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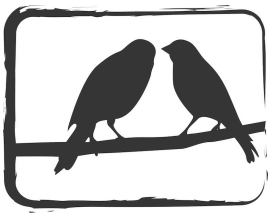

Genesis, Retold: In Search of an Atlas of the Anthropocene

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ABSTRACT While, within the last decades, the atlas has lost its dominance as a medium of spatial representation to digital media, it has recently attracted a significant aesthetic interest. Artists and writers have created books that are explicitly or implicitly linked to the atlas, delving into its history, its epistemological preconditions, and its representational capacity. In this essay, I suggest a connection between this attraction to a supposedly outdated medium and the representational challenges raised by the model of the Anthropocene. A first example offers Sebastião Salgado's *Genesis* (2013), a monumental collection of photographs that promises a journey "to the beginnings of our planet," confronting the viewer with the dimension of geological time into which human agency has expanded. Due to the indexicality of photography, the *Genesis*-project has to approach deep time by movements within space, and thus it is not coincidental that the book that is credited as one of the most powerful representations of the Anthropocene resembles an atlas. In this resemblance, however, it also reproduces the abstract and generalized space of cartography. The atlas allows, as I try to demonstrate by a short view into its history, the representation of large dimensions through a negotiation of relations between part and whole, but in order to do so, it increases the distance between the observer and the observed. As an alternative model, I discuss Judith Schalansky's *Atlas of Remote Islands* (2009, Engl. 2010). More aware of the problematic effects of media and modes of representation on the represented world, Schalansky's atlas deconstructs the observer who looks at the territory from outside and above, and reinserts him or her into a landscape of multiple movements and connections. Exploring a multiplicity of cultural techniques and actors, human as well as non-human, involved in the production of the image of the globe, this atlas becomes a medium of "being in the world" rather than one of "looking at" it. Being in the world is also the attempt of another photographic atlas of deep time, Ernst Haas' *The Creation* (1972), a thorough negotiation between part and whole, that offers an epilogue to my argument, although it is historically, more than four decades before Salgado's *Genesis*, a prologue to the recent return of the atlas.

A Journey to the Beginnings of our Planet: Sebastião Salgado's *Genesis*

In spring 2013, an exhibition in London's Natural History Museum and a monumental book edition completed "an epic eight-year expedition," undertaken by Brazilian photographer Sebastião Salgado, "to rediscover the mountains, deserts and oceans, the animals and peoples that have so far escaped the imprint of modern society—the land and life of a still-pristine planet." Under the title "Genesis," the exhibition as well as the book promised a journey "to

the beginnings of our planet," while at the same time linking this beginning to a possible ending in the epoch of the Anthropocene.[1]

Many critics were willing to accept Salgado's link between natural—or divine—creation and human destruction. A German critic, Andrian Kreye, for example, recognizes a "scene of doom" in a photo that depicts a group of penguins on an inclining plane of ice within a glacial landscape, a picture that has become a kind of icon of the whole project: "The allegory of the destruction of the Anthropocene is all too obvious—slowly the birds are heading in one line towards the maelstrom of the breakers, start sliding, while the first one already falls into the spray."[2] None of this, however, is really all too obvious. It is hard to *see* if the penguins are sliding. The first one, at least, does not seem to fall, but rather to jump—and there is no way to know if it does so because the ice of a melting glacier is no longer providing a safe life world for penguins (Kreye also suggests that the inclination of the plane of ice indicates a glacier that is going to be absorbed by the sea), or if this penguin is just going hunting, mating or whatever penguins do in the water, one of their natural elements of life. Neither can we see if the glacier is in a state of accelerated decomposition caused by climate change, caused bythe human use of fossil carbon, or if it is just calving, as glaciers regularly do.[3] It is impossible to see the chain of cause and effect that would build up the Anthropocene, that would inscribe human agency into the scene. To read the photograph as an allegory requires a contextual knowledge, a knowledge that is constituted by science. The "scene of doom" is not just there, it has to be inferred. Or, in other words, the "scene of doom" is there, yet its script is not the product of an allegorical reading, but of more complex procedures of measuring and computing. It emerges from an interpretation of scientifically generated data. However, if we apply such knowledge, we put the picture in an already established frame—we risk a circle: we have to know already what can be found in the picture in order to find it.

Salgado himself is more careful when he describes his intentions and possible interpretations of his work, but he also has more confidence in its power to bolster an argument without the aid of scientific knowledge. Frequently, in interviews, articles and in the foreword of the book, he articulates his concern about the threats of the Anthropocene, but he

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[1] Sebastião Salgado, *Genesis* (Köln: Taschen, 2013). The quotes are from the book's jacket and from: "Be fruitful, and replenish the earth. Sebastião Salgado introduces his journey to the untouched corners of the planet," *The Guardian*, 11 September 2004. See also: http://www.theguardian.com/artanddesign/2004/sep/11/sebastiaosalgado.photography1, accessed 2 January 2014. A selection of Salgado's photographs can be found on the homepage of the Taschen-Verlag: http://www.taschen.com/pages/en/catalogue/photography/all/05767/facts.sebastio_salgado_genesis.htm, accessed 2 January 2014.

[2] Andrian Kreye, "Der unberührte Planet. 'Genesis' ist das wohl ehrgeizigste Projekt in der Geschichte der Fotografie," in *Süddeutsche Zeitung*, 12 April 2013: "Die Allegorie auf die Zerstörung des Anthropozäns ist überdeutlich—langsam bewegen sich die Vögel in einer Reihe auf den Mahlstrom der Brandung zu, geraten ins Rutschen, während der erste schon mit einem Kopfsprung in die Gischt stürzt." See also, with a reproduction of the penguin-photo: http://blogs.sueddeutsche.de/feuilletonist/2013/04/12/der-unberuhrte-planet, accessed 2 January 2014.

[3] In fact, what we see is not a glacier at all, but an iceberg. See the additional booklet to Salgado, *Genesis*, 6.

also states that this is not what he wanted to depict. To the contrary, he searches for a world where a globalized modern civilization has not yet arrived, a pristine world right after the moment of its creation—in other words: a world without us, a world *before* us, a world before (and besides) the Anthropocene.

These statements mark a significant shift in Salgado's work. He has become famous as a photographer of people who live on the dark side of the modern, globalized world: workers who work under conditions that are destructive to themselves as well as to nature, and refugees who were driven out of their homelands by ecological disasters as well as by war. The strange kind of beauty that his camera often seems to find in the worst conditions may be an expression of Salgado's honesty to the people he portrays, while showing at the same time a planet out of balance, in a state of self-destruction.

Within the last decade, however, the beauty seems to shift from people to landscapes. And finally, people as well as traces of human activity are vanishing. In 2004, Salgado explained his new view on the world in *The Guardian*:

> Thus, for all the damage already caused to the environment, a world of purity, even innocence, can still be found in these wilderness areas. As an attempt to reconnect our species with our planet, I now intend to explore this world in order to record the unblemished faces of nature and humanity: how nature looked without men and women; and how humanity and nature long coexisted in what today we now call ecological balance. This project is designed to reconnect us to how the world was before humanity altered it almost beyond recognition. ... I conceive this project as a potential path towards humanity's rediscovery of itself in nature. I have named it *Genesis* because, as far as possible, I want to return to the beginnings of our planet: to the air, water and fire that gave birth to life; to the animal species that have resisted domestication and are still "wild"; to the remote tribes whose "primitive" way of life is largely untouched; and to surviving examples of the earliest forms of human settlement and organization. This voyage represents a form of planetary anthropology. Yet it is also designed to propose that this uncontaminated world must be preserved and, where possible, be expanded so that development is not automatically commensurate with destruction.[4]

Natural landscapes, wild, undomesticated animals and "primitive" (at least Salgado uses quotation marks here) peoples represent a world before and without *us*—*we*, of course, are the inhabitants of a globalized modernity.[5] Nine years after he outlined *Genesis*, Salgado can

[4] "Be fruitful, and replenish the earth. Sebastião Salgado introduces his journey to the untouched corners of the planet," in *The Guardian*, 11 September 2004, see also: http://www.theguardian.com/artanddesign/2004/sep/11/sebastiaosalgado.photography1, accessed 2 January 2014.

[5] The term "a world without us" is from Alan Weisman's book *The World Without Us* (New York: St. Martin's Press, 2007), a thought experiment and at the same time a scientific extrapolation of what will happen if humanity suddenly vanishes from a specific spot or from the whole world, and *A World without People*, a photo-essay by Alan Taylor, published in the online edition of *The Atlantic magazine* (http://www.theatlantic.com/infocus/2012/03/a-world-without-people/100264/, accessed 3 March 2014), showing deserted areas which people have recently abandoned for various reasons. Here the notion of an ending is clearer: while Salgado's world is one before humanity, Weisman's and Taylor's

report that he found more wilderness than he expected. "This work," he concludes when he finally presents it, "is the record of my journey, a visual ode to the majesty and fragility of Earth."[6]

The difference between an allegorical reading as suggested above and Salgado's intention is obvious. While the allegory only translates scientifically reclaimed knowledge into a more easily understandable discourse, Salgado's Earth—with a capital E—is no longer an object of scientific study at all, but one of admiration and concern. Although Salgado puts the creation of the earth in a geological rather than in a biblical timeframe, the religious dimension also is engaged in order to express the distance between *Genesis* and modern science. Earth appears as the creation of a transhuman agent, something that has to be treated with respect and care, something that has a value in itself and a right of its own. Only if we acknowledge—or rather, if we are able to *see*—this are we able to receive the message and the *truth* that *reveals* itself in the link between the majesty of the earth and its fragility, into which the link between creation and destruction is transferred: "But it is also a warning, I hope, of all that we risk losing."[7] Salgado ascribes an epistemological dimension to the act of seeing as it is enabled by his photography that would, if we follow him, avoid the circle that we will only see what we already know. The "scene of doom" is not in the pictures; it rather unfolds *between* them and the everyday world we see around us. Salgado's work does not address an audience that already *knows*, but one that is able to admire. The views of landscapes, animals and (so-called primitive) people, sometimes indeed breathtaking, follow the same logic as the famous Blue Marble icon of the earth, as photographed by the Apollo 17 mission. David Brower, founder of *Friends of the Earth*, for example, finds in this picture the same combination of beauty and fragility, of admiration and concern.[8]

The analogy highlights, however, another dilemma that is crucial for Salgado's representation of the Anthropocene: To see the earth in this way, and to receive the message, we have to leave it and look at it from outside and above.[9] And exactly this position, of the admirer and caretaker, outside and above, also establishes *us* as an actor that threatens the earth. So even if we see in Salgado's pictures a planet without us, we cannot erase our consciousness that this planet is endangered by our activity—we are outside and inside the picture. This paradoxical structure emerges from a rhetorical figure that is quite typical for the model of the Anthropocene: first, it establishes Earth as an agent by and for itself, and then it reinserts us into the picture, also as an agent with the power either to destroy or to save Earth—an agent who takes *risks* that threaten not only him, but also the other (her, Earth).

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is *after* it. For a broader view on the recent interest in the figure of a world without us see: Greg Garrard, "Worlds Without Us: Some Types of Disanthropy," *SubStance*, 41, no. 1 (2012): 40-60.

[6] Salgado, *Genesis*, 7.

[7] Ibid., 7.

[8] John McPhee: *Annals of the Former World* (New York: Farrar, Straus and Giroux, 1998), 88f., describes Brower's performance: "Brower ... has tirelessly travelled the United States delivering what he himself refers to as 'the sermon,' and sooner or later in every talk ... Brower holds up a photograph of the world—blue, green, and swirling white. 'This is the sudden insight from Apollo,' he says. 'There it is. That's all. We see through the eyes of the astronauts how fragile our life really is.'"

[9] This epistemologic operation has been analysed thoroughly by Tim Ingold, *The Perception of the Environment* (New York: Routledge, 2000).

While the distance is obvious in the view from outer space (the Apollo astronauts have left the earth so far behind that no traces of human activity are any longer visible), it is more difficult to construct if the point of view is supposed to be one of another temporal dimension. Since the photographic apparatus can only depict what is actually there, Salgado has to enter a world that exists in another timeframe than his own. The epistemological preconditions and the structural and infrastructural prerequisites that enable this—paradoxical—move are, as I would like to argue, crucial for representations of the Anthropocene in a more general sense—at least for what I have described as the rhetorical figure underlying the Anthropocene-model.

In *Genesis,* a structural equivalent to the position of the observer outside and above can be found in the fact that the image of the majestic and fragile planet is constructed from a constitutional, pictorial *off*, the room that enables the pictures but is not seen within them—and cannot be seen precisely because it enables them. "Behind the Picture" is the significant title of a short foreword to *Genesis*, added by Lélia Wanick Salgado, wife and manager of the photographer, who describes the technological and logistic aspects of the gigantic project. What we find there, in the back of the picture, is, first of all, the photographic apparatus that becomes manifest in Salgado's decision to switch from analog to digital photography in the middle of the work, a decision that caused a particular challenge, because it "required not only different handling of the images from each trip, but also new printing techniques so that photos shot with film and digitally were indistinguishable."[10] Technologically induced differences, in other words, have to be erased so that technology itself becomes invisible. A homogeneity of the photographs is created in order to represent the homogeneity of the photographed: *nature* (without man, without technology)—that is arranged in different parts of the book, its five chapters, but that is to be seen as a whole.

A second aspect of the photographic *off* is the touristic and administrative infrastructure. The work required extensive traveling, which again required funding, permissions and transport: "For Sebastião to move long distances over difficult terrain, we went in search of boats, planes, balloons, trucks and trains of mules as well as experienced guides. And in many cases, he set off with his own food as well as all kinds of medicine."[11] A nineteenth-century author like Jules Verne would have been fascinated by this kind of traveling, using all available tools and techniques or even creating new ones. For Salgado, in contrast, all this has to stay *behind the picture*. What can be mentioned (only) in the visual *off* of the text of a foreword has to be erased from the pictures themselves, precisely because it is the infrastructure of the modern world that enables pictures that are supposed to show a world before or beyond this modernity.

A third aspect (besides the apparative and logistic preconditions of photography) is the mediality of the *book*, the form in which *Genesis* is presented. In many ways, as I would like to suggest, Salgado's collection resembles an atlas, a long-established medium to show a totality split up in parts—and the medium of a view from outside and above. Before I explain this in more detail, I will briefly outline what I understand by the mediality of the atlas.

[10] Salgado, *Genesis*, 11.

[11] Ibid., 9-10.

Outside and Above: The Vision of Atlas

The first book that appeared under the title 'Atlas' was Gerardus Mercator's *Atlas sive Cosmographicae meditationes de fabrica mundi et fabricati figura,* edited posthumously in 1595 by his son. In the original plan, the *Atlas* should, within five volumes, present the creation of the world, the history of nature and mankind and historical maps of Ptolemäus and of the antique world. However, only the volume that contained the maps was printed. And this has remained the most common use: usually an atlas is a book that contains maps, even if since the nineteenth-century atlas is also used for varied collections of drawings, diagrams, photographs (for example a physiological atlas).[12]

All these atlases share some common features that can already be found within Mercator's. The most important is that they aim at a totality: the earth, a landscape, a nation, a colonial empire, the body of a human or an animal or, as in Aby Warburg's *Mnemosyne-Atlas*,[13] all the pictures that have to be seen together to create iconological knowledge. But the atlas can only present this whole in partitions. Of course an atlas can and mostly does contain overviews, like a map of the world, but this does not *make* an atlas. Often it only helps us find the particular page that shows an enlarged (or altered in other, more complex ways) view, a detail. The atlas is constituted by an interplay between part and whole: each page or double-page presents a *tableau* that has a certain kind of completeness of its own, but also is part of a series (no single sheet of paper can be an atlas). And thereby the individual view has to undergo a process of standardization: it has to be printed on paper of the same size, it appears in the same layout, framing, cartographical style and scale—or, as in the example of *Genesis*, in printouts where the different modes of photography have been made indistinguishable. This is to make clear that the single pages are cutouts, which can be put together to show something as a whole.

The frontispiece of Mercator's *Atlas* illustrates the process of standardization in a particular sense: the allegorical Atlas appears not as the familiar figure of endurance, an exhausted sufferer doomed to support the globe forever, but as a scientist who holds the globe for inspection, not on his shoulders but in front of his eyes (in his hand, it's the celestial globe, while Earth still waits at his feet).[14] The globe appears as something to be looked at (from outside and above) and to be measured. And this measurement again is prerequisite for the computation that allows the transformation, the *projection,* of the surface of a globe onto a flat sheet of paper.

Here, as Judith Schalansky, author of an aesthetic atlas herself, observes, the atlas goes indeed a step further than the globe: a globe can only be seen half at a time (and, according to the position of the viewer, in eminent distortion of most of its parts). Only a map can project

[12] Here I follow Robert Stockhammer: "Bilder im Atlas. Zum Verhältnis von piktorialer und kartographischer Darstellung," in *Der Bilderatlas im Wechsel der Künste und Medien*, ed. Sabine Flach, Inge Münz-Koenen, Marianne Streisand (Munich: Fink, 2005), 241-261. See also Peter van der Krogt, "Gerhard Mercators Atlas," in *Vierhundert Jahre Mercator. Vierhundert Jahre Atlas. Die ganze Welt zwischen zwei Buchdeckeln*, ed. Hans Wolff (Weissenhorn in Bayern: Konrad, 1995), 30-40.

[13] Aby Warburg, *Der Bilderatlas Mnemosyne.* Gesammelte Schriften (Studienausgabe), Vol II, 1, ed. Martin Warnk, Claudia Brink (Berlin: Akademie-Verlag, 2000).

[14] Stockhammer, "Bilder im Atlas," 349, describes the frontispiece in more detail.

the whole surface of the earth in a way that it can be overlooked (still distorted in one way or the other, but less than the view of the globe). The price is, however, that the observer loses what is probably his or her most natural quality: his or her point of view, his or her standpoint. In contrast to a globe, it doesn't matter from which perspective I look at the map, it doesn't alter it.

The atlas allows the earth to appear on a stage, but only under specific conditions—conditions that do not appear, again, on this stage themselves but are defined in a kind of paratextual *off*. Here we find the instruments of control, like the dividers the allegorical Atlas uses: what can appear on the map and what cannot is regulated by mathematical principles. And what can appear in the atlas is regulated by additional principles of standardization and homogeneity that allow the *whole* only to appear under the condition that it can be cut into pieces and be presented on different pages of a book, while on the other hand the detail can only appear in order to fit within an imagined—and prestabilized—whole.

The same features can be found in *Genesis*: the principle of standardization, the interplay of part and whole, that allows the single picture only to appear if it fits into the idea of a world without us, and its mapability. Like the world of an atlas, the world of *Genesis* is projected on a map. Arranged in five sections by their geographical origin, the pictures form the continents of the natural world. A supplemental booklet provides more detailed information about the topic and the locality of each photo so that it can be indexically related to a specific, single point on the earth. This mapping of *Genesis* follows the same epistemological model as an atlas.

Mercator's allegorical Atlas is, of course, not only an allegory of modern geography but of modern humanity, who, through the instruments of science, of industry and of global media (and media of the globe) looks at the world from outside and above. But then it is also an allegory of the Anthropocene, establishing man as an agent and the earth as his object, his *field*—of study, of appropriation, of exploitation, maybe also of concern (when earth becomes a child, looking far more fragile than majestic).

Definitions of the Anthropocene usually ascribe agency on a global (biological and geological) scale to humankind. Here, the Anthropocene becomes a scene in the theatrical sense (a *skené*), a stage that humankind has just entered to become the antagonist of nature. Stage is understood here in the broadest sense as a space that can be observed, that opens itself up for observation, that allows or forces something to appear before the eye (or the apparatus) of the observer. In this sense, a laboratory is also a stage. For the (drama of the) Anthropocene, the whole earth has become the stage, with two actors, humankind and nature. But can these two really interact? And if so, who can be the observer? Here is a fundamental dilemma of the Anthropocene model: its stage as well as its actors are too large, not only for scientific research but for artistic representation.

This dilemma becomes visible in Salgado's *Genesis* which constructs human agency by cutting humanity—that is: the humanity of a globalized modernity, that is also the humanity to which Salgado's photos are addressed—out of nature and placing it somewhere else, in nature's *off*. The so-called primitive peoples can remain within the pictures exactly because they are denied such agency. Like nature they live in the timeframe of deep time—in Salgado's version of *Genesis* that means they haven't changed since the beginning of time, and they will not change if *we* leave them alone. *We*, on the other hand, live in the timeframe of human

history, incomparably and incomprehensibly different from deep time. In order to construct the super-actors of the Anthropocene, Salgado closes the border between nature and humanity. In all its beauty, the world of his photographs seems inaccessible. They show us a nature that we can only look at from outside. Even he himself does not become a part of it, he remains separated by his apparatus, his equipment, his medicine. And, most of all, by his point of view, which is never within the scene; aerial views are common in *Genesis*.[15]

To observe the Anthropocene, a rather large stage is necessary. Both in spatial and in temporal dimensions, humankind has entered a room of an unfamiliar (and incomprehensible) scale that is defined by nature or more specifically by the forces of geological and biological revolutions and evolutions. The drama itself may unfold in the timeframe of human history, but its consequences extend into geological time, the deep time of the earth. That this is not our timeframe becomes visible in *Genesis*. The scale requires abstraction, and that is what Salgado delivers—in spite of all the concreteness of his photographs.

Maybe one could say that Salgado is too successful in showing a world without us, in hiding the conditions of modernity behind the picture; like scientific observation, his images deny the observer access to the observed (and they do not allow the observed to communicate with the observer). There is no way for us to picture ourselves within these pictures, within these landscapes; and there is no way to communicate (not even with the *primitive* people that are allowed to enter the stage of nature). The beauty of this world may convince us that we have to preserve it, but it also closes this world off from us and at the same time makes us superior to it in a certain way, requiring nature to appear as the object of our care.

Put apart from humanity, nature remains mute. This may explain the desire to (re-) inscribe humankind (*us*) into the picture, a desire that seems to be the driving force behind the allegorical reading. But the allegory only opens up the gap wider, because it ascribes a human meaning to the scene, instead of taking a closer view that might reveal something (a clue) that is really within it. Maybe the penguins have something to say, but they certainly do not speak to us in the mode of an allegory. Their message might be contained within small clues that will only reveal themselves to someone who shares the same *habitat* with them. They are an object of experience rather than of decoding.[16] Even if Salgado himself does not encourage the

[15] Here, Salgado follows in more than one aspect Bernhard Grzimek, who also propagated his Serengeti-project with aerial views of supposedly pristine nature that should be no longer inhabited by men (namely the local Masaai peoples who were no longer *primitive* enough to qualify as part of nature), but should be reserved for aesthetic admiration (by Western visitors).

[16] Again, I borrow a term from Ingold, *The Perception of the Environment:* "A clue, in short, is a landmark that condenses otherwise disparate strands of experience into a unifying orientation which, in turn, opens up the world to perception of greater depth and clarity. In this sense, clues are keys that unlock the doors of perception," 22. Ingold envisions, in a phrase borrowed from James Gibson, an "education of attention," 22, a process of showing that introduces a "novice" to the environment by lifting "a veil off some aspect or component" of it, 21f. Ingold describes this as a revelation opposed to the process of decoding: "Through its fine-tuning of perceptual skills, meanings immanent in the environment–that is in the relational contexts of the perceiver's involvement in the world–are not so much constructed as discovered," 22. This, however, will only take place within a lifeworld that "we shape as well as it shapes us," 20. In another chapter, "Globes and Spheres. The Topology of Environmentalism," 209-218, Ingold works out more particularly the contrast of a lifeworld and the

allegorical reading, his photos do: their world is too large to enable a closer view, and thus they lead us to abstraction.

Children of the Atlas: Re-readings of a Medium of Globalization in the time of the Anthropocene

The journey to the beginnings of our planet is also a journey away from human history, and, more specifically, from historical encounters of humans and nature that are smaller in scale than the encounter of the two super-actors of the Anthropocene, albeit often no less dramatic. On a small Antarctic island, for example, Salgado depicts a colony of penguins within a barren volcanic landscape, surrounded by glaciers and a sea that dissolves into mist. "The feeling of reaching another planet is particular[ly] intense on Deception Island," he notes in his commentary. Penguins, glaciers, volcanoes: Deception Island seems to exist completely in deep time, formed by geological forces and by the life rhythms of nature. But the now uninhabited island was in the first decades of the twentieth century a centre of industrialized whale hunting, and the penguins at the Bailey Head colony—the colony depicted by Salgado—were used as fuel in the vessels where the whale oil was extracted. The penguin colony only survived because with the shrinking whale population the whalers' colony declined—until it was recently revived as a tourist attraction.

One can learn most of this in another aesthetic atlas, the *Atlas of Remote Islands* (*Atlas der abgelegenen Inseln*) by the German author Judith Schalansky.[17] While Salgado uses Deception Island as an image of pristine nature, Schalansky represents it through a vivid description of how it must have been to enter the inner harbor, "at the gates of hell, in the jaws of the dragon":

> On the dark beach, the whalers hack the baleen away from the jaws, pull the skin off, separate blubber from flesh, and boil the white gold in giant containers to extract the whale oil. ... They leave the rest to rot. The whale skeletons show white against the dark sand, the water is red with blood and the stench of rotting flesh fills the air. Thousands of plundered bodies decompose in the crater's overflowing pond.[18]

Here, the island is also reduced to one short impression, a scene of the destructive interaction of humans and nature. But this is not an allegory of the Anthropocene. It is just an isolated moment in time and space, just one single episode in the history of just one of many islands. None of them can claim to represent all the others, and all of them reveal their significance not to a view from outside and above, but from within: one has to cross "the gates of hell," one has to smell the stench—even if one can only do so in the imagination.

Schalansky's sympathy is with islands so remote that they can't be positioned at their proper place on the maps of their *motherlands* (or any *mainland*), because that would require too much empty space. Often they get their own little frame, positioned in some corner of the

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vision of the globe as something to be looked at from outside and above, like the globe Mercator's Atlas looks at.

[17] Judith Schalansky, *Atlas of Remote Islands. Fifty Islands I have not visited and never will*, trans. Christine Lo (London/New York: Penguin, 2010); orig. *Atlas der abgelegenen Inseln. Fünfzig Inseln, auf denen ich nie war und niemals sein werde* (Hamburg: mare-Verlag, 2009).

[18] Schalansky, *Atlas*, 128.

map where there is room for them. Moving closer to the mainland by this repositioning, they seem to lose some of their remoteness, but on the other hand it becomes absolute, because, within their own little frame, they fall out of the homogeneous space of cartography and, in a way, betray the idea of continuity between part and whole that constitutes the atlas. Thus, like Salgado's natural sanctuaries, they form another world, and Schalansky's subtitle seems to aim at such an exclusiveness: "Fifty islands I have not visited and never never will." Her atlas, however, draws a different picture. Each of the fifty islands is presented in the same way: on the right side of a double page is a map showing every island—in the same scale—by itself, without coordinates and not in relation to any other significant geographical feature. The left side, in contrast, provides data such as geographical coordinates, size, number of inhabitants, distance to other islands and continents and a timeline marking relevant historical events. We find numerical as well as graphical representations such as vectors and a small map of the world in azimuthal projection with the island in its centre. Finally, two thirds of the left page are filled with text: anecdotal stories related to the island, short scenes, narrated in the present tense. As isolated as the islands may be, all of them are part of human history, constituted in movements. Even if only a little more than half of them are inhabited, all have been visited, time and again, by different people and for various reasons. They have produced narrations, legends, anecdotes, and they have witnessed human movements of various kinds, adventures, explorations, migrations as well as the movements of cartographers who have measured them and finally have drawn them on their maps.

Part of this network is also the "I," the creator of the *Atlas of Remote Islands*, who describes herself in the foreword as a "child of the atlas," having grown up in the German Democratic Republic with a map of the world that separated the two Germanys by the gap between the two halves of a double page.[19] When she was eight, a television documentary about the Galapagos Islands—which are also very prominent in Salgado's *Genesis*—offered her a view into deep time: "I still remember the breathless commentary: ... *This is how the earth must have looked millions of years ago*. My reaction was immediate: I was going to be a naturalist and travel to these islands."[20] The desire to travel through time and space into another world, however, is redirected to the atlas, where the child undertakes a journey around the world with her index finger, first following Magalhães' route around South America, until her mother advises her to take the Panama Canal. There are established routes into the other world. And there is the atlas itself, in its visuality, where the islands appear as a "cluster of dots in the light blue ocean."[21] This is what fascinates Schalansky, who will not become a "naturalist" but an artist and writer. Her field of study is the boundaries and the interfaces between nature and culture that seem to be more visible at isolated islands. In one of the episodes, Schalansky retells the story of Hugh Banning, a Californian writer and sailor who fantasized about being cast away on an island where there was 'nothing.' Socorro Island, which he visited in the 1920s, seemed to be a perfect incarnation of such a *beautiful nothing*. But when he spends only one day on the island, the picture is transformed. First, he finds a herd of sheep, once left by whalers as a resource of fresh meat, before whale hunting went on

[19] Schalansky, *Atlas*, 7, 9.
[20] Ibid., 7.
[21] Ibid.

to even more remote oceans. And when he finally has left these traces of civilization behind, he finds himself captured in his own imagination: "Gigantic snakes seem to be slithering along the branches and every bare tree looks like a creature being tortured; the crowd of bony shapes seems to be closing in on him from all sides. This is what hell must look like."[22] Schalansky quotes more or less accurately from Banning's own account of his visit to Socorro, where the description of nature gradually turns into an artistic vision: "I was, indeed, passing through the *Inferno* as illustrated by Gustave Doré."[23] Even if, in Schalansky's version, the reference to Dante and Doré is not made explicit, it is quite clear how literary and artistic imagination interfere with the experience of nature—and even more with its description. Every island that enters the map as a *dot in the light blue ocean* has already been colonized, if not by economic or geopolitical desire then by literary imagination. Thus, islands can be discovered in libraries as well as in atlases.

Separated from most of the islands not only by endless oceans, the "child of the atlas" uses her cartographical imagination to construct a world that is not looked at from above but experienced from various perspectives. Cartography can be one of these perspectives, but not if it is reduced to measuring and computing. It is the craftsmanship of cartographers (as painters and drawers) that fascinates Schalansky, who has not only collected and rewritten the stories but also drawn the maps of her Atlas. In this way, she inscribes herself into the history of cartography as well as into the history of the cartographed world—not as an observer in front or above the scene but as an actor within. Schalansky unfolds an *off* of cartography that is different from the one in Mercator's Atlas-allegory, an *off* that contains fantasies, stories, passions, but also the various skills and the commitment of seafarers, drawers, narrators—and of those who just look at an atlas, or search in libraries for lost manuscripts like the diary of Alexander Selkirk, the real Robinson, a manuscript that traveled from Scotland to Berlin only to get lost in the stacks of the State Library of Prussian Cultural Heritage.[24] The map may be one of the most abstract, distancing modes of representation, but even map-making is part of an environment that in one way or another overlaps with the environments of the mapped islands. Even if Schalansky will never visit any of them, she still inhabits the same world. This idea of a network of overlapping environments is cartographically worked out in an interplay between the large maps on the right and the small ones on the left side of the double-pages. The large maps give every island its individual shape and features, thus reducing the indexicality of the map (its dominant function to locate every place in relation to every other place) in favor of its iconological or even aesthetic qualities (if one likes, one can admire the beauty of these

[22] Schalansky, *Atlas,* 110.

[23] Hugh Banning, *In Mexican Waters* (Boston: Lauriat/London: Hopkinson), 49. Banning also highlights the difference between looking at an island from the outside and being in it, "You can see plainly from here that there's nothing on that island," says his captain, when he tries to persuade him to land at one such island, and Banning comments, "True. There was nothing that you could see 'from here'; and that was exactly the reason why so many islands were only small bodies of land surrounded by water. Thus surrounded they stand for centuries. No one goes there. They are monuments to mystery; they are tombs of romance—gravestones of buried adventure, and their secrets are seldom disclosed,"40. On Socorro, the real experience is made when the deep bush blurs the vision, "Every step was a crackle and a smash; every crackle was a scratch, every smash was a jab; every stumble was an ankle, or a shin, or a knee or an arm or a hand full of cactus," 46.

[24] Schalansky, *Atlas*, 74.

shapes). The small overview maps highlight the individuality of each island even further: rather than allowing us to locate it in *our* world, the azimuthal projection locates the island in the center of *its own* map of the world, pushing *us* to the periphery.

In other words: every double-page of the *Atlas* creates a new lifeworld, a center, while at the same time integrating it in a network of movements in time and space that form human history as well as human space. It is a network of human and nonhuman actors who are surrounded by their environment (instead of looking at it), like an island is surrounded by the sea that isolates it, that sometimes threatens it, that is the lifeworld of fishermen as well as of adventurers, explorers, and colonizers who cross the sea in order to settle on the island, to measure it, to exploit its natural resources, to trade with those who already live there or to battle and extinguish them. Those who shape and reshape the island and are shaped by it—like the mysterious Rapanui, who called their island, later renamed 'Easter Island' by European explorers, *Te Pit o te Henua*: *The navel of the world*, before they, supposedly in an absurd competition between different groups, devastated their once paradise-like world long before the last survivors were enslaved or extinguished by foreign colonizers.

> The twelve tribes of Easter Island compete against each other: they make bigger and bigger monoliths, and secretly topple their rivals' statues in the night. They exploit and over-cultivate their pieces of earth, chop down the last tree, sawing off even the branch they are sitting on. ... Today, there is not a single tree on the barren land created from seventy volcanoes. But the airport's landing strip is so enormous that a space shuttle could touch down on it in an emergency. The end of the world is an accepted fact, and Easter Island is a case in point with its chain of unfortunate events that led to self-destruction; a lemming marooned in the calm of the ocean.[25]

A case in point: here seems to be another allegory of the Anthropocene, where the isolated island functions as a laboratory or a stage for a manmade disaster. Again Schalansky follows a common narrative that has been popularized, for example, by the movie *Rapa Nui*.[26] The message then would be: What the Rapanui have done to their world, we are going to do to our world. But who are *we*, and what is our world?

In Schalansky's atlas, Easter Island is just one of fifty islands, and none of them can represent all the others, nor can it represent the whole world. Instead, there is something else to learn here: neither at the *navel* of the world nor at its end will we find pristine, unaltered nature. If we look at the end of the world, we find a place that has been the environment of a human society that has put itself in the center, the *navel of the world*, and that has significantly altered it. The words that Schalansky uses here are ambiguous. As much as *the end of the world* can be understood either in a spatial or in a temporal sense, the *navel* can be the spatial center of a plane, but it also has to do with the origin, an interface where two beings were once connected. The end of the story tells of another interface: the oversized airfield that seems to connect the island not only with the *motherland* (indeed it is a legacy of Augusto Pinochet's idea of a Chilean nation originated in and stretching out into the Pacific), but with outer space. The remote island is under surveillance and within reach. But it also may become the last hope

[25] Schalansky, *Atlas,* 100.

[26] USA 1994, directed by Kevin Reynolds.

of a wrecked Space Shuttle that has to perform an emergency landing—as so many islands of the *Atlas* have become the refuge of shipwrecked sailors. Rapa Nui's closest neighbor is, as the vector at the top of the page tells us, the Isla Robinsón Crusoe, *only* a little less than 3,000 km away.

Like the Rapanui, modernity cannot picture itself as outside and above, it has to figure itself within the environment. What is relevant here is the idea of interfaces that connect different life worlds both in space and time and that subvert the idea of a pristine nature at the origin of time. The story of the Easter Island cannot be reduced to a single episode featuring the battle of man versus nature. There are multiple and multilayered interfaces not between humanity and the global environment but between single men and women or single groups and *their* environments—and even the atlas can be such an interface.

Schalansky's rereading of the atlas is well aware of its epistemological preconditions, and out of this awareness it tries to close or at least to reduce the gap between observer and observed, subject and object, modernity and origin, humankind and nature—and it demonstrates that all these supposedly fundamental differences are the product of specific modes of representation.

This awareness makes the *Atlas der abgelegenen Inseln* valuable for a debate on "Culture and the Anthropocene." As a long-established medium that deals with large scales and represents totalities, the atlas offers itself as a useful tool for representations of the large-scale processes that form the Anthropocene. On the other hand, it is *the* medium that looks at the world from outside and above. But maybe this is also true for the Anthropocene-model, which, in order to stage humankind and nature as antagonists, first has to set them apart. In the first instance, this is an epistemological operation, but there is a risk that the two will never find each other again, even if nature is no longer an object of scientific observation but of ethical concern and of aesthetic admiration.

What I have called a re-reading (and re-writing) of the epistemology of the atlas can be applied to science in more general terms. This seems to be the message of a line of charismatic scientists who inhabit some recent literary texts that address environmental issues. Ovid Byron in Barbara Kingsolver's novel *Flight Behavior* is one of them. While he observes the abnormal behavior of a colony of butterflies, he rejects the demand for a quick and easy explanation: "You never see it at once. An attention span is required."[27] Here, he is echoed by Zeno, the melancholic glaciologist of Ilija Trojanow's novel *EisTau*, who describes his relation to his object of study as an arranged marriage (he was assigned to his particular glacier by his doctoral supervisor), which turned into a long lasting love affair: "For a lifetime I observed it thoroughly out of passion, with precise instruments."[28] Precision and passion do not exclude, but rather rely on each other. Only together do they create the required *attention span*.

The scientist's antagonist, an internationally known artist, is completely lacking in such attentiveness. Supposedly, he wants to raise the awareness of global warming by a spectacular performance where several hundred tourists are carried to the Antarctic to form a living *SOS*-sign on a plane of ice, while the artist flies in with a helicopter to take a photograph. The self-righteous director of this silly spectacle is, however, much more interested in his own fame

[27] Barbara Kingsolver, *Flight Behaviour* (London: Faber and Faber, 2012), 280.

[28] Ilija Trojanow, *EisTau* (Munich: Hanser, 2012), 50: "Ein Leben lang habe ich ihn beobachtet, sorgfältig aus Leidenschaft und mit präzisen Instrumenten."

than in the environment that he reduces to an announcement board into which he inscribes his message. In the configuration of the sensible scientist and the superficial artist, the novel also drafts a role of art and literature within an environmentalist project. The *SOS* is a polemically pointed model of an art that restricts itself to the popularization of scientifically generated knowledge. Thus, it loses its own, generic access to the environment, created by qualities like attentiveness, sensibility and passion. Through such qualities, art may contribute to an "education of attention"[29] that seems to be crucial for an epistemology of the Anthropocene. A compassionate cartography, as outlined in Schalansky's *Atlas*-project, could also be one building block of such an epistemology.[30]

But still, maps rely, as Schalansky also reminds us, on techniques of "merciless generalization," in which they "tame the wilderness": "Geographical maps are abstract and concrete at the same time; in all their measured objectivity, they offer no portrayal of reality, but a daring interpretation."[31] This is, of course, true for every representation. Schalansky's vision of Easter Island, for example, moves in one daring paragraph from the Island's volcanic origin to the moment where humanity has left its planet and reaches out into space. The history of the Rapanui, the histories of all island dwellers are not really affected by this movement. Encapsulated somewhere between deep time and deep space, they are engaged with problems and events of much more proximity. The temporal and spatial dimensions of the Anthropocene, the earth as a whole and the geological processes that have formed it, cannot be perceived, they can only be represented in daring interpretations. This is the experience of Hugh Banning. Neither is he able just to look *at* the "nothing" of pure nature, nor is he able just to *look*: while nature obscures the look and makes itself present in a more physical sense, the look is always already formatted by culture, by fantasies, by art, by literature.

The same applies to the photographs of Salgado's *Genesis*, which are, in a similar way to Schalansky's maps, "abstract and concrete at the same time." Every photo shows something that has been there at a single place and moment and that has offered itself to the camera. But the vision of a whole world that is still as it was in the moment of its creation can only emerge from the specific arrangement of the photographs in the form of the atlas. Only here, can humanity look at its other, a world from which it has excluded itself by its own activity. But then, this *other* is only the product of a specific mode of representation. This, I think, explains at least partly, why, in Salgado's *Genesis* but also more broadly, a vision of a world without us can represent a world where we are everywhere—the world of the Anthropocene. *The world* and *we* both require the "merciless generalization" of large-scale actors. When Salgado wants to show us "all that we risk losing,"[32] he hides the fact that most of *us* have already lost what he depicts—like islands we *have never visited and never will*. On the other hand, he suggests, that we have the potential to save the earth without us. Fantasies of impotence and omnipotence are likewise effects of large-scale models.

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[29] Ingold, *The Perception of the Environment*, 22.

[30] Comparable atlas-projects from different fields are: Michel Serres, *Atlas* (Paris: Editions Juiliard, 1994); David Mitchell, *Cloud Atlas* (London: Sceptre, 2004); Christoph Ransmayr, *Atlas eines ängstlichen Mannes* (Frankfurt/M.: S. Fischer, 2012).

[31] Schalansky, *Atlas*, 9-10 (Translation slightly altered).

[32] Salgado, *Genesis*, 7.

The Austrian photographer Ernst Haas was aware of this, when he published a photographic atlas of Genesis, *The Creation*, similar to Salgado's, but more than forty years before it—and one year before the Club of Rome presented its first report on *The Limits to Growth* in 1972.[33] Like Salgado, Haas wants to praise the world in a "visual ode" in order to raise an awareness of its value that is not measurable in scientific or economic terms. And also like Salgado, he trusts his photographic apparatus to reveal such a value within an almost mythical framework he calls a "spiritual ecology."[34] But he does not pretend to have reached "another planet," the unchanged, pristine nature before and beyond human modernity. He presents the creation, roughly following the biblical narration, in a sequence of "the elements," the "seasons," and "the creatures." But this is not purely a temporal sequence, nor do we find separate spaces. Although only the last two pictures depict human bodies—in a way that it is hard to distinguish them from the natural surroundings with which they merge into almost abstract forms—we find many pictures that could easily be perceived in a human lifeworld. The seasons, for example, are represented by blossoming trees and fallen leaves, which decompose, again, into forms that are "abstract and concrete at the same time." What we see, is not a world that is simply there, but that emerges from a double artistic activity: the composition of the single photo and the arrangement of the photos within the book, the atlas. These often surprising constellations also invite us to take a closer look, not only at the atlas but at the world around us. Like Salgado, Haas offers aerial views of breathtaking landscapes, but he continually counterbalances them with *close-ups*—not only in the technical sense of the word but also insofar as he finds his motives in the neighborhood: in rural Austrian gardens as well as in New York's Central Park. As in Schalansky's atlas, Genesis is nothing that happened without us—it is around us all the time.

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[33] Ernst Haas, *The Creation* (New York: Viking Press, 1971).
[34] Ibid., 7.

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