

Scientific Life

Satire for Conservation
in the 21st CenturyGuillaume Chapron,^{1,*}
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In Chapron *et al.* [1], we issued a warning to Planet Earth and opposed the ideological discourse of Ripple *et al.* [2]. For example, we suggested that instead of saving bees, we should develop microdrones to pollinate crops. Had we properly done our literature review before writing, we would have known that, indeed, our satiric recommendation had already been implemented through the ‘development of an innovative artificial pollinator against the global pollination crisis’ [3]. Ripple *et al.* [4] have explained that our satiric tone in Chapron *et al.* [1] should not be taken at face value, although it retrospectively appears that our text may not have been satiric enough.

The warning by Ripple *et al.* [2] – which all of us had signed – was intended to alert decision makers, the civil society, and humanity in general to the degradation of the state of the world. The approach taken by Ripple *et al.* [2] was to write a short and synthetic paper and invite the scientific community to sign it. The rationale was that if more than 15 000 scientists raise alarm about an issue, this issue then deserves particular attention and action. Others, however, have expressed doubts on Ripple *et al.*’s [2] effectiveness in galvanizing the needed change and argued that positive messages of hope are more likely to succeed [5].

In Chapron *et al.* [1], we chose a third approach – satire – that would broadcast Ripple *et al.*’s [2] message in a more blunt style. Satire is largely unusual in ecological science or science in general and only a very few papers have, to our knowledge, adopted a satiric angle (e.g., see [6]). One

could argue that satire is antithetic to science. Science is about objectively understanding and explaining the complexity of the world, while satire is instead about presenting the world in a deliberately aggressive and mocking angle with the intention to provoke reflection, stimulate critical thinking, and trigger societal change. However, science and satire originally stem from a common root, as satire was practiced by ancient Greek and Roman thinkers. One of the first satires is reported to be Aristophanes’ portrayal of Socrates, *The Clouds*, written in 423 BC.

We engaged in satire because we believe that satire is a unique literary style particularly suited to issues of high societal relevance. The environmental crisis has reached such a scale that it is no longer justifiable to dispense with some communication tools, even if nonconsensual. It is worth remembering that satire has historically been an important literary style in major societal struggles, by forcing debates into society that would otherwise not have been possible. For example, satire was instrumental in loosening the grip the Catholic Church held on 19th-century French society. Parallels can be made between monotheistic religions and today’s quasi-worshipping of economic growth, and satire can be an appropriate tool to confront that worshipping.

Writing or understanding satire can be difficult because there are no clear-cut criteria that unambiguously allow one to label a text as satiric or not. Satire often relies on irony, parody, and word play, but not every text that uses these is a satire [7]. Irony refers to telling something to mean the opposite, often by using extreme understatements or overstatements. Irony is essential to satire because it exposes inconvenient facts, logics, or double standards. Irony further requires more active involvement from the audience to process multilayered information. This critical thinking has been suggested

to promote the democratic health of a society [7]. Parody is intended to ridicule someone or something, but parody alone is not satire as it does not always lead to critical thinking and can consist in simply mockery. Satire can also be reinforced by wordplay (e.g., ‘factose intolerant’). An important distinction needs to be made between fake news and satire. Fake news presents knowingly false information to deliberately mislead the reader, while satire provides a specific magnifying angle on an existing situation to force the reader to engage in critical thinking.

Satire is absolutely not intended to be an alternative to traditional scientific communications, which guarantee the needed sobriety to effectively communicate research results. Satire is, however, relevant to put in perspective, for both scientists and the broader public, issues at the interface between science and policy. In other words, the role of satire begins where the one of traditional scientific communication stops. Satire can also be used to question the practices of the scientific community; for example, the recent study revealing the high ecological footprint of conservation scientists [8] would be suitable for a satiric communication. One obvious question relevant to satire is whether it communicates well the issues it addresses. Evidence remains limited but research indicates that satire can educate the public on scientific issues in a way that more standard scientific communication does not, by empowering a sympathetic section of the public [9]. There is, however, clear evidence that satire is effective at disturbing established powers or symbols; for example, authoritarian regimes systematically display low tolerance towards satirists.

In general, environmental satire is much less developed than social or political satire, but illustrative examples can be found in the US news medium *The Onion* writing, for example, a long article explaining enthusiastically that ‘for the first time in history, the

rich array of consumer products available in malls and supermarkets surpasses the number of living species populating the planet' (<https://www.theonion.com/consumer-product-diversity-now-exceeds-biodiversity-1819564919>). Visual communications such as cartoons are also an important stream of satiric production that can be relevant for conservation [10]. With scientists increasingly encouraged to innovate in their public outreach (i.e., *Science* has run for now a decade a 'Dance Your PhD' contest), one could imagine a conservation satire contest. Blogging can also be an adequate venue for satire. As academia is increasingly focused on diversity and inclusiveness, this should also include communication styles, even caustic ones.

Scientists engaging in satire may face numerous hurdles that are important to identify and discuss, especially because these hurdles are magnified by the global nature of today's scientific enterprise and the ease and immediacy with which information (and criticism) can circulate on the internet. Collaborating with known and experienced satirists may also be an effective way to avoid those hurdles.

The first hurdle relates to the possibility that a reader may fail to identify the text as satiric. Satire works only if it is recognized as satire and this can be by publishing in a blog, a magazine, or a section known as satiric. An alternative is to make it plainly obvious that the tone is satiric (our approach in Chapron *et al.* [1]) or to indicate ahead that the piece is not supposed to be understood at face value. However, this latter approach will fail to truly engage the reader and may stifle the empowering nature of satire.

The second hurdle is that satire is not supposed to be deferential or even funny. Good satire hurts and is a punch in the face. An essential nuance, however, is

that there is a clear difference between mocking people's beliefs and mocking people. One can criticize a faith (e.g., economic growth) without criticizing its worshippers (e.g., individual consumers). Satire should also preferably be punched up at the powerful rather than punched down at the powerless, although what is power and who holds it will always be a matter for debate, especially for environmental issues.

The next hurdle concerns cultural differences. Satire has played a fundamental role in the democratic development of some countries but may not be understood or accepted in others [11]. Satiric traditions may also differ between countries. For example, American satire consists more of a playful critique to gently mock society (Horatian satire), while French satire is violently confrontational and abrasive (Juvenalian satire). Satire from other cultures may be equally distinct in style and acceptance. Does satire still have a place in today's academia? Our opinion is that working in a globalized environment need not imply sanitized, lowest common denominator communication of ideas.

The same point applies when considering the broad readership of publications in the age of the internet and the speed at which information can circulate on social media. Social media do not facilitate the communication of nuances and some historical satiric texts would likely not be publishable today. For example, in 1748 Montesquieu opposed slavery in *De l'Esprit des Lois* by pretending to defend it, but with arguments that an attentive read reveals are all flawed and self-defeating. That piece would certainly be misunderstood today by quite a few people. Still, the fact that some may, legitimately or mistakenly, be offended cannot be a valid reason to not fully engage in satire, within the limits of the law.

To conclude, we believe that satire deserves its place in conservation communication and we encourage conservation scholars to consider it as a legitimate communication style for specific goals. We can also add that writing and discussing satire has easily given us two articles in *Trends in Ecology & Evolution*, which have increased, with minimum effort, our publication record in highly ranked journals. And if one was still not convinced of the impact of satire after reading these papers, but nevertheless did react to that previous sentence, the power of satire has again been demonstrated.

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<https://doi.org/10.1016/j.tree.2018.04.017>

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