

GAIA CASAGRANDE

UNIVERSITY OF MILANO

GAIA.CASAGRANDE@UNIMI.IT

[HTTPS://ORCID.ORG/0009-0003-7648-1218](https://orcid.org/0009-0003-7648-1218)

The “Estranged Self”. Selfie Through the Gaze of Amateur Drone

Abstract: The aim of this article is to investigate the practices of mediatization of the self through the analysis of *the dronie*, i.e. the custom of taking selfies using the amateur-drone camera. Given the increased presence of commercial and amateur drones in our “media habits”, it is necessary to investigate their characteristics and the consequences of integrating these technologies into domestic user interaction. This paper, therefore, focuses on the personal use of the amateur drone, on the subject-object relationship, and on the consequent, mediatized, subject’s experience. Starting from the concept of hybrid agency between the media-object and the user, the analysis focuses on ten flight and shooting experiences from a subjective point of view. Adopting an exploratory approach to the topic, the research is conducted through an auto-drone-technography that allows two main elements to be observed: the relationship between *operator-drone-subject*; and the mediatization of the self through the *estranged gaze* of the dronie. These two elements are then discussed from the principles underlying the logic of the selfie, highlighting the continuities and differences between the two practices.

Keywords: dronie; selfie; amateur drone; auto-technography; mediatization

Introduction

Nowadays, commercial and amateur drones are becoming increasingly present in our daily lives: to shoot striking panoramas of nature, for spectacular shows at public events, for mapping endangered territories, transporting small objects to inaccessible places, and so on.

We also have been witnessing the domestication of the commercial drone as a communication media (Casagrande et al., 2020), both in civic and commercial settings, for example: in journalistic covering of events, embedding drone’s footages as evidence; in the custom of shooting photos and videos from above for personal purposes, like in

weddings and private ceremonies; for commercial purposes such as in real estate sales properties, or touristic resorts. Indeed, given the ever-increasing presence of commercial and amateur drones in our daily media practices, there is a need to better investigate their characteristics and potentials, as well as the consequences of integrating “drone-habits” in domestic interaction with the users. These types of drones have recently been explored in the literature, with approaches ranging from socio-political analyses (Richardson, 2020) to aesthetic and visual studies (Serafinelli, 2024), from journalism and humanitarianism (Pong, 2024) to empirical research investigating their everyday uses and practices (Hildebrand, 2021). Over all, commercial and amateur drones raise important questions both with regard to their specific capabilities and characteristics – which they partly share with other types of drones, such as the military ones – and with regard to the everyday experience of this socio-technological object on an individual level.

This last point is of great interest for research purposes, especially in the light of an increasingly widespread dimension of amateurism and the domestic use of this technology. Therefore, this work seeks to shed light on the following research questions:

RQ1: What kind of relation there is between the amateur drone and the user?

RQ2: How does the experience of this technology affect self-perception?

In order to address these questions, this study focuses on the custom of flying an amateur drone to capturing images or video of the self: in other words, the practice of taking selfies with the drone or, as is it informally called, *the dronie*. This practice implies a relationship between the drone and the subject who uses it, and its analysis allows to observe the amateur drone experience on an individual level.

Because of its characteristic of producing and conveying digital images and videos, amateur drones can be considered as media objects that constructs and transforms the social world, through a process of mediatization (Couldry & Hepp, 2013, 2017). This approach allows to analyze the dronie by juxtaposing it with the other form of the mediatized self, *the selfie*, thus, better understanding the “hybrid” agency (Hepp, 2022) between subject and object.

Indeed, the purpose of this research is to investigate the relationship between the subject and the amateur drone through the practice of the dronie, in order to understand what implications this dynamic has in terms of the mediatization of the self. Here, the amateur drone is considered as a socio-technical object whose use produces effects in the personal, social and cultural lives of individuals.

Although amateur drones are very popular on a personal level, empirical research investigating their everyday uses and practices still remains rather niche: for this reason, in this study, an exploratory approach was favored in order to identify noteworthy elements (Swelberg, 2018). With the aim of favoring a subjective perspective, the analysis was carried out with the auto-technographic analysis (Hildebrand, 2020; Kien, 2008; Vannini & Vannini, 2008) of ten flight experiences, conducted between February and November 2024, and from the deriving observations obtained from the field-notes and the dronie-footages.

As a result, it emerges that the main characteristics that distinguish the drone as a socio-technical object – namely those ones of asymmetry, multi-sensory, proximity – significantly impact the relationship between drone and subject and the perception of the self through this media object. Indeed, these characteristics accentuate the perception of distance and de-individualization (Gaeta, 2024) of the subject from the self, thus, fostering an interdependent and tripartite relationship *operator–drone–subject*, which blurs the boundaries between subject and object. Therefore, if the selfie is considered as a mediatized and affirmative form of self, the drone rather portrays an *estranged* one.

Theoretical framework

The selfie as a deep-mediatized self

As anticipated, mediatization theory emphasizes the centrality of the media in shaping human and social experiences and cultures, increasingly conditioning our societies to submit to their logic. Indeed, mediatization enquires the “broader »consequences« of media and communications for everyday life and across social space” (Couldry & Hepp, 2013, p. 192). For Hepp, we have moved from a sociology of mass communications to a sociology of deep mediatization – that is, a sociology of a deeply mediatized world – suggesting three concrete changes related to this shift: “first, a rethinking of agency; second, a redefinition of social relations; and third, a rediscovery of order in light of the digital” (Hepp, 2022, p. 471). For the purposes of this paper, the first change proposed will be considered. In formulating his idea of rethinking agency, Hepp refers back to Action Network Theory (Latour, 2007) arguing that technological and media objects should always be thought of in relation to their “entanglement with human practices” (Hepp, 2022, p. 486). In short, what he calls a “hybrid” approach to agency does not understand media technologies simply as a “proxy” of human agency nor as a stand-alone agency but refers to “a kind of supra-individual agency that is produced in tandem by both humans and machines” (Hepp, 2022, p. 478).

The logic of deep mediatization also applies to the selfie, which, according to its sociotechnical definition, is a digital self-portrait created using the front-facing camera of smartphones, frequently using photo-retouching software, and whose purpose is to be spread, shared, through social media platforms (Faimau, 2020; Hess, 2015; Shah & Tewari, 2016). As Faimau (2020) describes, the nature of the selfie is interactive, and this characteristic makes it a performative practice that situates the subject in a specific time and space: those of the moment in which the selfie was taken.

For Faimau, the selfie is a “mediatized self” whose logic, closely related to that of social media, can be understood as “a digital practice through which discursive strat-

egies, construction and performance of the self are communicated and interpreted” (Faimau, 2020, p. 8). The logic of the selfie is based on four different principles. The first relates to *performativity*, a fundamental element that brings together the subject, the technology, and the audience, thus, transforming the relationship between these three elements. Secondly, the logic of the selfie is related to *contextuality*, linked to the spatial-temporal dimension of the moment in which the selfie is taken, and its relative conditioning by and toward social events. The third principle identified by Faimau is that of *publicity*, which emphasizes the reputational and branding aspect of the selfie, and its influence in managing public perception. Finally, the principle of *reproducibility*, which emphasizes the relationship of the selfie to social, technological and economic structures.

Together with the evolution of social and cultural practices related to digital technologies, selfie-related practices have also transformed – for instance, in the use of the video format, which suits better the characteristic formats of reels and stories on platforms such as Instagram and TikTok; or through the increasingly sophisticated offers of image-editing software, leading even to the generation of *deep fake* selfies. In this evolution of cultural and social practices related to the mediatization of the self, there is also that one of the *dronie*, the custom of taking self-portraits from above with one’s own amateur drone.

Characteristics of the commercial drone and the practice of the dronie

In the last decade, commercial drones have been introduced exponentially into everyday life being used for public activities in various sectors (e.g.: in large events, journalism, logistics and healthcare; etc.) and, in their smaller version of amateur drones, for private and leisure activities such as ceremonies, tourism, games and competitions. Sometimes called “toy-drones”, these objects are usually used with a non-professional approach, they are quite small, manageable, and do not require special permits or licenses; moreover, they can also be used safely by a single operator, and often fly in protected and restricted environments.

Often, commercial and amateur drones have been distinguished from the military ones, yet they share commonalities. For example, a common characteristic is that one of *asymmetry*, which is directly linked to their “vertical operation”, a distinctive feature of drones (Chamayou, 2013). Another similarity concerns the fact that drones are *multisensory* technologies, for example, extending the optical view; capturing thermal information; producing distinctive sound; collecting external data. These features tends to amplify both human and “non-human” senses, hence making the drone a “multisensory” medium (Agostinho et al., 2020; Garrett & McCosker, 2017; Jackman, 2017). Finally, and more generally, drones are “highly adaptive, differentiated-scale assemblages that rely on media infrastructure, materials, supply chains, and

complex discursive similarities and differences" (Kaplan, 2024, p. 103). In addition, a prominent feature of commercial and amateur drones regards its acting in *proximity* to the operator, engaging their senses in real time (Casagrande, 2023).

Despite their steady diffusion, amateur drones has only recently been explored in the literature, with regard to practices and habits. For example, Jablonowski investigated the bodily sensation experience of amateur drone through the lens of telepresence, suggesting to understand "drones as »synesthetic« media technology that allows for a complex, multi-sensory extension of human ranges of perception and action" (in Agostinho et al., 2020, p. 355). Hildebrand (2024) enquired the drones' uses and views in touristic and travel contexts, noticing how it modify and expand the tourist-gaze and, consequently, a certain approach of seeing the world – as a parkour-space. For O'Hagan and Serafinelli (2023), commercial-hobbyist drones "acquire new realities and take on new demilitarized meanings, disrupting our understanding of everyday environments" (p. 546). In particular, the practice of dronie, with its "playful" trait, democratizes the view from above – now no longer the prerogative of control and surveillance systems – opening up new resignifications of the airspace. On the contrary, Gaeta (2024) investigates the power dynamic between the subject and the drone, stressing on the self-tracking and self-surveillance practices that are enacted when one takes a dronie for leisure purposes: a symptom of the introjection of militarism into everyday life. The scholar examined the affective relationship between the amateur drone and its operator, the role played by vulnerability and interdependence, deriving from feminist disability standpoint and focusing on the practice of the drone-selfie. Juxtaposing the practice of the dronie with that one of the selfie, Gaeta argues that dronies are a middle ground between the selfie, whose purpose is to affirm the identity of the person taking the photo, and the bird's-eye view typical of drones, which render the pilot anonymous and "de-individualize their »target« via geographical and conceptual distance, as well as layers of mediation" (Gaeta, 2024, p. 134). In this dynamic, the subject assumes a passive, vulnerable dimension towards the drone, becoming at the same time its observer and target.

Analysis

Methodological note

As previously stated, the aim of this work is to investigate the relationship between the subject and the amateur drone through the practice of the dronie, in order to understand its implications in the process of mediatization of the self. Although the use of amateur drones is now widespread, investigation on the practice of the selfie with the drone is still a niche topic, albeit potentially of great interest from a media studies point of view.

Therefore, this paper embraces an exploratory approach (Swelberg, 2018) in order to examine the characteristic aspects of the drone–subject relationship through qualitative observations. More in detail, these observations are the result of an auto-technographic analysis (Kien, 2008; Vannini & Vannini, 2008) conducted by the researcher, following Hildebrand’s proposed approach to auto-drone-technography where “the self-reflective engagement with technology and through that technology tap into a technological unconscious” (Hildebrand, 2020, p. 92).

Auto-technography, in fact, questions the researcher first-hand and prompts them to reflect on their relationship with the drone. Both the researcher’s movements and those of the technology are analyzed in the surrounding space, as are the visual, tactile, and acoustic sensations that the researcher experiences in relation to the drone-object, and the emotions and instinctive reactions that it arouses in them. As Hildebrand (2021) points out, “auto-drone-technography is thus both a »make happen« – and »make aware« process” (p. 32).

This qualitative method is instrumental in thoroughly investigating the interplay between human practices and technological objects – that is, the “hybrid agency” (Hepp, 2022) that characterizes today’s deeply mediatized world. Clearly, the strictly subjective approach of auto-technographic analysis risks producing results that are difficult to generalize and susceptible to confirmation bias. At the same time, however, the contextualized data produced by this type of analysis allows for critical insight that sheds light on often understudied dimensions (emotions, perceptions, instincts) of the relationship between lived experiences and technology.

The self-observation phase was conducted between February 2024 and November 2024 using the amateur-drone DJI Mavic Mini, and resulting in ten flight experiences consisting on performing drone-movements and shooting dronies. During the flights, observations and experiences have been recorded through written and audio notes focusing on the subjective perspective. Each drone flight and dronie-footage have been approached mostly insisting on the perception of self: in relation with the surrounding space; through the operations of controlling and monitoring by remote; mirrored through the practice of the selfie with the drone. In the meantime, screenshots were taken to document the process of taking a dronie. In this context, screenshots are considered as evidence of what appears on the screen (Frosh, 2018). The images collected in this way were then screened to eliminate those that were blurred, duplicated, or irrelevant to the research, leading to a first selection of 22. From these, a final selection of 10 images were chosen based on their correspondence to the “dual” role played by the researcher during the self-observation phase: as the operator of the object-drone and as its subject. Thereafter, the screenshots and footages were analyzed and discussed together with the observations recorded during the flight experiences, as reported in the following paragraphs.

Notes from flight experiences: the operator, the drone, the subject

The auto-technographic research on the practice of the dronie has brought out three perspectives, distinct yet interdependent within each other: that of the subject as *operator*; then, the *drone* – here understood as media technology; and, finally, the perspective of *the subject* as the protagonist within the frame of the dronie.

The perspective of the subject as *operator* is closely linked to the drone's flight environment. In order to shoot a *dronie*, in fact, one must pay particular attention to the flying-context so that to avoid any interferences – climatic, environmental, legal – while, at the same time, paying attention to the surrounding space and to not harass the people or animals that may be there. In general, the less obstacles are present in the environment, the easier it is to fly the drone safely and, therefore, the easier it is to shoot a dronie. For the operator, every flight experience is also a coordination experience, since the eye must simultaneously monitor the drone in motion, and the screen reproducing the images captured from above. In this context, is the condition of proximity that modifies the relationship between the object-drone and subject: the further the drone flies away from the operator and the controller, the more attention must be paid to it, in order to maintain the flight condition under control. Conversely, the closer the drone flies to the operator, the more attention can be diverted from the environment and context, to focus on the image on the screen. As previously stated, the proximity condition is an indispensable feature of commercial drones, which allows for the extension of perception and awareness of the surrounding space in real time (Casagrande, 2023). In amateur drone flights, the distance between the object and the subject is rather small, and this allows the operator to experience the drone's presence from the bottom up, perceiving its surveying and controlling force.

The drone itself must be taken into account as a socio-technological object, an agent with certain capabilities and characteristics. Although in the case of the drone-toy these capabilities are certainly reduced and limited compared to other, more advanced, commercial models, they are equally significant. The physical presence of the drone must be taken into account, including its mobility and sound characteristics, which make it to all purposes a multisensory medium (Agostinho et al., 2020; Garrett & McCosker, 2017; Jackman, 2017). Indeed, not only is the drone capable of rising vertically, but it can move through the air at different heights and speeds; it can make circular and elliptical movements; rotate on itself; and freeze. It is affected by atmospheric agents – a gust of wind, a sudden rain shower – and emits a perfectly recognizable singular sound, which can be heard both close to the operator and also when flying at longer distances. Moreover, the act of hovering and taking off is also possible because a drone is not an isolated object but operates within a network consisting of, among other things, GPS satellites, WiFi networks and radio frequency transmitters (Gaeta, 2024).

When taking a selfie with the drone the camera moves with it; therefore, to obtain a good dronie, it is necessary to create a distance between the drone and the oper-

ator-subject. With the drone's integrated camera it is impossible to obtain vertical photos – such as those used for selfies – but each photo or video taken calls for a very specific aesthetic, linked to its aerial perspective and a distinct rigidity connected to the integrated stabilizer. Finally, there are also template perspectives designed to facilitate the operator and to capture images in a more appealing way; among these there is also a feature called “dronie”, which consists of an extensive movement that starts close to the operator up to the air, placing the subject in the surrounding, possibly appealing, panorama (Hildebrand, 2024).

Amateur drone flights imply the presence of – at least – one person, the operator, who is at the same time the agent of the drone's actions and *the subject* affected by its presence. Usually, any footage taken with the drone – selfie included – are set in outdoor environments, focusing mostly on the space rather than on the subject, and what emerges is the always-present physical distance between the drone and operator, between the eye and body, between the operator and subject of the dronie. This leads to the questions of who operates on who, and what controls what, blurring the distinction between operator and machine, between subject and object. Confirming what stated by the literature (Jablonowski, 2020), the subject-operator is estranged from the self: its body becomes the target of the drone, while the subject's eye (through the drone-eye) is the weapon (Gaeta, 2024). Indeed, the self is captured through the *estranged gaze* of the dronie.

In the next section, this last point will be explored in more detail, analyzing the images taken with the drone during the auto-technography.

Footage analysis: The estranged gaze of the dronie






The dual role of operator and subject can be observed through the footages of the *dronie*, which is displayed differently on the controller screen and as image reproduced in the photo gallery. Through the controller, in fact, the drone manifests its presence as an object *other-than* the operator, thanks to the display of its settings and features such as the tracking altitude, flying time, geo-location. On the other hand, in the photo-gallery all these information disappear, although indirectly represented in the composition. The tables (A) and (B) portray the two different sequences of images, taken during the auto-technographic analysis, both having the operator as the subject of the shot – the protagonist, therefore, of the selfie with the drone.

The frames grouped in Table (A) illustrate the images as viewed on the controller's screen, obtained through screenshots. Here, the layout of the screen is visible and relevant, showing: the grid, useful for centering the subject; the information related to the flight and the drone (e.g. in relation to battery and altitude); the photo and video options. The footages in Table (A) are further divided into two subgroups. In the first subgroup (1), the subject – *the operator* – is identified through sensors that position her in the middle of the image: first by tapping on the symbol [+] or drawing

a frame around the subject (Footage 1.1); then by framing the subject in the center of the screen and measuring its distance (Footage 1.2); finally, at a higher altitude, the subject is located and placed in the surrounding context. In the second subgroup (2), the subject is observed through the typical bird's-eye perspective of the drone. In this sequence, which proceeds in an extensive way widening the view from the operator outwards, the subject is spotted and localized (Footage 2.1; Footage 2.2) until it blends into its surroundings (Footage 2.3) – while still remaining in the center of the frame.

Table (B), on the other hand, refers to the drone's footages as they appear in the photo-gallery, and it is also divided into two subgroups. In the first subgroup (3), the operator is at close distance from the drone, staring at it and looking into the camera while smiling (Footage 3.1) – an attempt to replicate the common selfie's experience, with its gestures and attitudes, as much as possible. Here, the controller is clearly visible in the center of the frame, as if to emphasize the real-time relationship between the operator and the drone; the perspective is certainly elevated but not necessarily aerial; the surrounding environment is either present as a decorative element (Footage 3.2) or as a circumstantial, not-significant, one (Footage 3.1). Finally, in the second subgroup (4), the controller has almost disappeared from the scene and the subject does not look into the camera, thus renouncing his status as operator. The subject is also not perfectly centered in the frame, and the drone-gaze focuses more in the image as a whole, giving more relevance to the surroundings and constrain the subject to the role of co-protagonist. Here too the perspective is elevated although not necessarily areal, and the horizon is correctly in-line, stabilized, conferring to the images that distinct rigidity. Together, these two elements lead, non-intuitively, back to the drone.

In conclusion, the images shown in Table (A) refer to the gaze of the operator who, through the controller screen has to keep an eye on the moving drone, and captures herself in the *dronie*. These footages make explicit the presence of the drone as an object with functions of surveillance and control, as the subject is identified within the frame, targeted and localized in space – perpetually at gunpoint. On the contrary, the images included in Table (B) represent the subject as the protagonist of the *dronie*, as footages that can be found in the photo-gallery. Here, the presence of the drone is less evident than in Table (A), although it is equally referable to it, due to the stillness of the images and the elevated perspective. In these images, the subject appears less targeted, and even the environment no longer resembles a map on which to place a mark, but rather a preponderant, decorative element. However, the subject appears detached even when looking into the camera, and the shot seems to be taken not by herself, but by someone, something, else.

Controller's screen	
The subject in the frame	The subject as a target
 <p>The subject in the frame</p> <p>Footage 1.1</p>	 <p>The subject as a target</p> <p>Footage 2.1</p>
 <p>Footage 1.2</p>	 <p>Footage 2.2</p>
 <p>Footage 1.3</p>	 <p>Footage 2.3</p>

Source: All images in Table (A) are original, taken by the author, 2024.

The footages in the photo-gallery	
Selfie with the drone	The estranged gaze
 <p>Footage 3.1</p>	 <p>Footage 4.1</p>
 <p>Footage 3.2</p>	 <p>Footage 4.2</p>

Source: All images in Table (B) are original, taken by the author, 2024.

Discussion

The logic of the selfie and the drone: Moments and perspectives

The analysis of the notes and observations of the flight experiences, together with that one on the footages and screenshots of the dronies, attempted to answer the research questions, first highlighting the relationship between the user and the technological object (RQ1), and then the perception of estrangement from the self, experienced during this interaction (RQ2).

Accordingly, the amateur-drone can be considered as a media object capable of “hybrid agency” (Hepp 2022), therefore, not considered as a simple proxy for human agency yet not totally independent from it, but entangled with it. The concept of “hybridization” is also used by Gaeta (2024), who identifies precisely in the drone a middle-ground between the self and the drone. The auto-drone-technography

confirms the “hybrid” quality of the relationship between human agency and that of the media object, through the interdependent dynamic between *the operator*, *the drone*, and *the subject*. However, since the practice of the dronie is strictly linked to that one of the selfie, in the following the perspectives of these three actors will be discussed through the characteristic points of the logic of the selfie, as proposed by Faimau (2020).

Firstly, it emerged how the perspective of *the operator* is closely related to the surrounding flight environment. In this sense, attention to the context (*contextuality*) is crucial, especially with regard to the spatial-temporal dimension of when and how the dronie is taken, and the possible constraints that may arise. Secondly, the socio-material elements of *the drone* can influence the dronie shot. From its distinctive sound to its particular templates, from the camera-stabilizer to the Wi-Fi networks to which it connects in order to operate: all these characteristics refer to, and reproduce, pre-existing social, technological and economic structures (*reproducibility*). Finally, the third element is the operator as *the subject* of the dronie. Here, the focus is on the image, and is linked to the concept of *performativity*, which holds together the subject, the technology used as well as the potential audience of that image. In this research, performativity is also to be found in the dronie shot itself, a type of “performance” certainly less immediate and spontaneous than that of the selfie. Indeed, to shoot a selfie with the drone requires, among the other things: preparing and loading the drone for flight; finding the right spot to fly and to take the photo; not disturbing people or animals in the surroundings; being perfectly coordinated.

Thus, the dronie can be thought as a performed image – but in a different way than the selfie. In fact, in the latter, the subject is at the center of the image, and thanks to its immediacy convey a feeling of closeness regardless of the surrounding context; in this sense, the selfie captures the subject through an *intimate gaze*. On the contrary, in the dronie, there is always an element of detachment between the camera and the subject, also due to the fact that often the subject is located in open environments. Unlike the selfie, the dronie lacks immediacy and spontaneity and, even when the subject is at the center of the frame, they are always an indirect protagonist with respect to the surrounding space. Above all, the dronie conveys the impression that someone or something else is taking the picture. The subject of the dronie is therefore captured through an *estranged gaze*.

This aspect confirms the results of previous studies (Richardson, 2020) which highlighted how in dronies is the environment the focus of the scene, not the subject. Nevertheless, O’Hagan and Serafinelli (2023) emphasize how the subject still plays a fundamental role, since without it there would be no composition or atmosphere in the shot. At the same time, the dominance of the space exacerbates the sense of detachment and distance, which Gaeta (2024) refers to as a de-individualization of the subject.

These aspects call into question on the modified perception of space and time. If the selfie, in fact, is a performative practice that expresses the affirmative power of

self-representation by capturing the subject in the present moment, the same cannot be said of the dronie where spatiality has all the advantage over temporality and where the operator suppress themselves through the mediation of the drone. Indeed, where the selfie captures a moment, the dronie provides a perspective. The "mediatized self" (Faimau, 2020) that comes from dronies is framed within subject's own point of view, as a result of the dual gaze of the operator and the drone, which broadens the horizon but estranges the subject from themselves.

Conclusion

Given the growing presence of commercial and amateur drones in our daily media habits, the aim of this research was to understand, at an individual level: (RQ1) what kind of relationship and interaction exists between the user and their amateur drone; (RQ2) how the experience of this relationship can impact self-perception.

For these purposes, first the analysis was placed within the frame of mediatization, paying particular attention to the concept of "hybrid" agency" (Hepp, 2022) and to the selfie as a form of mediatization of the self. Secondly, the practice of drone selfies was analyzed by employing the method of auto-drone-technography (Hildebrand, 2020; Kien, 2008; Vannini & Vannini, 2008); indeed, this qualitative method allows the researcher's direct experience to be brought to the fore, thus, obtaining contextual yet under-studied information on the relationship between subject and technology, by collecting notes and observations on flight experiences and screenshots and footage of the images.

The notes and observations in the field reported the interdependent interaction between the three perspectives of *the operator*, *the drone*, and *the subject*: a relationship that blurs the distinction between subject and object (RQ1). The analysis of the dronie footages highlighted both the characteristics of control and localization of the subject in space [Table (A)] and the element of detachment and estrangement of the subject [Table (B)]: the subject is, thus, alienated from themselves, mediatized through the drone within its *estranged gaze* (RQ2).

Thereafter, these observations were deepened and discussed in the light of the main elements that distinguish the logic of the selfie: *contextuality*, *reproducibility*, *performativity* (Faimau, 2020). In the selfie, the perception of spontaneity and intimacy refers to the crystallization of a precise moment in time, when it has been taken, centering the focus on the subject. On the contrary, the dronie lacks of spontaneity, since it is the result of preparation and coordination, and the subject is secondary to the perspective of the surrounding environment. Indeed, in the dronie, the temporal dimension is reduced in favor of the spatial one.

These findings are in line with what has emerged in the more recent literature on dronies both in regards of their "playful" connotations – as opening new perspec-

tives for reinterpreting space (O'Hagan & Serafinelli, 2023), and, on the contrary, concerning the de-individualization of the subject, as consequence of a detachment experience (Gaeta, 2024).

This paper has several limitations, starting with its exploratory approach, which by its definition does not provide conclusive data but rather suggests hypotheses that require further investigation. Furthermore, the limited number of 10 flight experiences does not allow for generalized results, which should possibly be compared with other findings, for example, derived from interviews with selected insiders or digital ethnography of dronies shared on social media.

Nevertheless, this research provides food for thought on the relationship that develops between the user and the drone-object; on the mediated perception of the self through this technology; and on the role that spatiality and temporality play in everyday media practices. Future studies could continue along these lines of research, involving different types of participants, such as hobbyists or artists, and exploring not only personal aspects but also the practices and their implications in the social and cultural spheres.

References

- Agostinho, D., Maurer, K., & Veel, K. (2020). Introduction to the sensorial experience of the drone. *The Senses and Society*, 15(3), 251–258. <https://doi.org/10.1080/17458927.2020.1820195>
- Casagrande, G. (2023). *On Our Little Drones: Senses, Violence and the Space*. Institute of Network Cultures. <https://networkcultures.org/blog/publication/our-little-drones/>
- Casagrande, G., Khaddar, M.A., & Parisi, S. (2020). Technology and the local community: Uses of drones in #NoDAPL movement and Dandora dumpsite storytelling. *American Behavioral Scientist*, 64(13), 1906–1920. <https://doi.org/10.1177/0002764220952133>
- Chamayou, G. (2013). *Théorie du drone*. La Fabrique.
- Couldry, N., & Hepp, A. (2013). Conceptualising mediatization: Contexts, traditions, arguments. *Communication Theory*, 23(3), 191–202. <https://doi.org/10.1111/comt.12019>
- Couldry N., & Hepp A. (2017). *The Mediated Construction of Reality*. Polity Press.
- Faimau, G. (2020). Towards a theoretical understanding of the selfie: A descriptive review. *Sociology Compass*, 14(12), 1–12. <https://doi.org/10.1111/soc4.12840>
- Frosh, P. (2018). *The Poetics of Digital Media*. Polity.
- Gaeta, A. (2024). The drone's other target: The generative aesthetics of drone hobbyists' love. In B. Pong & M. Richardson (Eds.), *Drone Aesthetics: War, Culture, Ecology* (pp. 128–144). Open Humanities Press.
- Garrett, B.L., & McCosker, A. (2017). Non-human sensing: New methodologies for the drone assemblage. In E. Gómez-Cruz, S. Sumartojo, & S. Pink (Eds.), *Refiguring Techniques in Digital Visual Research, Digital Ethnography* (pp. 13–23). Palgrave Macmillan.
- Hepp, A. (2022). Agency, social relations, and order: Media sociology's shift into the digital. *Communications*, 47(3), 470–493. <https://doi.org/10.1515/commun-2020-0079>
- Hess, A. (2015). The selfie assemblage. *International Journal of Communication*, 9, 1629–1646.

- Hildebrand, J.M. (2020). Drone mobilities and auto-technography. In M. Büscher, M. Freudendal-Pedersen, S. Kesselring, & N. Grauslund Kristensen (Eds.), *Handbook of Research Methods and Applications For Mobilities* (pp. 92–101). Edward Elgar Publishing. <https://doi.org/10.4337/9781788115469.00016>
- Hildebrand, J.M. (2021). *Aerial Play. Drone Medium, Mobility, Communication, and Culture*. Palgrave Macmillan.
- Hildebrand, J.M. (2024). The tourist drone: Commercial visions and practical considerations. In E. Serafinelli (Ed.), *Drones in Society. A New Visual Aesthetic* (pp. 161–173). Palgrave Macmillan.
- Jablonowski, M. (2020). Beyond drone vision: the embodied telepresence of first-person-view drone flight. *The Senses and Society*, 15(3), 344–358. <https://doi.org/10.1080/17458927.2020.1814571>
- Jackman, A. (2017). *Sensing. Society for Cultural Anthropology Editor's Forum: Theorizing the Contemporary*, 27 June 2017. <https://culanth.org/fieldsights/sensing>
- Kaplan, C. (2024). Everyday militarisms: Drones and the blurring of the civilian-military divide during COVID-19. In B. Pong & M. Richardson (Eds.), *Drone Aesthetics: War, Culture, Ecology* (pp. 98–114). Open Humanities Press.
- Kien, G. (2008). Technography = technology + ethnography. *Qualitative Inquiry*, 14(7), 1101–1109. <https://doi.org/10.1177/1077800408318433>
- Latour, B. (2007). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press.
- O'Hagan, L.A., & Serafinelli, E. (2023). Rethinking verticality through top-down views in drone hobbyist photography. *Visual Studies*, 39(4), 535–548. <https://doi.org/10.1080/1472586X.2023.2201239>
- Pong, B. (2024). The "politics of the faceless": Proliferated drone's-eye views of forced migration. *Cultural Politics*, 20(1), 112–135. <https://doi.org/10.1215/17432197-10969253>
- Richardson, M. (2020). Drone cultures: Encounters with everyday militarisms. *Continuum*, 34, 858–869. <https://doi.org/10.1080/10304312.2020.1842125>
- Serafinelli, E. (2024). *Drones in Society. Social Visualities*. Palgrave Macmillan.
- Shah, R., & Tewari, R. (2016). Demystifying 'selfie': A rampant social media activity. *Behaviour & Information Technology*, 35(10), 864–871. <https://doi.org/10.1080/0144929X.2016.1201693>
- Swelberg, R. (2018). *On the uses of exploratory research and exploratory studies in social science*. <http://people.soc.cornell.edu/swedberg/On%20the%20Uses%20of%20Exploratory%20Research%20and%20Exploratory%20Studies%20in%20Social%20Science.pdf>
- Vannini, P., & Vannini, A. (2008). Of walking shoes, boats, golf carts, bicycles, and a slow technoculture: A technography of movement and embodied media on Protection Island. *Qualitative Inquiry*, 14(7), 1272–1301. <https://doi.org/10.1177/1077800408322708>

Acknowledgments

All the images in this article were taken by the author, Gaia Casagrande, in 2024 and are released under the article's open-access license (CC BY 4.0). ©Gaia Casagrande, 2024.