NOMADIC CAMERA

PHOTOGRAPHY, DISPLACEMENT AND DIS:CONNECTIVITIES

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Chapter 2

Reflections on Photography and 'Flight': Encounters with Human and More-than-Human Lives in Transit

Noemi Quagliati

In 2010, geographer Denis Cosgrove and writer William L. Fox published *Photography and Flight*, a volume dedicated to the history of high-altitude photography – which included everything from hot-air balloons to remote sensing – and its repercussions for numerous fields of knowledge (warfare, geography, archaeology, landscape design, etc.). Photography made during flight – that is, during "the act of moving through the air" – captures terrestrial scenes from above, which Cosgrove and Fox analysed from the very beginning, going back to when Nadar in France and J.W. Black in the US, among others, pioneered aerial experimentation in the 1860s (Cosgrove/Fox 2010). Aerial photography, however, allows us to reflect on another meaning of the term 'flight'. In English, flight can also be defined as the act of escaping, running away or avoiding something. The expression 'fight-or-flight', for instance, was coined by physiologist Walter Bradford Cannon in the early 1900s to describe the human and animal responses – either of reacting or retreating – to an acute threat to survival (Cannon 1915, 211). If employed in the military context, aerial target photography carried out by 'flying cameras' can signal a subsequent aerial bombing attack that will determine the flight of soldiers or civilians from the area previously scrutinised by photography. Paradoxically, photography *and* flight might cause displacement *and* photography. Indeed, in the case of the terror bombing of civilians made possible by photo-reconnaissance, the displaced survivors might want to document their forced relocation through photography. In other words, the employment of flying cameras might give rise to what we can term nomadic cameras: devices used to capture images during flight, forced migration and resettlement processes.[1]

This essay reflects on the role of flying cameras in theorising nomadic cameras by proposing different case studies. Some of them suggest a clear distinction between the functions of aerial devices and the use of ground-based (but mobile) cameras to document travel, migration, flight, displacement and exile: a dichotomy embedded in the different technologies used for producing the often predatory gaze of the 'vertical' and the transitory gaze of the 'horizontal'. However, this antagonism is complicated by unmanned aerial vehicles (drones), recently commercialised as hobby gadgets to a broad public and then used as weapons during conflicts (e.g. in Ukraine).[2] Moreover, aerial and satellite image analysis is no longer the exclusive prerogative of states and corporate entities – militaries, police forces, government departments and companies – but is also carried out by social movements and public research groups that investigate human rights and environmental violations (e.g. Forensic Architecture).[3] The first part of this essay introduces the peculiarities of the aerial perspective compared to other visual techniques for recording terrestrial mobility, thereby reflecting on the concept of overview in relation to the observation of animal migration. As movement is a central category of aerial mapping, the essay also describes the type of trajectory that aerial cameras and outer space cameras follow and how it differs from the mobility of cameras used in the context of flight, exile and migration. This chapter implicitly asks if every type of camera movement can be categorised as nomadic. Indeed, public access to certain technologies creates hierarchies of vision between flying cameras (from above) and other nomadic cameras (from below). Even though these levels of visuality have become more blurry in recent years, people's right to fly is often unequal, and aerial cameras – in contrast to terrestrial cameras – are not yet democratic devices.

OVERVIEW EFFECT: WHALE WATCHING IN THE SOUTHERN HEMISPHERE

In March 1938, after being invited by the German Lilienthal Society for Aeronautical Research to talk about aerial photography's application to prehistoric and protohistoric research, British archaeologist O.G.S. Crawford used the metaphor of the cat's-eye view of a Persian rug to describe the condition of a human's ground-based view (Crawford 1938, 16–17; Nadar 2015, 58). The animal's proximity to the floor makes the cat see a blurred image on the rug; in contrast, an elevated perspective makes

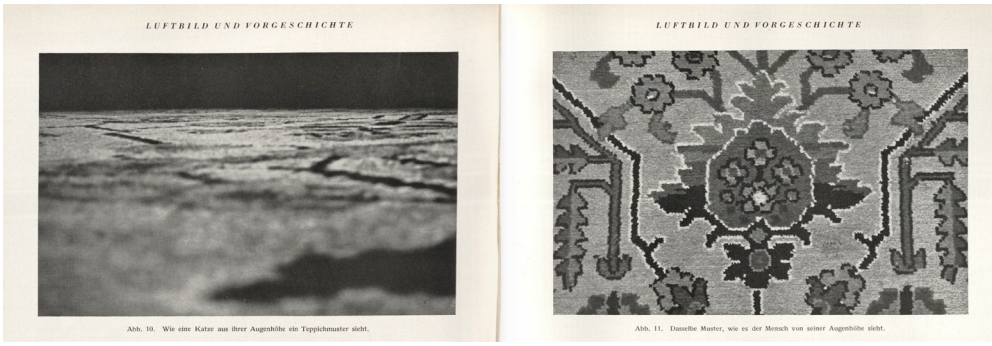

Fig. 1: O.G.S. Crawford, Comparison between a cat's-eye view of a patterned carpet with a human's-eye view (O.G.S. Crawford: Luftbildaufnahmen von Archäologischen Bodendenkmälern in England, proceeding of the conference "Luftbild und Vorgeschichte", Berlin, 21–22 March 1938, pp. 16–17).

patterns visible, giving the viewer a multidimensional, comprehensive and vivid view of a specific area. The metaphorical example of the cat's-eye view (even though figure 1 shows that Crawford had a quite humanised cat in mind) became even more evident to me the first time I saw a much bigger animal, in fact the largest mammal in the world: a whale.

In early September 2023, I paid an academic visit to South Africa, specifically Cape Town and its surroundings. Western Cape province, where the Indian Ocean and the Atlantic Ocean meet, is a multicultural crossroads. Its history saw nomadic Khoekhoen and San people living in the area well before European explorers rounded the cape, opening a sea route to India and the East. Dutch colonial rule introduced farming and the importing of slaves from West Africa, Madagascar, India, Ceylon, Malaya and Indonesia. This difficult heritage is also the foundation of today's mix of cultures, which has transitioned to democracy since the end of apartheid. While South Africa's human past is often narrated through the topics of segregation, forced relocation and migration, its natural history is equally tumultuous.

Southern right whales inhabiting oceans south of the Equator were hunted almost to extinction in the 19th century. These marine mammals provided large amounts of valuable products, such as oil, and whalers named them the 'right whales' to hunt for four main reasons: these animals are slow swimmers, curious about vessels, swim close to the shore and float when they are dead. These aspects made them easy to catch, at least until 1935, when the first international legal protection from commercial whaling came into place. Forty years after this first regulation, signs of

recovery could be noticed thanks to the annual surveys carried out using aircraft sightings and photographs (Best 1990). Photographic flights, which have been operating along the southern coast of South Africa using fixed-wing aircraft and helicopters since the 1970s, are the only way to conduct a census of the whale population, establish a photo-ID catalogue and study how individual whales socialise. This example attests to the use of aerial photography in support of science and conservation, which lately has also been occurring through low-cost remote-controlled drones.[4]

Whale observation, however, is not something only scientists engage in. Indeed, whale-watching tourism is a rapidly growing industry across the globe. Between June and November, whales spend the southern hemisphere winter months in the coastal waters of South Africa, where they rest, mate and give birth after having migrated from the feeding grounds in the subantarctic region. The winter therefore also represents whale-watching season, with many operators offering boat-based tours at the cost of about 60 euros per person, a price particularly affordable for international tourists. Since 1952, the southernmost country in Africa has become an international tourist destination. In that year, the British Overseas Airways Corporation flew the world's first 36-passenger jetliner (the commercial monoplane De Havilland Comet) from London to Johannesburg in 23 hours with five stops along the way – advertised by the *Daily Mail* under the title "Comet in South Africa by Tea-Time".[5] For this reason, small fisherman's villages are today large and bustling towns able to accommodate the needs of coastal and marine tourism. The area of Western Cape, and in particular the Walker Bay Whale Sanctuary in Hermanus, is considered the best whale-watching hot spot.[6] Going on a "blue safari" catamaran trip here means watching whales at very close range.[7]

Tourists come to this part of the world not only to observe nature but also to photograph it. A myriad of clicks can be heard during the tour, and operators encourage visitors to take home "the experience of a lifetime" by suggesting the best way to photograph marine mammals. On the "what to bring list" featured on the website of one boat-based operator, tourists are advised of the following: "Due to being on a moving boat Tripods & Binoculars are not advised & Drones / UAV not permitted".[8] The latter prohibition suggests that it is not uncommon for wealthy tourists to bring their own drones to photograph or film during their vacations.[9] Although tourists are not allowed to record aerial views of the animals, as soon as a whale is spotted a crew member starts to operate a drone that not only records the animals from above but also frames the group of tourists, who are

Fig. 2: Screenshot of drone footage showing the whale-watching boat with the tourists in the background and a whale in the foreground (Recording: Southern Right Charters).

asked by the naturalist guide to greet the device. After the whale-watching experience, on the way back to the mainland, visitors are invited to watch the recordings of the drone on a screen positioned inside the catamaran. During the second half of the two-hour boat trip, the six-minute video is then edited alongside a soundtrack of pop music in order to be ready to be sold at the end of the tour on a memory stick at the cost of 20 euros.

According to the South African Civil Aviation Authority, drones cannot be flown in national parks or protected/conservation areas, and "only drones used for wildlife conservation and research are allowed, subject to special permission".[10] Boat operators might have this special permit if they also support scientific research. However, it is not clear if the permit can then also be used for commercial reasons, and it is obvious that the sale of the six-minute video is an excellent marketing gimmick appreciated by tourists for two main reasons. First, it is a personalised souvenir of the unique experience: the whales recorded in the video are not some random whales that can be found in nature documentaries but are the particular animals the tourists saw with their own eyes and witnessed firsthand. The link between tourists and animals is visually intensified by the video editing: close-ups portraying all the whale watchers with recognisable faces are followed by elevated oblique shots of the white boat with the tourists in the background and a whale in the foreground (fig. 2). Aerial photographs attest, therefore, to the real presence of a person in an extraordinary place with the giant animals. The eye of the drone provides the only opportunity

Fig. 3: Passengers' view of the whale and the drone from the boat during the whale-watching tourist trip, Hermanus, 2023 (Photo: Noemi Quagliati).

Fig. 4: Screenshot of drone footage showing two southern right whales from above through a nadiral perspective, Hermanus, 2023 (Recording: Southern Right Charters).

to portray the tourist together with the world's biggest animal. Indeed, the size and the importance of the animal necessitate that the drone acts as an extra-long selfie stick, positioning the whale in the front while elevating the view to include all the elements in the same scene.[11]

The second essential reason these videos are commercially effective is the unexpected feeling produced by seeing the whales from above. From the boat, tourists had seen only some parts of the whale; they had metaphorically observed only the 'tip of the iceberg' (fig. 3). With

the animal close to the water's surface, the drone elevation shows the unseen. The view from above makes the tourists understand their visual limitation, described by Crawford with the metaphor of the cat's-eye perspective; through the drone, however, it is possible to see the whole picture (fig. 4). The tourists had been so close to the whale, but from their perspective they were not able to grasp the animal's real size, shape and colour. The aerial view ensures a deeper look at the water and the big creatures that inhabit it. It is not a coincidence that Heathcote Williams's 1988 book-length poem *Whale Nation* ends with: "From space, the planet is blue. / From space, the planet is the territory / Not of humans, but of the whale". This hymn to whale protection became famous after being made into a film by BBC Television, and the poem's reference to a blue planet observed from outer space came from the popularisation of the 1972 NASA Apollo photograph known as *Blue Marble* (Williams 1988). One of the first clear colour images of an illuminated face of the Earth, taken with a modified Hasselblad 500EL, it became a symbol of the American environmental movement in the 1970s (NASA 1973; Cosgrove 1994). Since then, the distant view has begun to represent something other than the dominant, propagandistic gaze claimed in the Cold War context of the space race. Instead, it began to signify a holistic view of the world by encouraging less anthropocentric discourses about water ecologies and a better understanding of aquatic fauna.

The case study described so far is representative of the way in which the touristic gaze meets the aerial view when observing an aquatic migratory species (Urry/Larsen 2011). This example also shows the advantages of the elevated perspective (both oblique and vertical) in recording the natural world in the tourism industry as well as in conservation. The overview effect is a debatable concept theorised by the American author Frank White in 1987 to indicate a mental reaction astronauts personally experience when observing the Earth from space, which, according to White's analysis of astronaut accounts, should increase their connection with Planet Earth as a whole. Space psychologists have investigated the overview effect in terms of awe and self-transcendent emotions (Yaden et al. 2016). However, historians have also criticised the generalisation of considering this effect as a "truly transformative experience", which implies "unity with nature, transcendence, and universal brotherhood" (Bimm 2014). Even though it is important to describe the origin of the overview effect as a concept developed from space history, I argue that the literal meaning of the word overview effectively summarises two

fundamental qualities of the aerial view that also emerged in the context of whale watching. The aerial perspective is indeed both “a view from an elevated position”, namely the panoramic view that creates wonder in the tourists, and “a general understanding or description of a situation as a whole”,[12] a surveying tool appreciated by scientists.

MOVEMENTS, PATHS AND TRAJECTORIES OF AERIAL VISION

Since movement is an essential feature of nomadism, it might seem that a camera is more nomadic the greater the movement and the distance it is designed to perform. From this perspective, aerial cameras installed on flying vehicles could be considered nomadic devices. The dream of disanchoring the human eye from the ground is what led to the development of balloons, which initially ascended into the air only up to the length of the tether. Similarly, in the kite photography developed at the end of the 19th century, the tether line rolled onto a reel symbolised both the limit of movement and the control from the ground (fig. 5a, b). Moreover, the low speed of the camera shutters – together with the fact that wet glass plates needed to be developed in the basket of the balloon just after the exposure – prevented people from taking pictures while flying. Therefore, aerial photography was a perspective from a static point of view in the sky for many years, at least

Fig. 5a, b: Arthur Batut, Kite photography: landscape with the tail of the kite in the foreground, 1890, 13 × 18 cm, silver bromide gelatin glass negatives; tether line rolled on a reel, c. 1890, 5.5 × 7 cm, albumen print (Collection Musée Arthur Batut/Archives départementales du Tarn).

until camera shutter technology advanced and dry plates (and later roll film) made it possible to obtain sharp images during free flights.

From the beginning of the 20th century, the capacity to photograph from a vantage point freely moving in the sky was finally made possible thanks to navigable and dirigible flying machines. Airships consisting of a large balloon filled with gas that is lighter than air and driven by engines (the most famous rigid model being the German Zeppelin) were known in English simply as dirigibles. Interestingly, this word encapsulates the idea of a movement capable of being directed or guided and less subject to atmospheric phenomena such as air currents.[13] This controlled powered flight made it possible to go straight toward targets, which was an important quality for transforming aerial photography into a scientific discipline as well as an instrument for military reconnaissance.

Serial aerial cameras installed vertically in the fuselage of powered aircraft could also create aerial maps of a vast area by recording a series of photographic sections of the terrain using a technique known as photographic mosaic. Combining sequences of aerial pictures in a logical concatenation resulted in a homogeneous rendering of space. First developed in the First World War, the creation of this kind of aerial photomontage required the controlled movement of the aircraft, which had to follow a straight route in order to be able to record the terrain without gaps (Saint-Amour 2011). By mapping with automatic film aerial devices, the kinetic qualities of both flying machine and flying camera (the controlled and straight movements of aeroplane, camera propeller, film and shutter) serve to record the terrain as a static and uniform photomap (Quagliati 2023). The magazine *Marco Polo* provides a good summary of the accurate flight path a pilot must follow to carry out aerial surveys. A 1985 article regarding a new photomap of Venice commissioned by the council's town-planning department states:

> The plane's route must follow with millimetre accuracy the coordinates prearranged by the Parma Aerial Surveying Company, which is entrusted with the photographic shooting phase. In order not to deviate from the coordinates, the plane, which flies nine hundred meters above the ground, must follow over 600 landmarks in the historic centre of Venice. A difficult feat. (Salzano 1985, 29)[14]

The strict trajectory developed in mapping and targeting aerial photography can also be seen in contemporary practices. One example concerns the use of drones for fawn rescue in agricultural land. In southern Germany,

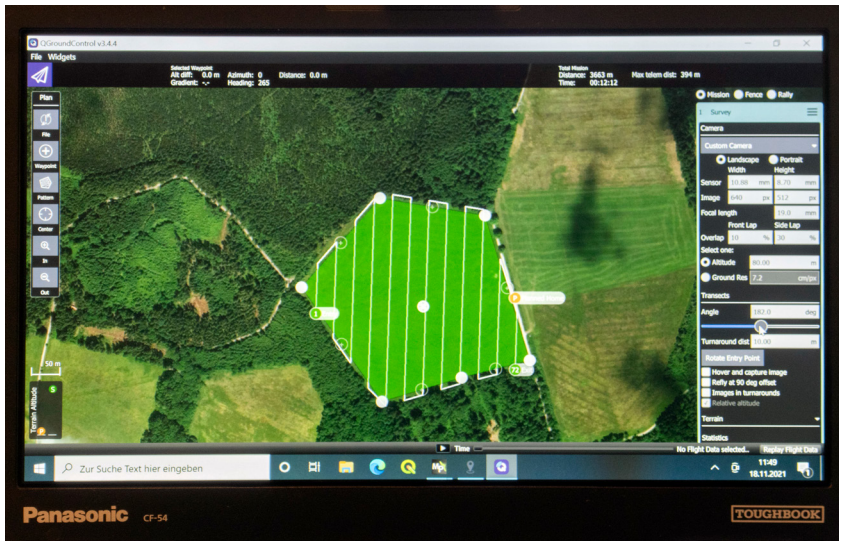

Fig. 6: Software allowing UAV operators working at the Art and Nature Foundation in Nantesbuch (Bavaria) to set drone parameters to scan an entire field area using a thermal camera in order to pinpoint the precise location of fawns (Photo: Noemi Quagliati, 2023).

the rise in temperatures in the spring marks the beginning of the mowing season, which tragically also coincides with the roe deer birthing period. After giving birth, the female deer typically hides her newborns in tall grass to protect them from predators. In their first weeks of life, baby deer hidden in cultivated fields are still unable or unlikely to run from threats. As a result, an estimated high number of fawns are killed every year.[15] To reverse this deadly scenario, farmers and environmental organisations are collaborating using drones specifically designed to pinpoint the precise location of fawns so they can be relocated before the passing of the tractors (Israel 2011; Cukor et al. 2019; Scheder 2020). Fields that need to be mowed are inspected in the early morning with a drone equipped with a thermal camera, following the same principle of target reconnaissance. Ground control station software allows unmanned aerial vehicle (UAV) operators to set parameters for the flying mission, which involves the drone following a well-defined single serpentine line in order to record the entire field area through vertical images (fig. 6). In just ten minutes, the drone is able to search around ten hectares and provide the fawns' GPS position so that the animals can be removed.[16]

Another example of strict trajectory can be found in satellite image mosaics, which nowadays provide global coverage of the Earth. Outer

space cameras or imaging devices are naturally bound to an orbit, which traces a circle that can only have different altitudes and inclinations, even though observation satellites are placed in low-Earth orbit for a high data resolution. Therefore, a satellite trajectory always follows the same circle as the Earth simply spins underneath, allowing the acquisition of strips or tracks of images that are subsequently stitched together. Remote sensing imagery shows how the movement of aerial cameras and outer space recording devices is transnational, even though all their functions are designed to follow a strict flight path that enables them to transmit their recordings to specific ground bases.

Having a home point is particularly evident in the case of drones, which have a 'return to home' (RTH) feature that brings them back to the location where they were launched when they lose connection or when the battery is nearing depletion. As the monitoring of territory has become one of the main purposes of the development of aerial cameras, precise measurability, clarity and analytical techniques are essential features of these devices. Consequently, aerial reconnaissance and survey require cameras to follow a predetermined trajectory that does not allow for any change of course and can hardly be described as nomadic. The fixed set-up paths most aerial cameras follow contrast with the idea of seasonal nomadism influenced by environmental circumstances and the availability of resources. Moreover, even though mobility characterises aerial cameras, the way flying devices move also differs from a further definition of nomadism as the "roaming about from place to place aimlessly, frequently, or without a fixed pattern of movement".[17]

HIERARCHIES OF ABOVE AND BELOW: THE MEDITERRANEAN MIGRATION ROUTE

In 2023, the Holocaust memorial in Milan hosted an exhibition titled *La memoria degli oggetti* (The memory of objects) to commemorate the tenth anniversary of the 2013 Lampedusa migrant shipwreck in which 368 people lost their lives. Fleeing the military dictatorship and forced conscription, most of the victims were Eritreans in search of asylum but with no chance of obtaining a visa to fly to Europe or of accessing other legal options such as humanitarian corridors. Due to the high number of corpses found around the fishing boat and in the wreck of the hull, which sank close to the shore, this tragic event was the first migrant vessel incident on the Mediterranean Sea to receive widespread media

coverage in Europe.[18] The Italian government reacted by launching the rescue operation Mare Nostrum, which, after lacking financial support from EU member states and being criticised for being a 'pull factor' of irregular seaborne migration, was superseded by Frontex's Operation Triton, exclusively focusing on border control and surveillance.[19] Failures of European migration policies and subsequent gaps in rescue capabilities were bridged by humanitarian non-governmental organisations (NGOs), which conduct search-and-rescue operations on their own to this day. Despite the public outcry and indignation at the 2013 shipwreck, this complex situation contributed to over 28,000 migrants and refugees dying along the Mediterranean routes.[20]

In an effort to recognise the victims not as collateral numbers in the migration crisis but as individuals with their own stories, feelings and identities, the Milan exhibition shows for the first time the possessions that migrants and refugees associated with the 2013 shipwreck kept with them while crossing the Mediterranean Sea. In doing so, it focuses on building an intimate relationship with the lost lives of the victims by showing their very concrete belongings: mobile phones, medicines, toys, watches, pieces of paper with contact numbers, religious symbols and many photographs (El Maktafi 2023). These creased and warped pieces of photographic paper ruined by seawater corrosion convey people's lives before their flight by portraying images of couples, families and friends, as well as means of identification like passport photos (fig. 7). These photographs and other personal effects, together with the forensic analysis of the corpses, are the only elements remaining to identify the victims. "Identifying the corpses is not just a question of restoring dignity to the dead, it is also necessary for the health of the living", says Cristina Cattaneo, a professor of forensic pathology. She advocates for the right of identification of people who die attempting to cross the Mediterranean, claiming that this effort should be coordinated at the European level (Cattaneo 2018; Tondo 2021).

Being moved by the stories of people who are usually only described as "humanity in flight" seems at least possible by observing their possessions and photographic portraits, the latter consisting of visual records that are able to establish a close connection with someone else's emotions. Photos that migrants and refugees keep with them, as well as the photos taken during their travel and stored on smartphones, have specific qualities that are far removed from aerial images. Photos belonging to the victims also signal the failure of the European Union's migration and asylum policies as well as of governmental sea rescue missions.

Fig. 7: Anonymous, Group photo ruined by seawater corrosion belonging to a migrant travelling from Libya to Italy onboard a fishing boat that sank off the island of Lampedusa on 3 October 2013 (Photo: Karim El Maktafi/Zona, 2023).

There are, however, other pictures from elevated positions that have become symbols of migration across the Mediterranean. One of them is Massimo Sestini's shot from a helicopter showing a crowd of refugees on board a boat before being rescued by an Italian naval frigate working as part of operation Mare Nostrum (fig. 8). Sestini, a photographer who experimented with zenith angle shots in journalism, was authorised to document the Italian rescue operation in June 2014. His photo, which won second prize in the World Press Photo – General News Category, recalls Alfred Stieglitz's iconic photo *The Steerage* (1907) in its approach; that is, it aims to combine the documentation of events with a geometric construction of the shot. Portraying more than 500 people (an equal number was probably in the hull) joyfully looking upwards, the photographer – who was positioned outside the helicopter – constituted for these people the possibility of being rescued and hopefully beginning a new life in Europe (fig. 9). The photo therefore embodied the humanitarian approach of the Italian government's search-and-rescue operations in 2014, which saved more than 150,000 people but which was disbanded a couple of months later, to be replaced by the EU's surveillance operations (Lerner/Gnocchi 2019).

Even though Sestini's picture became a Western symbol of the Mediterranean migration crisis, it significantly differs from the

Fig. 8: Massimo Sestini, *Mare Nostrum*, rescue operation in the Mediterranean Sea around Lampedusa, June 2014 (Photo: Massimo Sestini, 2014).

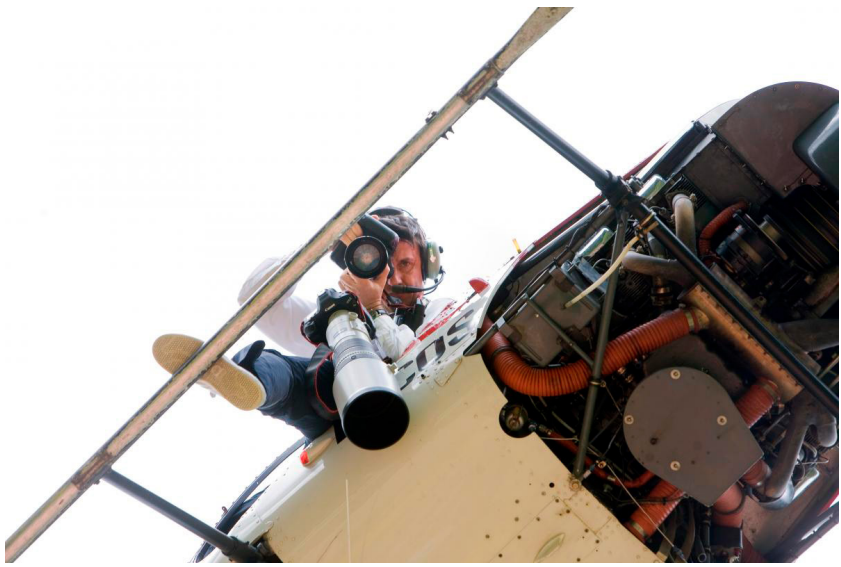

Fig. 9: Photographer Massimo Sestini positioned outside the helicopter to take vertical images used in journalism (Photo: Alessandro Rossini).

photographs brought by the migrants and later exhibited in Milan. Not only does the dangerous perspective (from below) of the people who are forced to leave their countries contrast with the point of view (from above) of the rescuers and maritime patrols that monitor the sea, a hierarchy of mobility precludes categories of migrants and refugees from the Global South from travelling with aeroplanes, meaning that there has also been, for a long time, a strict distinction between aerial cameras and terrestrial cameras.

Unlike bulky, complex and expensive aerial cameras, amateur cameras are designed to be small, portable, easy to use and affordable. At the beginning of the 20th century, the advertisement of the 'Kodak girl' spending her holidays at the seaside with her distinctive striped dress and a camera in her hand demonstrates that the American company was eager to increase its clientele by including upper-class women (Smith 2012, 105). Over time, the general public began expressing a desire for their photographs to be available as quickly as possible, which led to the development of instant cameras such as the Polaroid. In contrast, only a limited number of users employed aerial photo devices, and the infrastructure that produces such images often remained unfamiliar to non-specialist audiences, in particular to women. For instance, even though Western Allies employed women as radar operators and photo reconnaissance analysts in the Second World War (Constance Babington Smith, a member of the British Women's Auxiliary Air Force, is one well-known example), they did not serve as aircrew (Babington Smith 1957; Powys-Lybbe 1983). Therefore, women were almost totally precluded from using aerial cameras – Margaret Bourke-White's aerial photography with a K-20 from an American bomber is, in fact, considered a heroic exception.[21] In this perspective, aerial cameras are mainly developed for surveying, surveillance and scientific monitoring purposes carried out by men, while terrestrial cameras used by amateurs have always been advertised as democratic tools to record life experiences and emotions.

The dichotomy between the users and uses of aerial cameras and terrestrial cameras remained valid until the commercialisation of drones – one precursor being pigeon photography. This latter technology was patented in 1907 by Julius Neubronner, who tried to propose his invention as both a military device and a hobby gadget but was unsuccessful in both cases. Advertised all around the world, it was certainly considered a curious invention (Degiorgis/Salomon 2019). Nevertheless, the animal component of pigeon photography made it a complex technique not

suitable for use by the general public. From a military point of view, this method was unreliable, even though aerial target photography using pigeon cameras was theoretically possible by calculating the speed of the homing pigeons in relation to the target's distance. Nevertheless, since a pigeon could carry a maximum weight of 75 grams, the size of the cameras could not be increased. Without a long focal length, it was impossible to magnify distant objects without enlarging the negative, with the result of obtaining blurry images that could not be rectified (Neubronner 1909; Brons 2006).

Producing sharp-focused photographs that trained photo interpreters can scrutinise is essential for aerial cameras. This quality is also necessary to provide evidence of a violation of human rights during investigative journalism or projects like Forensic Oceanography (Heller/Pezzani 2020). These studies make use of surveillance tools used by patrols to practise a "disobedient gaze" and thereby reveal the structural violence against migrants across the EU's maritime borders, especially the reluctance to initiate rescue operations (Heller et al. 2022).

The war in Ukraine has shown that drones commercialised to a broad public as hobby gadgets have then been employed as instruments of resistance by the population (and they have also been modified for transporting weapons). Therefore, the distinction between who has the capacity to monitor from above and who is subjected to this vision is nowadays more difficult to make. The ambivalent utilisation of drones was also the subject of the exhibition *Game of Drones. Of Unmanned Aerial Vehicles* organised at the Zeppelin Museum in Friedrichshafen, Germany, in 2019. The exhibition focused on how drone technology is used in protests, feminist perspectives, surveillance/counter-surveillance and also areas of animism (Emmert et al. 2020). However, doubt remains as to whether specific uses of flying cameras can be ascribed to forms of nomadic cameras.

If obtaining pictures with good resolution and measurable results is an important quality for aerial monitoring when applied to science, national security and even for reporting human rights violations, being in transition often means using makeshift devices that produce blurring and granular effects as well as a hesitant framing of the image. I would like to conclude by mentioning the use of photography in W.G. Sebald's literary work, which is centred on the themes of memory and loss of memory through a combination of fiction, travelogue, memoir, history and biography. In a conversation with Christian Scholz on the relationship

between literature and photography, the author affirms: "That's typical for photographs after all, that they lead such a nomadic existence and then are 'rescued' by someone". He then adds: "I use the camera as a kind of shorthand or *aide memoire*. […] I don't want to integrate images of high photographic quality into my texts; they are rather documents of findings, something secondary. It is actually quite nice when this indistinctness somehow finds its way into the images" (Scholz 2007, 546).

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NOTES

1 In this case, it would also be appropriate to say that 'flying cameras' might produce 'fleeing cameras'. Burcu Dogramaci and Helene Roth (2019) first used the term 'nomadic camera' to describe photography in the context of flight, exile and forced migration. Later, Dogramaci (2022) expanded this concept to also include voluntary mobility and cross-border changes of place.

2 During the first year of the Russian invasion of Ukraine, numerous reports emerged testifying to the use of civilian drones in support of military operations. Western news sources featured several of these examples, highlighting Ukraine's successful David-and-Goliath resistance (see Bowman 2022; Borger 2022; Myre 2023; The Economist 2023).

3 https://forensic-architecture.org. Accessed 15 December 2023.

4 See the work of the Save Our Seas Foundation, https://saveourseas.com/project/id-shot-southern-right-whales/. For the use of airplane photography for animal conservation and nature tourism, see also Lekan 2020.

5 See Anonymous, a, 1952. After a series of crashes that occurred between 1953 and 1954, all Comets were grounded and the world's airlines largely opted to fly with the American Boeing 707 and Douglas DC-8. For the history of commercial aviation, see Asendorf 1997; Elliott/Urry 2010; Greiner 2022.

6 Even though Hermanus is known as "Little Monaco" for being one of South Africa's wealthiest coastal strips, the income gap between white and non-white residents remains apparent. In Hermanus' township Zwelihle, socioeconomic conditions continue to reflect past segregation policies and the lives of people in the shacks are often stigmatised for undermining the holidaymakers' narratives (Hartford/Langa 2018). For an analysis of shack areas in post-apartheid South Africa, see also Bank 2005.

7 The distance vessels must keep from animals worldwide is 300 m, but they can move as close as 50 m if granted special permission. These cetaceans display a natural curiosity for boats, and since they spend considerable time at the surface of the water to breathe, tourists can easily admire and photograph them.

8 www.southernrightcharters.co.za/what-to-bring/. Accessed 15 December 2023.

9 For the uses and aesthetics of drones apart from military usage, see Conradi 2021.

10 https://drone-laws.com/drone-laws-in-south-africa/. Accessed 15 December 2023.

11 For an analysis of the digital selfie in relation to other media of self-portrayal, see Peraica 2017; Eckel et al. 2018.

12 See "overview" in the Online Etymology Dictionary, www.etymonline.com/search?q=overview. Accessed 15 December 2023.

[13] Dirigible, short for 'dirigible balloon', comes from French *dirigeable* "capable of being directed or guided", from Latin *dirigere* "to steer". See "dirigible" in the Online Etymology Dictionary, www.etymonline.com/word/dirigible and Encyclopædia Britannica, www.britannica.com/technology/airship. Accessed 15 May 2024.

[14] It is interesting to note that the 1985 photomap of the Venetian urban space was publicly referred to as "Jacopo de' Barbari's technological heir". De' Barbari's *View of Venice* (1500) is indeed considered one of the first examples of a bird's-eye view.

[15] German farmers and hunters have long practised *Kitzrettung* (save-a-fawn) by means of deterrence devices or/and low-tech alternatives to drones, e.g. by walking through meadows and fields in a line. The search for fawns does not take place solely for ethical reasons; failure to prevent harm to wild animals during grass mowing can lead to prosecution with fines up to 10,000 euros under German law. Moreover, dead fawn carcasses that are incorporated into silage and hay can potentially contaminate livestock with botulinum toxins (Moeller Jr./Puschner 2007).

[16] I am grateful to the foundation Kunst und Natur in Nantesbuch (Bavaria), especially Sinan von Stietencron and Martin Nicklbauer, for insights on fawn rescue using drones. Moreover, I am indebted to Talitta Reitz (Rachel Carson Center Munich) for sharing her expertise on landscape management through aerial technology and joint fieldwork.

[17] See "nomadic" in the Merriam-Webster online dictionary, www.merriam-webster.com/dictionary/nomadic. Accessed 15 December 2023. For the connotations of the term 'nomad' in different time periods, see also Kaplan 1996.

[18] Migrant vessels did not receive media attention before 2013, unlike shipwrecks involving Europeans, such as the partial sinking of the *Costa Concordia* in 2012.

[19] After Triton, the European Border and Coast Guard Agency (better known as Frontex) launched Themis operation, and in 2015, the military mission European Union Naval Force Mediterranean (EUNAVFOR MED) was also initiated. For an analysis that calls into question the argument that search-and-rescue operations are a pull factor of irregular seaborne immigration, see Cusumano/Villa 2019.

[20] https://www.europarl.europa.eu/RegData/etudes/ATAG/2023/751479/EPRS_ATA(2023)751479_EN.pdf

[21] Margaret Bourke-White was the first accredited woman photographer to be authorised to fly on combat missions. Her aerial recordings can be seen in *LIFE* magazine's essays *Life's Bourke-White goes Bombing* (1943) and *The Battered Face of Germany* (1945). Her experience in taking aerial pictures is described in her autobiography *Portrait of Myself* (Bourke-White 1963, 223–233).

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