



This is a peer-reviewed, post-print (final draft post-refereeing) version of the following published document and is licensed under Creative Commons: Attribution 4.0 license:

Somerville, Keith, Dickman, Amy, Johnson, Paul and Hart, Adam G ORCID logoORCID: <https://orcid.org/0000-0002-4795-9986> (2021) Soap operas will not wash for wildlife. *People and Nature*, 3 (6). pp. 1160-1165. doi:10.1002/pan3.10202

Official URL: <https://besjournals.onlinelibrary.wiley.com/doi/10.1002/pan3.10202>

DOI: <http://dx.doi.org/10.1002/pan3.10202>

EPrint URI: <https://eprints.glos.ac.uk/id/eprint/9420>

Disclaimer

The University of Gloucestershire has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

The University of Gloucestershire makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

The University of Gloucestershire makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

The University of Gloucestershire accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.

Perspective

Soap operas won't wash for wildlife

Keith Somerville, Durrell Institute of Conservation and Ecology, University of Kent, UK

Amy Dickman, Wildlife Conservation Research Unit, Department of Zoology, University of Oxford,
Recanati-Kaplan Centre, Tubney House, Abingdon, UK

Paul J. Johnson, Wildlife Conservation Research Unit, Department of Zoology, University of Oxford,
Recanati-Kaplan Centre, Tubney House, Abingdon, UK

*Adam G. Hart, University of Gloucestershire, School of Natural and Social Science, Cheltenham,
UK*

*Corresponding Author: ahart@glos.ac.uk

Keywords: conservation; media; anthropomorphism; misinformation

Abstract

1. Natural history documentaries are a globally important source of information about wildlife, conservation and environmental issues and they are the closest many will get to seeing featured animals and their behaviour in the wild. They are entertainment, certainly, but may also inform people's knowledge of the natural world and influence their ideas on conservation of species and habitats. We locate our perspective in the existing literature analysing wildlife documentary making and its effects.
2. We argue that a conspicuous preoccupation with the 'personalisation' of individual animals and the injection of false jeopardy in recent wildlife documentaries leads to significant misinformation and creates problems for public understanding of wider conservation.
3. We illustrate our point by detailing episodes from the BBC natural history series *Dynasties*, discussing personalisation, anthropomorphism and the use of jeopardy to gain emotive impact and audience engagement. We find that narratives are framed around a single individual, that "stories" are framed as soap-operas, that jeopardy is emphasised throughout and that animals are endowed with the capacity to be aware of, and work towards, the dynasties of the title.
4. With conservation increasingly relying on public support, we argue that it is important that people are presented with factually correct information, and portraying wild animals as soap-opera style characters is neither honest nor helpful.

Natural history documentaries are a globally significant source of public information about conservation (Dingwall and Aldridge, 2006). The BBC's Natural History Unit has a particularly stellar international reputation for natural history film-making, but has been

criticised for ignoring the plights of many of the species they feature (e.g. Monbiot, 2018), for giving the impression that wild places are solely for nature, and for neglecting people in many habitats (Sandbrook and Adams, 2013). After the Second World War wildlife films took on a more scientific character, diverging from the pre-war sensationalist and cinematic style of people like Martin and Osa Johnson, but despite this shift in tone, wildlife documentaries still have a major aim of being popular rather than strictly factual (Brockington, 2009).

There is also increasing attention being paid to the importance of assessing the impact of such documentaries and the form of their narratives (e.g. Jones et al., 2019). Here, we argue that a conspicuous preoccupation with the ‘personalisation’ of individual animals and the heavy use of a largely constructed or exaggerated ‘jeopardy’ misinforms viewers and may ultimately create problems for conservation by giving the public a distorted view of wildlife and therefore a weak base on which to form opinions about how conservation should be pursued. While anthropomorphism may in some circumstances enable people to relate more easily to wildlife and conservation issues, filmmakers and scientists who may contribute to documentaries do need to ensure that excessive anthropomorphism that may mislead or distort reality is avoided. The possible problems with these narrative approaches, underpinned by anthropomorphism, are exemplified by the popular BBC wildlife documentary series *Dynasties*. First broadcast in 2018, *Dynasties* was presented an exceptionally anthropomorphic depiction of natural history and therefore provides an ideal case study to examine the problems of this approach.

Before going further with the analysis of the messages conveyed by this series, it is worth placing it in the context of the origins and evolution of wildlife documentaries. Their development, conventions and techniques were the subject of Mitman’s detailed study *Reel*

Nature (Mitman, 1999) and Bousé's *Wildlife Film* (Bousé, 2000), along with Brockington's *Celebrity and the Environment. Fame, Wealth and Power in Conservation* (Brockington, 2009), which looks particularly at the role of celebrity. Celebrity is very relevant here because of the influence of Attenborough, the presenter of *Dynasties*, in informing and influencing people's views on wildlife and the environment (Revell, 2020).

The advent of the natural history or wildlife film came in the early 20th century with the filming of lion or other hunts in East Africa. It is hard to identify the first such film, but certainly one of the earliest was made by a cameraman, Cherry Kearton, who accompanied the hunting expedition led by Theodore Roosevelt (the former American President) in 1909-10. The film of the expedition was released by Motion Pictures Patent Company in on 18 April 1910. It was a failure with the public, with no live hunting scenes and no live film of lions. Mitman says the message that came over from the failure seemed to be that "audiences craved drama over authenticity" (Mitman, 1999). Further films in the 1920s were more successful, with the appeal of these early attempts to film animals in the wild leading to the development of a wildlife film industry based largely on dangerous or charismatic megafauna in the wild both to entertain and, sometimes, to educate; not that different from aspects of the *Dynasties* series which is the focus here. Similarly, as films were produced to meet audience interest, conventions of editing together sequences filmed at different times, using forms of artifice (including filming captive animals as though they were wild) and constructing stories from disparate films sequences developed. Even though filming technology, sound recording techniques and the ability to get cameras into positions to film wild animals in close up have advanced hugely since the early films, at times fakery or artifice in terms of cutting together unrelated sequences to make a narrative is still heavily used. In *Dynasties* (see below) there are clear examples of shots cut together to create sequences that may not have happened in real-life. An example of an older Attenborough-fronted documentary using fakery that was

unacknowledged in the film but later revealed, was the filming of polar bears in a zoo amid fake snow which purported to show a polar bear giving birth in the wild in the BBC's *Frozen Planet* in December 2011 (Independent, 2011). Horak has warned that few documentaries are now "strictly documents of animal activity, but are artificial constructs... Narrators state flatly that filmmakers have waited patiently in the jungle for years in order to 'capture' an animal on film. Directors, however, spend much more time in the studio and in the editing room than on location...[which] helps to create an artificial 'emotional' relationship to animals...nature filmmakers produce at very high shooting ratios, then construct specific events through editing, utilizing images which may indeed have no spatial and temporal relationship to each other and may involve dozens of animals, rather than the one example ostensibly being depicted" (Horak, 2006). Bousé (2000) also argues that methods used in shooting and editing together disparate pieces of film to create supposedly continuous action sequences, with close-ups and an accompanying script, are intended to prompt a sense of intimacy and create more of an emotional bond between viewer and animal.

Anthropomorphism may be an important part of this in stressing individuality and personality through artifice and narration. This is an analysis that is very relevant to the final versions of the *Dynasties* episodes reviewed here.

We should clarify that we are not arguing that anthropomorphism is in itself a bad thing. The rejection of all human-like traits in animals, or 'anthropodenial' as Frans de Waal has dubbed it (Waal, 2017), is clearly misguided. It is where the tendency to portray animals *as* humans is taken to extremes that it may have a distorting effect on public understanding of human-wildlife relations (especially when the real humans in the landscapes are ignored), and therefore undermine understanding of the aims of conservation.

Dynasties

The BBC wildlife documentary series *Dynasties* concentrated on “five of the world’s most celebrated, yet endangered animals”. It was narrated by Attenborough and aimed to tell the “true stories” of the featured species: penguins; chimpanzees; lions; African wild dogs; and tigers. Each was shown “in a heroic struggle against rivals and against the forces of nature” as “these families fight for their own survival and for the future of their dynasties” (BBC, no date).

The title injected a note of anthropomorphism intended to pull in audiences. Producer and director Rosie Thomas explained that chimpanzee groups are “very political, and at times it’s a bit like watching a soap opera... Similar to politics, there are characters that you like, and ones you don’t like” (Archer, 2018). From the start, the programmes assigned soap opera dynamics, political and human emotional characteristics to animals, built up through shot selection and scripting. It was an approach that worked; *Dynasties* gained a wide audience and attracted very positive reviews. Ed Cumming in the *Independent*, summed it up well: “It focuses on families, which is another way of saying that Attenborough & co are no longer even pretending not to be launching a direct assault on the heartstrings. The animal footage in these programmes has always been a distraction, but it’s a sumptuously shot high definition red herring... Human emotions are the reason we come back” (Cumming, 2018).

The problem that can arise from this approach is that, by labelling the documentaries as “true” or “authentic” when there is a high level of artifice or reconstruction of supposed events created the danger that the informative and educative role of wildlife documentaries is distorted, with misleading information being conveyed. The BBC mission statement is to “inform, educate and entertain” and, clearly, wildlife documentaries are a balance of all three

objectives. But the question we ask here regarding *Dynasties*, and the wider approach of treating wildlife documentaries like soap operas or dramas, is whether the mission to inform and educate is becoming subsumed in order to deliver sufficient entertainment. This leads to a more important question: is this approach good or bad for conservation?

Examining the *Dynasties* episodes

The first of the series was broadcast on 11 November 2018, depicting the life of a dominant male chimpanzee (“David”) leading a troop in a Senegalese forest (BBC, 2018a). The narrative starts by emphasising the dominant theme of the series; the family as “one of the most powerful forces in nature” helping animals “battling against the odds, fighting for survival” (BBC, 2018a). What develops is the almost apocalyptic picture of the life of a male chimp, with the oft-repeated refrain that the life of a male within a troop is all about “power, politics and the fight for survival” (BBC, 2018a).

Most of the episode is set during the dry season, a yearly occurrence that is nevertheless presented as a unique existential threat. David is depicted as particularly threatened by this part of the annual weather cycle: “As the dry season begins, David’s potential competitors are gathering...David is alone, he’s never been more vulnerable” (BBC, 2018a). The building of jeopardy continues through the narrative, developing the impression that the younger males consciously and constantly plan insurrection against the dominant male.

A new threat to the well-being of the troop is later presented when some of the adult females, until then hardly mentioned, come into season. This is a regular occurrence and does engender conflict among males. A fight between David and a group of young males is shown, at the end of which the screen fades to black, implying death. The film then shows an injured

David, with a strong implication that he is fatally wounded, although he appears only to have lost a digit. Some females gather round him and “tend his wounds”, but then move off. There is a series of shots with the focus pulling out from the injured chimp with the script saying that “David is left for dead”. However, he later re-joins the troop and retains dominance. As this would have been known before the script was written, the *he is about to die* narrative with accompanying melodramatic music are clearly there to elicit emotions and to suggest imminent death rather than reflect the chronology of what actually happened.

The wet season is treated in the scripting as a miracle which saves the chimps rather than an annual event. The film and script depict David as dominant and “gorging” on food, yet the jeopardy of his position is continually referred to. When one of the females gives birth, with David presumed to be the father, we are told, “his rule and the future of his dynasty is secure” (BBC, 2018a). The word dynasty strongly implies a conscious attempt by individuals to create dynasties in a highly anthropomorphic fashion. At the end of the documentary David is described as the most powerful leader with the longest reign of any chimp the researchers have known, so why the constant jeopardy and emotive threat theme?

The third of the *Dynasties* films, on lions, was broadcast on 23 November 2018 and featured a pride in Kenya’s Maasai Mara. The programme started with the proclamation that lions are “the very image of majesty and indeed of Africa itself...[and] have ruled the savannas for millennia” (BBC, 2018b), rhetoric more suited to Disney’s *The Lion King* than a wildlife documentary. This is followed by a focus on a single lioness as the embodiment of the lion and the sole hope for the pride because, the narration explained, “the very survival of this great dynasty is under threat” (BBC 2018b). The most experienced lioness, (named Charm),

was described as, “Perhaps the most powerful in history of the Marsh pride” (BBC, 2018b), a statement without any biological meaning or evidential support.

Despite well-researched and longstanding estimates of hunting ability and success levels (e.g. Funston et al., 1998; Funston et al., 2001), the failure of many of the pride’s hunts is presented as an unusual and looming threat to pride survival rather than something that is routine to all prides. Other existential drama includes one of the young males confronted by a large pack of hyenas. The narration says he is in severe danger of being killed, and yet when another sub-adult male turns up they drive off the hyenas with ease.

In focusing on single individuals, accuracy is sacrificed for sensation. The lioness Charm is presented as a single mother fighting for her cubs when there are clearly at least three other hunting-capable lions in the pride who can help make and defend kills.

The fourth episode on African wild dogs (*Lycaon pictus*, unusually referred to throughout as painted wolves), again puts the emphasis on individuals, in this case pack alpha females (BBC, 2018c). The narrative is replete with jeopardy, and like the lion episode, is often more *The Lion King* than documentary. Indeed, the film-makers appropriate the term *pridelands* (used in *The Lion King* to describe the lion kingdom) for an area with a large pride of lions (BBC, 2018c). Much of the episode is premised on the concept that there is intense and murderous rivalry between neighbouring packs, in this case each pack being led by related (mother and daughter) dogs. But, as Hunter (2011) has explained, wild dogs have large territories and while those of packs overlap, active territorial defence is infrequent, and when it does happen is around den sites and is not about occupation of an entire territory.

In the *Dynasties* treatment of wild dog pack interaction one pack harasses and pursues the other pack, forcing it to leave its territory completely and venture into the ‘*pridelands*’ where they are in danger of elimination by lions. Lions certainly do kill wild dogs, but across Africa the two species live in the same areas and lion ranges are not no-go areas for wild dogs. The narrative also stresses the danger from “forests full of hyenas” (BBC, 2018c). That wild dogs are usually successful in driving off hyenas is ignored. The emphasis on hyenas as the enemy and the use of the term ‘*pridelands*’ clearly alludes to *The Lion King* with no regard for factual accuracy regarding the extensive coexistence of these species.

The fifth episode in the series, about tigers (BBC, 2018d), was less artificially preoccupied with individuals and their interactions, as tigers (except females with dependent cubs) are usually solitary. But the narrative continued to be anthropomorphic and jeopardy-driven. At one stage, it is suggested that an Asian sloth bear is likely to attack the cubs yet at no point is the bear shown near the cubs (BBC, 2018d). The tigress depicted is described as having to strike an impossible balance between hunting and protecting her cubs but this is something all solitary mothers in the wild do and is hardly a sudden or extreme danger. In another scene, one of the cubs meets a male tiger at a waterhole. The narration says he will not harm the cub as it is his daughter. How do they know, and how for that matter, does the tiger know? Oddly, the narrative then goes on to undermine this myth by admitting that male tigers rarely see their progeny (BBC, 2018d). Later on, the main tigress is injured and we were then told that “A serious injury to a mother tiger can mean starvation for her cubs”. But it is clear the cubs are old enough to go their separate ways, so the jeopardy element is again false.

Dynasties focuses heavily on named individuals, and presents stories framed as a soap-operas. Jeopardy is emphasised throughout, with human emotions, socio-political conflicts

and relationships used to provide context. Animals are also endowed with the capacity to be aware of, and work towards, the dynasties of the title. As Dingwall and Aldridge (2006) conclude from their scrutiny of a range of TV wildlife programs, the commercial and narrative imperatives of the ‘blue-chip’ productions influence how science is represented. Does this matter for conservation? Some conservationists have argued that promoting anthropomorphism could even be helpful. Tam et al. (2013), for example, showed that anthropomorphic presentation of environmental issues was associated with higher ‘connectedness to nature’ scores in experimental conditions. They suggest such narratives could be a useful low-cost strategy in environmental promotion, and that educators might consider anthropomorphic narratives in ‘school curricula and public service announcements’. They were however cautious concerning the use of ‘fictional animal personas’.

The dangers inherent in this strategy, which we believe to be particularly relevant for the extreme version deployed in *Dynasties*, have been outlined by Root-Bernstein et al. (2013), who allude to it as powerful but ‘double-edged’ sword. And as McCarney (2018) points out there is little evidence that anthropomorphism can be harnessed to promote public commitment to habitat protection, rather than an emotional reaction to particular animals – something seen vividly in the public reaction to media reports of the killing of a lion that had been named Cecil, in Zimbabwe in 2015 (Somerville, 2017). We are not arguing that wildlife films should not be seeking to evoke an emotional reaction to nature, or its conservation. Nor are we arguing that films that do so are necessarily unscientific. As Kay Milton has argued, denigration of emotion as in conflict with scientific rationality expresses a false dichotomy (cited by Brockington, 2006). On the contrary, emotion is a ubiquitous reaction to nature, and an inspiration for conservation. But emotion can be evoked, and ethically so for conservation, without depending on exaggerated depictions of animals as ‘persons’.

As Brockington (2009) argues, many conservation/wildlife filmmakers believe that they have contributed to conservation, but films can make animals into a spectacle with lots of sound and fury, an argument also made by Mitman (1999). This suggests that while documentary films about wildlife may be popular, and give their audiences exciting experiences and an idea that they know more about wildlife after watching a film than before, they do not in reality necessarily make any great contribution to developing public understanding if they depend on spectacle alone. The ability of wildlife films to inform the public to an extent where they can make informed decisions on conservation issues (such as trophy hunting, wildlife trade bans or other legislation that may affect global conservation (Bega, 2020; Dickman et al 2019)) is, in practice, limited. While the evidence linking nature films and human behaviour is complex and uncertain, there is good reason, however, to expect that nature films can increase support for conservation (Jones et al. 2019). In laboratory conditions, subjects exposed to audio-visual presentations with greater emphasis on the anthropogenic threats to biodiversity showed greater willingness to donate to environmental campaigns (Shreedar and Mourato, 2018), Recent research on social media reactions to documentaries presented by Attenborough suggest a strong influence on public opinion, as Fernández-Bellon and Kane (2019) have set out. They analysed social media behaviour suggesting public engagement with environmental issues after the broadcast of *Planet Earth 2* by the BBC and found that “effects on audience awareness of species persisted beyond the broadcast of *Planet Earth 2*...natural history films coupled with opinion leaders (e.g., David Attenborough), using broader reaching channels (e.g., online streaming platforms), or that engage with the public (e.g., social media campaigns) have strong potential to promote pro-conservation behaviors” (Fernández-Bellon and Kane, 2019). Where such films are less than accurate in their portrayals, the behaviours promoted could therefore be misinformed and inappropriate.

A focus on individuals, and particularly individuals of charismatic species, rather than populations is increasingly recognised as inimical to conservation. Tom McShane, a former director of the World Wildlife Fund's Central Africa program has speculated that such 'animalism' and its obsession with individuals is a trend which draws attention from more pressing issues in conservation (Martin, 2012). Indeed, the unprecedented media reaction to the 2015 killing of Cecil the lion (Macdonald et al., 2016; Somerville, 2017) demonstrated that much of the public does conflate the fate of individual animals with conservation. The coverage of the event gave a false impression that trophy hunting was a prominent conservation issue for lion persistence, and almost completely neglected the real threats for lion conservation: habitat loss and persecution.

A second conspicuous issue occurs for conservation where anthropomorphism promotes negative stereotypes. Bousé points out [p165] that this anthropomorphism brings with it the projection of human (predominantly Western) values onto animals: individuals are praised for their 'courage', 'patience', or parenting skills. This leads to perceived moral deviance in species where these virtues cannot easily be identified. Individuals of a species can be imbued with 'evil' human qualities (Root-Bernstein et al., 2013). Among the most obvious is the wolf in North America, which has long acquired a stereotype as murderous and blood-thirsty. The treatment of the spotted hyena in *Dynasties* (BBC, 2018b) lazily reinforced its long-standing negative imagery in fiction (which like that of the wolf is deeply embedded in the cultures of people encountering them). Conservation efforts for these species are clearly not going to be helped by film-makers who use these ancient tropes to fortify their wildlife soap-operas. Indeed, the conservation of all species who are not like humans in the 'right ways' (including all plants) is unlikely to be helped by this tendency (Root-Bernstein et al., 2013).

Clearly, *Dynasties* was an entertaining and popular series. It garnered favourable reviews and excellent viewing figures, and undoubtedly made the public more aware of the species covered. While public awareness is important for conservation, we argue that the extreme anthropomorphism, focus on individuals and false jeopardy that characterise *Dynasties* (and similar output, including the popular series *Meerkat Manor* and *Big Cat Diary*) could have negative consequences for real-world conservation. Such an approach risks distracting people from the realities of the natural world and the requirements and complexities of conservation, as it shifts focus away conserving habitats and populations and towards safeguarding individual animals. Bradshaw et al. (2007) made a similar case, arguing that the ‘dumbing down’ which accompanies sensationalism tends to distance audiences from the realities of the natural world. It would be refreshing to see the same production values and stunning footage being used to portray more scientifically accurate narratives and to introduce people to the realities of modern-day conservation.

References

Archer, K. (2018) When does *Dynasties* start on BBC One? Everything you need to know about Sir David Attenborough’s new series Get set for another nature spectacular from the king of wildlife documentaries, 11 November 2018, <https://tv.bt.com/tv/tv-news/when-does-dynasties-start-on-bbc-one-everything-you-need-to-know-about-david-attenboroughs-new-series-11364308257365> [accessed March 10th 2020]

Sir David Attenborough defends Frozen Planet zoo footage, *Independent*, 12 December 2011, <https://www.independent.co.uk/news/media/tv-radio/sir-david-attenborough-defends-frozen-planet-zoo-footage-6275985.html> accessed 14 August 2019. BBC (no date) <https://www.bbc.co.uk/programmes/p06mvnr8> [accessed march 10th 2020]

- BBC (2018a) *Dynasties: Chimpanzee*, Series 1:1, 11 November 2018, BBC iPlayer,
- BBC (2018b) *Dynasties: Lion*, Series 1:3, 25 November 2018, BBC iPlayer.
- BBC (2018c) *Dynasties: Painted Wolf*, Series 1:4, 2 December 2018, BBC iPlayer.
- BBC (2018d) *Dynasties: Tiger*, Series 1:5, 9 December 2018, BBC iPlayer
- Bega, S (2020) Southern Africa community leaders pen open letter to UK celebrities over trophy hunting, IOL, 31 July 2020, <https://www.iol.co.za/saturday-star/news/southern-africa-community-leaders-pen-open-letter-to-uk-celebrities-over-trophy-hunting-653c082c-295a-40f4-b806-07c2cec39b5b>
- Bousé, D (2000) *Wildlife Films*, Philadelphia: University of Pennsylvania Press,
- Bradshaw, C.J.A., Brook, B.W. and McMahon, C.R. (2007) Dangers of Sensationalizing Conservation Biology, *Conservation Biology*, 21: 570-571.
- Brockington, D (2006) Loving Nature: towards an ecology of emotion by Kay Milton, *Royal Geographical Society*, <https://doi.org/10.1111/j.1475-4762.2006.0676f.x> accessed 1 February 2021.
- Brockington, D (2009) *Celebrity and the Environment. Fame, Wealth and Power in Conservation*, London: Zed Books.
- Cumming, E. (2018) Dynasties review: Immaculate new David Attenborough series is a direct assault on the heartstrings, 11 November 2018, <https://www.msn.com/en-gb/entertainment/tv/dynasties-review-immaculate-new-david-attenborough-series-is-a-direct-assault-on-the-heartstrings/ar-BBPACKZ> [accessed March 10th August 2020].
- Dickman, A. et al (2019) Trophy hunting bans imperil biodiversity Amy Dickman, *Science*, 365.

- Dingwall, R. and Aldridge, M (2006) Television wildlife programming as a source of popular scientific information: a case study of evolution, *Public Understanding of Science* 15:131-152.
- Fernández-Bellon, D. and Kane, A. (2020) Natural history films raise species awareness—A big data approach. *Conservation Letters*, 2020;13:e12678.
- Funston PJ, Mills MGL, Biggs HC, Richardson PRK. (1998). Hunting by male lions: ecological influences and socioecological implications. *Animal Behaviour* 56:1333-1345.
- Funston PJ, Mills MGL, Biggs HC. (2001). Factors affecting the hunting success of male and female lions in the Kruger National Park. *Journal of Zoology* 253:419-431.
- Horak, J-C (2006) Wildlife documentaries: from classical forms to reality TV, *Film History*, 18.
- Hunter, L. (2011) *Carnivores of the World*. Princeton: Princeton University Press.
- Jones, J.P., Thomas-Walters, L., Rust, N.A. and Veríssimo, D. (2019). Nature documentaries and saving nature: Reflections on the new Netflix series Our Planet. *People and Nature* 1: 420-425.
- Macdonald, D.W., Jacobsen, K.S., Burnham, D., Johnson, P.J. and Loveridge, A.J. (2016) Cecil: a moment or a movement? Analysis of media coverage of the death of a lion, *Panthera leo*. *Animals* 6: 26.
- Martin, G. (2012) *Game Changer. Animal Rights and the Fate of Africa's Wildlife*. Berkeley, California: University of California Press.
- McCarney P. (2018) Anthropomorphism: What is it and Can it Benefit Conservation? *Environment and Conservation*.
<https://www.truthaboutfur.com/blog/anthropomorphism-and-conservation/> [accessed March 10th 2020]

- Gregg Mitman (1999), *Reel Nature. America's Romance with Wildlife on Film*, Seattle: University of Washington Press.
- Monbiot, G. (2018) David Attenborough has betrayed the living world he loves. *The Guardian* 7th November 2018
<https://www.theguardian.com/commentisfree/2018/nov/07/david-attenborough-world-environment-bbc-films> [accessed March 10th 2020]
- Revell, T. (2020) David Attenborough's A Life on Our Planet is a powerful call to action, *New Scientist*, 23 March 2020, <https://www.newscientist.com/article/2238102-david-attenboroughs-a-life-on-our-planet-is-a-powerful-call-to-action/> accessed 25 January 2021.
- Root-Bernstein M, Douglas L, Smith A, Verissimo D. (2013) Anthropomorphized species as tools for conservation: utility beyond prosocial, intelligent and suffering species. *Biodiversity and Conservation* **22**:1577-1589.
- Sandbrook, C., & Adams, W. M. (2013) The BBC's Africa as middle earth. Cambridge, UK. Available at: <https://thinkinglikeahuman.com/2013/01/18/the-bbcs-africa-as-middle-earth/> Last accessed 23/01/20
- Shreedhar G. & Mourato, S. 2018. Grantham Institute on Climate Change and the Environment Working Paper No. 302.
- Somerville, K. (2017) Cecil the lion in the British media: The pride and prejudice of the press. *Journal of African Media Studies* 9: 471-485.
- Tam K.P., Lee S.L., Chao M.M. (2013) Saving Mr. Nature: Anthropomorphism enhances connectedness to and protectiveness toward nature. *Journal of Experimental Social Psychology* 49:514-521.
- Waal F.B.M.d (2017) *Are we smart enough to know how smart animals are?* Granta, London.