecting on the rules and guidelines they follow, citizen OSINT investigators declared to specifically value verification, impartiality and responsibility towards themselves and others. Three main rules emerged to be the guiding principles of private citizens' involvement in war-related OSINT investigations: Be as rigorous

with fact checking as possible. Try to not let your political beliefs influence your OSINT activities. And try to not do any harm, neither to yourself nor to others.

Second, citizen OSINT investigators show a broad variety of how they perceive the impact of their work on the war in Ukraine, ranging from regarding it to be almost non-existent to perceiving their activities as having some degree of influence on legal investigations and the public sphere. Moreover, one interview partner also critically reflected on the danger of sharing data that might have potentially threatened individual lives on the ground. However, none of the interviewed persons regarded their role in the context of participative war in Ukraine to be that of a combatant.

Third, even though citizen OSINT investigators may not have been trained in OSINT or journalism and operate outside formalized institutions or networks, there seems to be a group of "professional unprofessionals". All interview partners mentioned, explicitly or implicitly, how their professional jobs as English professors, programmers, lawyers, or historians have equipped them with a specific set of skills, routines or knowledge that influences their OSINT activity and provides, in some cases, certain guidelines to follow. This is especially interesting as the crowdsourcing of specialized knowledge might be a highly significant performative advantage of citizen OSINT communities over legacy media, as they can form networks of hundreds or thousands of private citizens all over the world with which traditional news outlets simply cannot compete concerning the range and profoundness of specialized knowledge.

Finally, when reflecting on their role, four broad and intersecting cognitive role-orientations of citizen OSINT investigators in participative warfare in Ukraine emerged over the course of the interviews. The first one is that of a "critical civilian", who defines their role to be a facet of a critical and constructive citizenship that constitutes a

fundamental pillar of an informed global public sphere. The second one is that of a "citizen journalist" who regards the own role to be an impartial aggregator and sometimes analyst of information on the line to being a journalist, often directly or indirectly sharing their information or analysis with the broader public. The third one is that of a "contributor", a person who has specific skills or knowledge that seems very valuable in the context of the war and wants to help those who do not possess that skill set, providing it to other people or something of greater importance. The fourth one is that of the "human-rights-interventionist", who, by doing OSINT, hopes to contribute to the promotion and observance of a specific set of values and the promotion of human rights.

Comparing the four role-orientations of citizen OSINT investigators that emerged in the interviews with the ones that Hanitzsch and Vos (2019) found, there are two overlapping role-orientations. The "human-rights interventionist" role-orientation shows similarities to the "interventionist" journalistic role-orientation, while the "citizen journalist" role-orientation overlaps with the "monitorial" journalistic role.

In sum, all interviewed citizen OSINT investigators defined their own role as lying between the categories of activism, journalism, and citizenry, dismissing the notion of potentially being combatants in a participative warfare of the 21st century. However, some declared to have struggled with their own role in. a context of war and the question of which datapoints to share or not to not put individuals in danger. This was also reflected by one of the major rules that emerged: to not do any harm to others in any way. However, the very possibility of one's own OSINT data being potentially used for the battlefield could not be ruled out entirely. These reflections point towards a field that is heterogeneous and currently in the process of negotiating its own role in a participative war. The fact that citizen OSINT investigators largely operate outside of

formal or semi-formal structures does consequently lead to an individualized process of coming to terms with the own role-orientations, being illustrated by the fact that none of the participants explicitly mentioned, for example, the *Berkeley Protocol* as a guiding source or protocol to follow. Thus, the empirical findings show that citizen OSINT investigations navigate a context where individuals with different ideas, ethics and role-orientations come together, negotiating, and constructing principals of a decentralized network of private citizens that exists in a field of tension between its' informal nature and the longing for some formal rules and values which seem to be necessary in the war ecology of the 21st century.

Limitations

All the above-mentioned findings must be seen in light of their own limitations. First, since convenience sampling was used to approach interview partners, the sample is not representative and thus does not allow for generalized conclusions about citizen OSINT investigators' role-orientation. Second, 90% of those who were approached directly via Twitter did not reply, raising the question whether the sample might be screwed towards certain citizen OSINT investigators who are especially motivated to share their reflections on their role, rules, and reflections. Third, even though the sample is explicitly not representative, it is striking that only one of the seven participants is female, and six out of seven participants were from the Global North. This points to the question of potential entry barriers of informal citizen OSINT communities or networks and globalized dynamics of exclusion based on race, class and gender which is a topic not touched upon in this thesis. Fourth, even though a typology of four broad role-orientations of citizen OSINT investigators in participative war is suggested based on thematic coding of the interviews, it is important to emphasize that the sample size is

not big enough for data saturation, which, according to Guest et. al (2006, p. 73), occurs within the first twelve interviews in qualitative research using interviews. Fifth, it is important to emphasize that the examined role-orientations do not allow for conclusions about the role-performance of citizen OSINT investigators. For example, even though all the participants declared to follow rigorous processes of verification and fact-checking, none of them mentioned institutionalized rules such as the Berkeley Protocol providing guidance for their actions. To be brief: even though role-orientations provide the guidelines and recipes for role-performance, conclusions about it cannot be made without further research. At the same time, it is important to underline that this thesis is only a first, exploratory step towards shedding light on the role-orientation of citizen OSINT investigators. Further research is needed to shed light on a variety of facets of the unprecedented rise of private citizens' participation in crowdsourced OSINT investigations.

Further research

As this thesis is only a small, first contribution to the academic exploration of citizen OSINT investigations, further research is needed concerning a lot of different facets of the phenomenon. Thus, the following suggestions cannot be regarded to be complete as they only hint towards certain aspects of a complex phenomenon that yet need to be examined. First, research on the normative role-orientation of citizen OSINT investigators and their role-performance would be very valuable. Researching the actual role-performance of citizen OSINT investigators could also be useful for further analysis of their role in participative war. Second, quantitative and qualitative research on the role of class, race and gender within the citizen OSINT community is needed, examining potential entry barriers, how they could be removed and how they potentially

influence the internal agenda-setting and gatekeeping mechanisms. Third, the mental health and coping strategies of citizen OSINT investigators is still a blank spot, even though they potentially are especially vulnerable towards risks such as vicarious trauma. As opposed to employed OSINT investigators, private citizens do not have the support of an institution to deal with the risks of OSINT investigations. Fourth, further light needs to be shed on a theme that emerged in all interviews: how the professional job of citizen OSINT investigators influence their role-orientation and potentially their role-performance.

These are only some suggestions for further research. As the object of analysis is still a novel and changing phenomenon, further contributions towards a more profound knowledge of private citizens' involvement in OSINT investigations in their free time are necessary. This also applies to the field of role-orientation, which was examined in this thesis. Even though it provides first insights and suggests a typology of role-orientations that are prevalent within the sample of this thesis, more research would be very valuable for further exploration and comparison, especially since "roles are never static; they are subject to discursive (re)creation, (re)interpretation, appropriation, and contestation", as Hanitzsch et al. (2019, p. 163) state.

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List of appendices

Appendices

Appendix 1: Table of interview partners

Name Code	Gender	Nationality	Age	Job	OSINT activities per week
P1	Male	United States	60-65	Retired (previously US Air Force)	35-42 hours
P2	Male	Canada	35-40	Lawyer	12-15 hours
P3	Female	Russia	30-35	Historian	3-4 hours
P4	Male	British	20-25	Programmer	5 hours
P5	Male	United States	35-40	Technical writer (previously professor)	14-21 hours
P6	Male	United States	30-35	Intelligence manager	8-10 hours
P7	Male	Switzerland	20-25	Draftsman	8-10 hours

Appendix 2: Semi-structured interview-guide

- How old are you?
- What gender do you identify with?
- What is your nationality?
- What do you do for a living?
- Have you received any professional training in journalism and/or OSINT?
- How and when did you start to get into OSINT? And what is your focus?
- How much time do you usually spend on OSINT-related activities?
- Can you give one example of a concrete OSINT investigation that you have been part of, or that you conducted alone, related to the war in Ukraine?
    - How/where did you publish it?
    - How would you describe the feedback and/or impact?
- Have you ever felt like you potentially did some harm with what you've published?
- I want to know more about how you perceive your role as a citizen who voluntarily participates in OSINT investigations in a participative war.
    - How would you describe your personal motivation to participate in OSINT investigations in the context of a war that is not directly threatening your home country?
    - How do you perceive your role as an OSINT investigator in a war context?
    - To be very concrete: In the context of the war in Ukraine: Where would you place yourself in a matrix of journalists, activists, civilians, and combatants? Please justify your answer.
- When investigating war-related publicly available information, do you follow any specific set of rules, guidelines, or protocols? If yes, which ones?
- Do you feel like you are part of an OSINT community? If yes, how would you characterize the values of that OSINT community? If not, why not?
- Do you think any data you created through OSINT investigations might have somehow influenced the war?
- Is there anything else you would like to mention concerning your role-orientation as a citizen OSINT investigator in the war context?