

## Impact case study (REF3)

<b>Institution:</b> Brunel University London		
<b>Unit of Assessment:</b> 21 Sociology		
<b>Title of case study:</b> Shaping plastics industry communication practices and policy development in relation to plastic pollution and behaviour change		
<b>Period when the underpinning research was undertaken:</b> 2000 - 2020		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Dr Lesley Henderson	Reader in Sociology & Communications	09/1999 – present
<b>Period when the claimed impact occurred:</b> 2018 - 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		

**1. Summary of the impact** (indicative maximum 100 words)

Dr Lesley Henderson's sociological research on communicating plastic pollution addresses the problem of public understandings and behaviour change. It has influenced industry practice and informed policy development in relation to (micro)plastics communications. Her research has been used to prioritise the cultural context of plastics use, media framing of the problem and role of communications in behaviour change. This has influenced European regulation (SAPEA) and EU policy (Circular Economy Action Plan) and led to Ursula von der Leyen making plastic-free oceans a 'cross-cutting priority' for the European Commission in 2019. Dr Henderson's work has also informed business and plastic industry approaches. [REDACTED]

**2. Underpinning research** (indicative maximum 500 words)

The impact stems from a body of research that Dr Henderson has developed over the past 20 years at Brunel University London in relation to health, science and political communications. At the core of her research is the relationship between communications and social change (Ref. 1-4; Grant 1-5).

Between 2000 and 2001, Dr Henderson (then, Lecturer) examined media representations of human genetic research. She found that media values of drama and personalisation can undermine scientific accuracy, amplifying 'breakthroughs' and creating misconceptions amongst audiences about risk to human health. Her work highlighted how 'science reporting' is firmly embedded within broader socio-economic issues and how political and economic factors may drive a science story. This has provided crucial insights into the key relationships which influence media reporting of scientific research (Grant 1).

During 2003, Dr Henderson explored reasons for low childhood immunisation amongst the Orthodox Jewish community in North East London. She identified the importance of 'word of mouth' networks and that media myths about the risk of vaccination may play a greater role than expected in marginalised communities (Ref. 1).

Between 2006 and 2009, Dr Henderson (then, Senior Lecturer) led the audience reception strand of a project which explored the debates about the 'state of youth' in the UK and EU regarding public alienation from the political process. The research identified disaffection from formal politics as presented on mainstream media and a desire for more authentic depictions of

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young people. The findings showed how perceptions of ‘fakery’ can reduce levels of trust and engagement in expertise and recognised a desire for political messaging from more ‘trusted’ figures, such as comedians, who were seen as ‘neutral’ figures without an agenda (Grant 2).

Between 2016 and 2017, Dr Henderson led an interdisciplinary project mapping media stories and audience engagement with plastics pollution using news bulletins and the documentary film *A Plastic Ocean* (Netflix, 2017), endorsed by David Attenborough and Leonardo Di Caprio for promoting an anti single-use plastic message. Dr Henderson found that emotive images of plastics were powerful and raised awareness, but low public scientific literacy meant people made little connection between their everyday actions and plastics in the ocean. She attributed this to media framing which links plastic pollution to wildlife entanglement and promotes myths about the Great Pacific Garbage Patch. Dr Henderson found strongly held societal perceptions regarding “good health” (e.g. ‘plastic straws protect teeth’) and assumptions about “good parenting” (e.g. ‘plastic balloons are normal for birthday celebrations’) which can undermine circular economy messages (reuse, recycle, retain, refuse) (Grant 3; Ref. 4).

In 2020, Dr Henderson went on Knowledge Transfer Leave to strengthen further the evidence base for the impact her research has had on plastic pollution. She engaged with industry [REDACTED] and policymakers (European Commission, OSPAR, World Health Organisation) to shape interventions for bridging the gap between education and human behaviour which resulted in more effective plastic waste management.

**3. References to the research** (indicative maximum of six references)**Publications**

- Ref 1.** Henderson, L., Thorogood, N. and Millett, C. (2003) *‘Exploring the reasons for low uptake of childhood immunisation in the orthodox Jewish community, North East London’*. Report. (Commissioned by The City and Hackney Primary Care Trust).
- Ref 2.** Henderson, L. (2010). *Television News, Politics and Young People: Generation disconnected?* New York, NY: Palgrave Macmillan. [10.1057/9780230274754](https://doi.org/10.1057/9780230274754)
- Ref 3.** Henderson, L. Hilton, S and Green, J. (eds) (2019) *Media Analysis and Public Health: Contemporary Issues in Critical Public Health*. London: Routledge.
- Ref 4.** Henderson, L. and Green, C. (2020) ‘Making sense of microplastics? Public understandings of plastic pollution’. *Marine Pollution Bulletin*, 152. pp. 1 - 43. [10.1016/j.marpolbul.2020.110908](https://doi.org/10.1016/j.marpolbul.2020.110908)

**Grants**

1. Lesley Henderson (CI) and John Eldridge (PI) (University of Glasgow), The Wellcome Trust (GR058105MA), 2000 – 2001, *Media coverage of the ethical and social implications of human genetic research*, GBP116,000.
2. Lesley Henderson (CI) and Mike Wayne (PI) (Brunel University London), Arts and Humanities Research Council (112169/1), January 2006 – February 2009, *Television News, Current Affairs and Young People: The problem of disconnection*, GBP108,339.
3. Lesley Henderson (CI) and Susan Jobling (PI), Plastics Ocean Foundation and Brunel University London (POF-615), September 2016 – August 2017, *From Plastic Pollution to Solutions: Public Communication of Environmental and Health Risks*, GBP50,000

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4. Lesley Henderson (CI) and Susan Jobling (PI) (Brunel University London), Natural Environment Research Council, 1 July 2020 – 31 December 2023, *Plastics in Indonesian Societies (PISCES): Systems Analytics Approach to Reduce Plastic Pollution*, GBP841,846.71
5. Lesley Henderson (CI) and George Fern (PI) (Brunel University London), Natural Environment Research Council, 1 November 2020 – 30 April 2022, *Providing the 30% recycled content for food packing (PFP): An integrated stakeholder approach to solving 'hard to recycle' plastic packaging*, GBP453,074.84

**Peer Reviewed Scientific Report**

1. SAPEA, Science Advice for Policy by European Academies. (2019). *A Scientific Perspective on Microplastics in Nature and Society*. SAPEA: Berlin.

<https://www.sapea.info/topics/microplastics>

**4. Details of the impact** (indicative maximum 750 words)

Dr Henderson has made contributions to European policy options as a member of the SAPEA Working Group on microplastics. SAPEA (Science Advice for Policy by European Academies) is part of the European Commission's Scientific Advice Mechanism that provides independent advice to the European Commission for planning and policy-making. Because of her expertise in communications, risk and public behaviours, Dr Henderson was the only sociologist invited to be a member of the Working Group on microplastics, which included 26 colleagues (comprising natural scientists; environmental psychologists; social scientists; policy makers). Together, they produced a report (Report 1) which concludes that 'evidence on microplastics does not yet point to widespread risk' however warns that 'the situation could change if pollution continues at the current rate.' It was presented to the European Group of Chief Scientific Advisors (GCSA) in January 2019 who have fully accepted the recommendations from the report.

**I. Impact on the European Commission and Changes to the Risk Perception of Microplastics**

An independent expert report published by the European Commission in February 2020 refers to the outcome of the SAPEA Evidence Review Report and the activities of the European Commission's Group of Chief Scientific Advisors both of which Henderson's research influenced. The report corroborates that the data presented in the SAPEA report, "made recommendations on how the EU, together with other global policy actors, should respond to microplastic pollution based on state-of-the-art scientific knowledge and insights" (E1). It confirms that the SAPEA report "has informed a number of debates both within the scientific community and among policy-makers, including roundtable meetings of G7 Chief Scientific Advisors on Scientific Advice cooperation for microplastic pollution in Washington DC... and in Paris... and has strengthened international cooperation between Chief Scientific Advisors" (E1).

The Commissioner for Research, Science and Innovation commended the report: "with the rise of microplastics pollution, we need to understand how microplastics interact with people and planet, so we can take action...The recommendations of the Advisors provide clarity on what we can and should do now, and what we need to know and how we can find it out in order to act later. The Commissioner for Environment, Maritime Affairs and Fisheries was equally impressed: "the recommendations complement work already set in motion by the European Plastics Strategy. They will help us in our continued efforts to provide the highest standards of protection of public health and the environment, through sustainable management of plastics" (E2).

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The European Commission report has also informed the ECHA proposal January 2019 to restrict intentionally added microplastics. Currently, “the releases of intentionally added microplastics in the EU/EEA are estimated to be around 42000 [sic] tonnes a year. Additional releases from infill material used in artificial turf pitches could amount to 16,000 [sic] tonnes per year. The proposed restriction would prevent more than 90% of these releases, or 500,000 [sic] tonnes of microplastic releases over a 20-year period” (E3).

The SAPEA report was also responsible for the point made by Ursula von der Leyen in her mission statement to the Commissioner-designate for Environment and Oceans in September 2019. She ordered the Commissioner, “As part of [the new Circular Economy Action Plan], you will lead efforts towards plastic-free oceans. I want you to address the issue of microplastics and ensure that the existing legislation on plastics is implemented” (E4). In the mission letter, von der Leyen labels this as part of the “cross-cutting priorities” which will contribute to “conserving Europe’s natural environment” (E4). This statement demonstrates a shift in priorities at the top-level of the EU, as a direct result of Henderson’s research contribution to the report.

The report has also reached international levels. It had a strong influence on the WHO report “Microplastics in drinking-water”; was cited in “The Ocean As a Solution to Climate Change”; discussed at the high level panel for a sustainable ocean economy (involving presidents/prime ministers of Australia, Canada, Chile, Fiji, Ghana, Indonesia, Jamaica, Japan, Kenya, Mexico, Namibia, Norway, Palau and Portugal), and was discussed by G7 science advisors at a meeting in Washington DC. The panel concluded, “The fact that we can also share findings from sociological research on the effects of ocean pollution on humans and society shows that interdisciplinary, joint efforts by the natural and social sciences to tackle these global problems are increasingly perceived and appreciated by politicians and donors alike” (E5).

[REDACTED]

The chair of the SAPEA Working Group acknowledged the importance of communication as emphasised by Dr Henderson, noting “a lack of evidence for risk doesn’t mean we should assume that there is no risk. As our social science colleagues have pointed out, it’s vital that we communicate clearly about uncertainties in the evidence, rather than just assuming that everything is fine just because we don’t know for sure” (E8).

### **5. Sources to corroborate the impact** (indicative maximum of 10 references)

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- E1** Informing European Commission Policy making with Scientific Evidence, The Group of Chief Scientific Advisors 2015-2019. PDF provided.
- E2** [https://ec.europa.eu/info/news/european-commissions-chief-scientific-advisors-call-wider-evidence-based-policy-response-pre-empt-growing-risks-microplastic-pollution-2019-apr-30\\_en](https://ec.europa.eu/info/news/european-commissions-chief-scientific-advisors-call-wider-evidence-based-policy-response-pre-empt-growing-risks-microplastic-pollution-2019-apr-30_en)
- E3** [RAC backs restricting intentional uses of microplastics](#)
- E4** Ursula von der Leyen, Mission letter, 10 September 2019
- E5** <https://www.leibniz-zmt.de/en/news-at-zmt/news/news-archive/high-level-meeting-in-washington-zmt-joins-g7-advisory-roundtable-on-microplastics-pollution.html>
- E6** [REDACTED]
- E7** [REDACTED]
- E8** <https://knaw.nl/en/news/news/evidence-on-microplastics-does-not-yet-point-to-widespread-risk-say-europe2019s-top-scientists>