

Doctoral Thesis

Science Skepticism. Temporal and Religious Agency in Vaccination and Climate Change Controversies

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Abstract

Mistrust towards mainstream science and evidence-based expertise, or "science skepticism", is embedded in postmodernity. Vaccine hesitancy and climate change skepticism are both forms of rejecting expertise and searching for alternative bodies of knowledge. In this sociological research, I studied the social construction (Berger and Luckmann, 1966) of skeptical discourses on vaccination and climate change. Using a mixed-methods approach, I first provided a quantitative overview of skeptical attitudes on vaccination and climate change at the European Union level, and then I placed an emphasis on the Romanian society and I identified the cultural resources employed in the social construction of skeptical discourses.

One of the key findings of my research is that vaccine hesitancy and climate change skepticism, as skeptical discourses, do not support the postmodern claim for a plurality of knowledge types - although postmodern social characteristics such as neoliberalism, the democratization of information, and reflexivity facilitate and consolidate various forms of skepticism. Skeptics of vaccination and climate change do not contest the epistemic advantages of science, but they strongly reject mainstream science and official authorities. Instead, they support experts who are marginal within the scientific community and promote their contrarian claims as factually true (Vulpe, 2020b; Vulpe, 2022; Vulpe and Vasile, 2023). Both vaccine hesitancy and climate change skepticism encompass a heterogeneity of attitudes which are influenced by an individual's place within the social hierarchy, structural constraints, and economic inequalities (Vulpe, 2020a). Discourses on vaccination and climate change that are skeptical of mainstream science are socially constructed using three types of resources: selective trust, temporal agency (Flaherty, 2003), and religious agency (Leming, 2009). This is a key similarity that contributes to expanding the knowledge on the social construction of skepticism and the specific strategies used to reject mainstream science. Selective trust is a concept that I

introduced to show that skeptics of vaccines and of climate change distrust official experts, political authorities, big companies, and some parts of mass media, while they trust some experts and media representatives who are themselves promoters of skepticism and contesters of public authorities. Temporal agency (Flaherty, 2003) is extensively used in skeptical discourses in various forms, from argumentative time work (Ciocănel et al., 2021) to timescapes (Adam, 1998), historical continuity and discontinuity (Zerubavel, 2003). Religious agency (Leming, 2009) is used by Orthodox Christian and Pentecostal actors to construct a religious worldview that valorizes God's protection against the disease and climate disasters, associates the COVID-19 vaccine with the Mark of the Beast, and interprets pandemic restrictions as Apocalyptic events.

Another similarity is that skeptics of both vaccination and climate change structure their discourse around themes that are anchored in systemic problems causing risks and vulnerabilities for society at large and for particular social categories. Numerous problems and vulnerabilities emerged during the COVID-19 pandemic as regards public health measures and economic disruptions, thus consolidating the vaccine-hesitant discourse and skepticism of a just green transition. In terms of dissimilarities, the climate-skeptical discourse is underdeveloped in Romania in comparison with the vaccine-hesitant discourse. This is related to the neglect manifested by Romanian public authorities and media representatives on this topic, contrasting with policy proposals and public debates on vaccination. My research contributes to overcoming the knowledge deficit model (Suldozsky, 2017) by showing that skepticism of mainstream science is not an individual problem caused by deficient cognitive processes but is a socially constructed phenomenon that gains legitimacy because of societal problems and systemic dysfunctions. To mitigate the growing popularity of skeptical discourses, public authorities are faced with the difficult task of regaining the trust of the general public, which requires a long time and consistent efforts from scientists, experts, and policymakers.

Thesis References

1. Adam, B., 1998. *Timescapes of modernity*. Routledge, New York.
2. Adams, S.A., 2011. Sourcing the crowd for health services improvement: The reflexive patient and “share-your-experience” websites. *Soc. Sci. Med.* 72, 1069–1076.
3. Adger, N.W., Dessai, S., Goulden, M., Hulme, M., Lorenzoni, I., Nelson, D.R., Naess, L.O., Wolf, J., Wreford, A., 2009. Are there social limits to adaptation to climate change? *Clim. Change* 93, 335–354.
4. Afolabi, A.A., Ilesanmi, O.S., 2021. Dealing with vaccine hesitancy in Africa: the prospective COVID-19 vaccine context. *Pan Afr Med J* 38. <https://doi.org/10.11604/pamj.2021.38.3.27401>
5. Aklın, M., Urpelainen, J., 2014. Perceptions of scientific dissent undermine public support for environmental policy. *Environ. Sci. Policy* 38, 173–177.
6. Alario, M., Freudenburg, W., 2003. The Paradoxes of Modernity: Scientific Advances, Environmental Problems, and Risks to the Social Fabric? *Sociol. Forum* 18, 193–214.
7. Alexandrescu, F., 2019. ENVIRONMENTAL INJUSTICES IN EUROPEAN CLIMATE HOTSPOTS. *Sociol. Rom.* 17, 11–34.
8. Alltucker, K., 2023. “This is alarming”: Childhood vaccination rates drop as measles and polio outbreaks emerge [WWW Document]. *USA Today News*. URL <https://eu.usatoday.com/story/news/health/2023/01/12/childhood-vaccination-rates-drop/11039032002/> (accessed 1.19.23).
9. Andrews, T., 2012. What is Social Constructionism? *Grounded Theory Rev.* 11, 39–46.
10. Angermüller, J., 2015. Discourse Studies, in: *International Encyclopedia of the Social & Behavioral Sciences*. Elsevier, pp. 510–515.
11. Anghel, D., 2015. Religia penticostală. Regulile după care se ghidează membrii comunității. adevarul.ro.
12. Asociația pentru radio audiență, 2021. Rezultatele Studiului de Audiență Radio. ASOCIAȚIA PENTRU RADIO AUDIENȚĂ.
13. Attwell, K., Navin, M.C., Lopalco, P.L., Jestin, C., Reiter, S., Omer, S.B., 2018. Recent vaccine mandates in the United States, Europe and Australia: A comparative study. *Vaccine* 36, 7377–7384. <https://doi.org/10.1016/J.VACCINE.2018.10.019>
14. Bagnasco, A., 2009. Comunitate, in: *Dicționar al Gândirii Sociologice*. Polirom, Iași, pp. 147–149.
15. Baker, J.P., 2008. Mercury, Vaccines, and Autism One Controversy, Three Histories. *Public Health Then Now* 98, 244–253.
16. Baker, J.P., 2003. The pertussis vaccine controversy in Great Britain, 1974–1986. *Vaccine* 21, 4003–4010.
17. Bauman, L.J., Adair, E.G., 1992. The Use of Ethnographic Interviewing to Inform Questionnaire Construction. *Health Educ. Q.* 19, 9–23.
18. BBC News, 2019. Paris climate accords: US notifies UN of intention to withdraw [WWW Document]. *BBC News*. URL <https://www.bbc.com/news/world-us-canada-50297029> (accessed 5.20.20).
19. Beck, U., 1993. *Risk Society: Towards a New Modernity*. SAGE Publications Ltd, London.
20. Beck, U., Bonss, W., Lau, C., 2003. The theory of reflexive modernization. *Theory Cult. Soc.* 20, 1–33.
21. Bedford, H., Attwell, K., Danchin, M., Marshall, H., Corben, P., Leask, J., 2018. Vaccine Hesitancy, Refusal and Access Barriers: The Need for clarity in terminology. *Vaccine* 36, 6556–6558.
22. Beiser-McGrath, L.F., 2022. COVID-19 led to a decline in climate and environmental concern: evidence from UK panel data. *Clim. Change* 174, 1–11. <https://doi.org/10.1007/S10584-022-03449-1/FIGURES/4>

23. Berger, P.L., 2011. *Elements of a Sociological Theory of Religion*. Open Road Integrated Media, New York.
24. Berger, P.L., Luckmann, T., 1966. *The Social Construction of Reality*. Penguin Books, London.
25. Biss, E., 2014. *On Immunity: An Inoculation*. Graywolf Press, Minneapolis, Minnesota.
26. Blaskiewicz, R., 2013. The Big Pharma conspiracy theory. *Med. Writ.* 22, 259–261. <https://doi.org/10.1179/2047480613z.000000000142>
27. Blume, S., 2017. *Immunization How Vaccines Became Controversial*. Reaktion Books Ltd, London.
28. Blume, S., 2006. Anti-vaccination movements and their interpretations. *Soc. Sci. Med.* 62, 628–642.
29. Blume, S., Baylac-Paouly, B., 2022. *Immunization and States The Politics of Making Vaccines*. Routledge, New York.
30. Bogdan, E.A. (Evalyna), 2020. How a Deadly Pandemic Cleared the Air: Narratives and Practices Linking COVID-19 with Air Pollution and Climate Change: <https://doi.org/10.1177/1206331220938641> 23, 293–300. <https://doi.org/10.1177/1206331220938641>
31. Bourg, D., 2010. L'éco-scepticisme et le refus des limites. *Études* 413, 29–40.
32. Boykoff, M.T., 2008. The cultural politics of climate change discourse in UK tabloids. *Polit. Geogr.* 27, 549–569.
33. Bozzola, E., Spina, G., Russo, R., Bozzola, M., Corsello, G., Villani, A., 2018. Mandatory vaccinations in European countries, undocumented information, false news and the impact on vaccination uptake: the position of the Italian pediatric society. *Ital. J. Pediatr.* 44, 1–4. <https://doi.org/10.1186/s13052-018-0504-y>
34. Bradshaw, A.S., Treise, D., Shelton, S.S., Cretul, M., Raisa, A., Bajalia, A., Peek, D., 2020. Propagandizing anti-vaccination: Analysis of Vaccines Revealed documentary series. *Vaccine* 38, 2058–2069. <https://doi.org/10.1016/J.VACCINE.2019.12.027>
35. Bramadat, P., 2019. Crise de confiance et crise de vérité : religion, culture et réticence à la vaccination au Canada, in: *La Santé Publique à Une Ère Marquée Par Le Doute - Origines Religieuses et Culturelles de l'hésitation Des Canadiens Face à La Vaccination*. Les Éditions de l'Université de Sherbrooke (ÉDUS), pp. 17–50.
36. Brandt, M.J., Henry, P.J., 2012. Psychological Defensiveness as a Mechanism Explaining the Relationship Between Low Socioeconomic Status and Religiosity. *Int. J. Psychol. Relig.* 22, 321–332.
37. Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qual. Res. Psychol.* 3, 77–101.
38. Brisman, A., 2013. NOT A BEDTIME STORY: CLIMATE CHANGE, NEOLIBERALISM AND THE FUTURE OF THE ARCTIC. *Mich. State Int. Law Rev.* 22, 241–289.
39. Brown, S., 2009. The New Deficit Model. *Nature* 4, 609–611.
40. Brunk, C.G., 2006. Public Knowledge, Public Trust: Understanding the 'Knowledge Deficit'. *Community Genet.* 9, 178–183.
41. Buffel, V., Nicaise, I., 2018. *ESPN Thematic Report on Inequalities in access to healthcare Belgium*.
42. Burcea, M., Toma, S.-G., Papuc, R.-M., 2014. Patients' Satisfaction With the Health Care System in the Age of Globalization: The Case of Romania. *Transylv. Rev. Adm. Sci. Special Is*, 5–20.
43. Cafiero, F., Guille-Escuret, P., Ward, J.K., 2021. "I'm not an antivaxxer, but...": Spurious and authentic diversity among vaccine critical activists. *Soc. Netw.* 65, 63–70. <https://doi.org/10.1016/j.socnet.2020.11.004>
44. Caillé, A., 2003. NOUVELLES THÈSES SUR LA RELIGION. *La Découverte* 22, 318–327.
45. Camera Deputaţilor, 2017. PL-x nr. 399/2017 Proiect de Lege privind vaccinarea persoanelor în România [WWW Document]. Camera Deputaţilor Website. URL http://www.cdep.ro/pls/proiecte/upl_pck2015.proiect?idp=16586 (accessed 5.10.21).

46. Carrion, M.L., 2014. Risk, Expertise, and the Mother: A Qualitative Examination of Maternal Vaccine Refusal (PhD Thesis). Purdue University.
47. CATO Institute, 2020. Walter E. Williams [WWW Document]. CATO Inst. URL <https://www.cato.org/people/walter-williams> (accessed 10.21.20).
48. Centers for Disease Control and Prevention, 2019a. Vaccine Information for Adults [WWW Document].
49. Centers for Disease Control and Prevention, 2019b. Vaccine Information for Adults [WWW Document]. URL <https://www.cdc.gov/vaccines/adults/rec-vac/index.html> (accessed 2.17.20).
50. Chinn, S., Hart, P.S., 2021. Effects of consensus messages and political ideology on climate change attitudes: inconsistent findings and the effect of a pretest. *Clim. Change* 167, 1–21.
51. Chow, M.Y.K., Dankin, M., Willaby, H.W., Pemberton, S., Leask, J., 2017. Parental attitudes, beliefs, behaviours and concerns towards childhood vaccinations in Australia: A national online survey. *Aust. Fam. Physician* 46.
52. Chu, H., Liu, S., 2021. Light at the end of the tunnel: Influence of vaccine availability and vaccination intention on people's consideration of the COVID-19 vaccine. *Soc. Sci. Med.* 286, 114315. <https://doi.org/10.1016/J.SOCSCIMED.2021.114315>
53. Chun Tie, Y., Birks, M., Francis, K., 2019. Grounded theory research: A design framework for novice researchers. *SAGE Open Med.* 7, 205031211882292. <https://doi.org/10.1177/205031211882292>
54. Ciocănel, A., Rughiniș, C., Flaherty, M.G., 2021. Argumentative time work for legitimizing homeopathy: Temporal reasons for the acceptance of an alternative medical practice. *Time Soc.* 30, 100–125. <https://doi.org/10.1177/0961463X20962663>
55. Clark, A., Chalmers, D.J., 1998. The Extended Mind. *Analysis* 58, 10–23.
56. CNCAV, 2021. Tabel acoperire vaccinală [WWW Document]. CNCAV. URL https://vaccinare-covid.gov.ro/wp-content/uploads/2021/12/Tabel-acoperire-vaccinala_5.12.2021.pdf (accessed 1.6.22).
57. Cohen, A., 1992. The symbolic construction of community. Routledge, London and New York.
58. Colafrancesco, S., Perricone, C., Priori, R., Valesini, G., Shoenfeld, Y., 2014. Sjögren's syndrome: another facet of the autoimmune/inflammatory syndrome induced by adjuvants (ASIA). *J. Autoimmun.* 51, 10–16.
59. Coman, O., 2017. O epidemie a neglijenței [WWW Document]. DOR. URL <https://www.dor.ro/o-epidemie-a-neglijentei-dor30/> (accessed 2.1.23).
60. Concer, M., 2018. The narrative and tropes of the Italian anti-vaccination movement in their online communication in 2017. Loughborough University.
61. Constantine, N.A., Jerman, P., 2007. Acceptance of Human Papillomavirus Vaccination among Californian Parents of Daughters: A Representative Statewide Analysis. *J. Adolesc. Health* 40, 108–115.
62. Contributors.ro, 2020a. Alexandru Lazescu [WWW Document]. Contributors.ro. URL <https://www.contributors.ro/author/alexandru-lazescu/> (accessed 9.14.20).
63. Contributors.ro, 2020b. Constantin Crânganu [WWW Document]. Contributors.ro. URL <https://www.contributors.ro/author/constantin-cranganu/> (accessed 9.14.20).
64. Cooper, C.B., 2011. Media Literacy as a Key Strategy towards Improving Public Acceptance of Climate Change Science. *BioScience* 61, 231–237.
65. Corbett, J., 2020. The Corbett Report - About [WWW Document]. Corbett Rep. URL <https://www.corbettreport.com/about/> (accessed 10.21.20).
66. Corner, A., Markowitz, E.M., Pidgeon, N., 2014. Public engagement with climate change: the role of human values. *WIREs Clim Change* 5, 411–422.
67. Corpul de Control al Primului-Ministru, 2016. Notă de informare privind rezultatul verificărilor suplimentare efectuate de către Corpul de control al primului-ministru în legătură cu situația copiilor transferați cu afecțiuni grave de la Spitalul de Pediatrie Pitești la Spitalul Clinic de Urgență pen.

68. Corry, O., Jørgensen, D., 2015. Beyond 'deniers' and 'believers': Towards a map of the politics of climate change. *Glob. Environ. Change* 32, 165–174.
69. Cotton, M., Rattle, I., Van Alstine, J., 2014. Shale gas policy in the United Kingdom: An argumentative discourse analysis. *Energy Policy* 73, 427–438.
70. Cristea, D., Ilie, D.-G., Constantinescu, C., Fîrţală, V., 2021. Vaccinating against COVID-19: The Correlation between Pro-Vaccination Attitudes and the Belief That Our Peers Want to Get Vaccinated. *Vaccines* 9.
71. Cristea, D., Zamfirache, I., Zamfirescu, R., 2022. Vaccination against COVID-19 in Europe: A Typology Based on Cluster Analysis. *Int J Env. Res Public Health* 19. <https://doi.org/doi.org/10.3390/ijerph19148603>
72. Culliton, B., 1990. The ideal scientist described. *Science* 249, 355.
73. David, A.-E., Enache, C.-R., Hasmaţuchi, G., Stanciu, R., 2022. No need for the needle. A qualitative analysis of the antivax movement in Romania. *Prof. Inf.* 31. <https://doi.org/10.3145/epi.2022.ene.03>
74. de Melo-Martín, I., Intemann, K., 2013. Scientific dissent and public policy. *EMBO Rep.* 14, 231–235.
75. Delborne, J.A., 2008. Transgenes and Transgressions: Scientific Dissent as Heterogeneous Practice. *Soc. Sci. Stud.* 38, 509–541.
76. DeLong, G., 2012. Conflicts of Interest in Vaccine Safety Research. *Account. Res.* 19, 65–88.
77. Deming, M.E., Michael, N.L., Robb, M., Cohen, M.S., Neuzil, K.M., 2020. Accelerating Development of SARS-CoV-2 Vaccines — The Role for Controlled Human Infection Models. *N. Engl. J. Med.* 383, e63. <https://doi.org/10.1056/nejmp2020076>
78. DESMOG, 2020. Timothy F. Ball (Tim Ball) [WWW Document]. DESMOG. URL <https://www.desmogblog.com/timothy-f-ball-tim-ball> (accessed 10.21.20).
79. Desroches, D., 2012. La fabrication des ambiances à partager - Le défi de la climatologie politique, in: *Ambiances in Action / Ambiances En Acte(s) - International Congress on Ambiances*. Montreal, pp. 141–144.
80. Devos, C., Cordon, A., Lefèvre, M., Obyn, C., Renard, F., Bouckaert, N., Gerken, S., Maertens de Noordhout, C., Devleeschauwer, B., Haelterman, M., Léonard, C., Meeus, P., 2019. Performance of the Belgian Health System - Report. Brussels.
81. Dietz, T., Dan, A., Shwom, R., 2007. Support for Climate Change Policy: Social Psychological and Social Structural Influences. *Rural Sociol.* 72, 185–214.
82. Digitale, E., 2014. Side effects of childhood vaccines are extremely rare, new study finds [WWW Document]. SCOPE Stanf. Med. URL <https://scopeblog.stanford.edu/2014/07/01/side-effects-of-childhood-vaccines-are-extremely-rare-new-study-finds/> (accessed 4.21.20).
83. Dilema Veche, 2020. Andrei Manolescu [WWW Document]. Dilema Veche. URL <https://dilemaveche.ro/autor/andrei-manolescu> (accessed 9.14.20).
84. Dîncu, A., Orban, M., Amuza, A., Bageac, I., 2015. După 135 de ani România - SUA. Sinteza.
85. Djupe, P.A., Burge, R.P., 2022. Divine attribution? The interaction of religious and secular beliefs on climate change attitudes. *Polit. Relig.* 1–19. <https://doi.org/10.1017/S1755048322000293>
86. Douba, A., Aka, L.B.N., Yao, G.H.A., Zengbe-Acray, P., Akani, B.C., Konan, N., 2015. Facteurs sociodémographiques associés à la vaccination incomplète des enfants de 12 à 59 mois dans six pays d'Afrique de l'ouest. *Santé Publique* 27, 724–733.
87. Douenne, T., Fabre, A., 2020. French Attitudes on Climate Change, Carbon Taxation and other Climate Policies. *Ecol. Econ.* 169. <https://doi.org/10.1016/j.ecolecon.2019.106496>
88. Downs, J.S., Bruine de Bruin, W., Fischhoff, B., 2008. Parents' vaccination comprehension and decisions. *Vaccine* 26, 1595–1607.
89. Dubé, E., Gagnon, D., MacDonald, N.E., Eskola, J., Liang, X., Chaudhuri, M., Dube, E., Gellin, B., Goldstein, S., Larson, H., Manzo, M.L., Reingold, A., Tshering, K., Zhou, Y., Duclos, P., Guirguis, S., Hickler, B., Schuster, M., 2015. Strategies intended to address vaccine hesitancy: Review of published reviews. *Vaccine* 33, 4191–4203. <https://doi.org/10.1016/J.VACCINE.2015.04.041>

90. Dubé, E., Laberge, C., Guay, M., Bramadat, P., Roy, R., Bettinger, J., 2013. Vaccine hesitancy An overview. *Hum. Vaccines Immunother.* 9, 1763–1773.
91. Dubé, E., MacDonald, N.E., 2020. How can a global pandemic affect vaccine hesitancy? <https://doi.org/10.1080/14760584.2020.1825944> 19, 899–901.
<https://doi.org/10.1080/14760584.2020.1825944>
92. Dubé, E., Vivion, M., MacDonald, N.E., 2014. Vaccine hesitancy, vaccine refusal and the anti-vaccine movement: Influence, impact and implications. *Expert Rev. Vaccines* 14, 99–117. <https://doi.org/10.1586/14760584.2015.964212>
93. Dubé, E., Ward, J.K., Verger, P., MacDonald, N.E., 2021. Vaccine Hesitancy, Acceptance, and Anti-Vaccination: Trends and Future Prospects for Public Health. *Annu. Rev. Public Health* 42, 175–191.
94. Duduciuc, A., Ivan, L., Chelcea, S., 2013. Psihologie socială Studiul interacțiunilor umane. Comunicare.ro, București.
95. Dunlap, R.E., 2013. Climate Change Skepticism and Denial: An Introduction. *Am. Behav. Sci.* 57, 691–698.
96. Dunlap, R.E., McCright, A.M., 2010. Climate change denial: sources, actors and strategies, in: Lever-Tracy, C. (Ed.), *Handbook of Climate Change and Society*. Routledge, Abingdon, pp. 240–259.
97. Durkheim, E., 2002. *Suicide: A Study in Sociology*. Routledge, New York.
98. Durkheim, E., 1960. *Les formes élémentaires de la vie religieuse*. PUF, Paris.
99. École des hautes études en sciences sociales, 2015. COMMENT GARANTIR L'AUTONOMIE DE LA RECHERCHE [WWW Document]. Dir. Image Audiov. EHESS. URL https://www.canal-u.tv/video/ehess/comment_garantir_l_autonomie_de_la_recherche.18598 (accessed 4.17.20).
100. Etkin, D., Ho, E., 2007. Climate Change: Perceptions and Discourses of Risk. *J. Risk Res.* 10, 623–641.
101. European Commission, 2021. EU Adaptation Strategy [WWW Document]. Eur. Comm. Website. URL https://ec.europa.eu/clima/policies/adaptation/what_en#tab-0-0 (accessed 5.10.21).
102. European Commission, 2019a. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal. Brussels.
103. European Commission, 2019b. Eurobarometer 91.2 [WWW Document]. Kantar Public GESIS Data Arch. Cologne.
104. European Commission, B.D.G.C., 2019. Media Monitoring and Eurobarometer. Eurobarometer 90.2 (2018). GESIS Data Arch.
105. Fabian, J., 2014. *Time and the other: how anthropology makes its object*. Sage Publications, New York.
106. Fair, H., 2018. Three stories of Noah: Navigating religious climate change narratives in the Pacific Island region. *Geo Geogr. Environ.* 5, 1–15.
107. Farrell, J., 2016. Network structure and influence of the climate change counter-movement. *Nat. Clim. Change* 6, 370–374.
108. Flaherty, M., 2011. *The Textures of Time Agency and Temporal Experience*. Temple University Press, Philadelphia.
109. Flaherty, M., 2003. Time Work: Customizing Temporal Experience. *Soc. Psychol. Q.* 66, 17–33.
110. Flaherty, M., 1999. *A Watched Pot: How We Experience Time*. New York University Press, New York and London.
111. Flaherty, M.G., 2021. The Social Organization of Time, in: *The Routledge International Handbook of Interactionism*. Routledge, London, pp. 254–263.

112. Flaherty, M.G., 2002. Making Time: Agency and the Construction of Temporal Experience. *Symb. Interact.* 25, 379–388.
113. Flaherty, M.G., Meinert, L., Dalsgård, A.L. (Eds.), 2020. *Time Work: Studies of Temporal Agency*. Berghahn Books, New York.
114. Foss, S.K., 2005. Theory of Visual Rhetoric, in: *Handbook of Visual Communication: Theory, Methods, and Media*. Lawrence Erlbaum Associates, London, pp. 141–152.
115. Fournet, N., Mollema, L., Ruijs, W.L.M., Harmsen, I.A., Keck, F., Durand, J.Y., Cunha, M.P., Wamsiedel, M., Reis, R., French, J., Smith, E.G., Kitching, A., van Steenbergen, J.E., 2018. Under-vaccinated groups in Europe and their beliefs, attitudes and reasons for non-vaccination; two systematic reviews. *BMC Public Health* 18, 1–17.
116. Friedman, A., Ron, S., 2017. Unlocking the power of visual grammar theory: analyzing social media political advertising messages in the 2016 US election. *J. Vis. Lit.* 36, 90–103.
117. Frumușani, D.-R., Marinescu, V., 2020. Concepts-clés de la communication environnementale et du développement durable. *Presa Universitară Clujeană, Cluj-Napoca*.
118. Fueller, H., Dubbala, K., Obiri, D., Mallare, M., Advani, S., De Souza, S., Stoby, K., King-Okoye, M., 2021. Addressing Vaccine Hesitancy to Reduce Racial and Ethnic Disparities in COVID-19 Vaccination Uptake Across the UK and US. *Front Public Health* 9. <https://doi.org/10.3389/fpubh.2021.789753>
119. Fuentes, R., Galeotti, M., Lanza, A., Manzano, B., 2020. COVID-19 and Climate Change: A Tale of Two Global Problems. *Sustainability* 8560; <https://doi.org/10.3390/su12208560>
120. Fuller, S., 1991. *Social epistemology*. Indiana University Press, Bloomington.
121. Furton, E.J., 2004. Vaccines and the Right of Conscience. *Natl. Cathol. Bioeth. Q.* 4, 53–62.
122. Gardella, É., 2014. L'urgence comme chronopolitique. *Temporalités* 19.
123. Gerber, J.S., Offit, P.A., 2009. Vaccines and Autism: A Tale of Shifting Hypotheses. *Clin. Infect. Dis.* 48, 456–461. <https://doi.org/10.1086/596476>
124. GESIS – Leibniz Institute for the Social Science, 2018. Eurobarometer 90.2: Future of Europe, Climate change and Internet Security [WWW Document]. GESIS Data Arch.
125. Gesis Leibniz Institute for the Social Sciences, 2019. Eurobarometer 91.2 (2019): Europeans in 2019, The General Data Protection Regulation, Awareness of the Charter of Fundamental Rights of the European Union, and Europeans' attitudes towards vaccination [WWW Document].
126. Gheorghiță, V., Guiță-Alexandru, L., 2022. Pandemia de COVID-19 în România Abilitățile de răspuns și rolul rezilienței psihologice în situații de criză. Editura Universitară Carol Davila, București.
127. Giddens, A., 1999. Risk and Responsibility. *Mod. Law Rev.* 62, 1–10.
128. Giddens, A., 1991. *Modernity and self-identity: Self and Society in the Late Modern Age*. Stanford University Press, Stanford.
129. Giordan, G., 2009. The Body between Religion and Spirituality. *Soc. Compass* 56, 226–236.
130. G.M., 2020. IPS Teodosie: Doar bisericile sunt închise! Cei care ne-au silit să nu vă primim în biserică să ne dea voie să deschidem [WWW Document]. Digi 24. URL <https://www.digi24.ro/stiri/actualitate/ips-teodosie-doar-bisericile-sunt-inchise-cei-care-ne-au-silit-sa-nu-va-primim-in-biserica-sa-ne-dea-voie-sa-deschidem-1285419> (accessed 7.28.20).
131. Gnangle, P.C., Egah, J., Baco, M.N., Gbemavo, C.D.S.J., Kakai, R.G., Sokpon, N., 2012. Perceptions locales du changement climatique et mesures d'adaptation dans la gestion des parcs à karité au Nord-Bénin. *Int. J. Biol. Chem. Sci.* 6, 136–149.
132. Goldberg, R.F., Vandenberg, L.N., 2019. Distract, delay, disrupt: Examples of manufactured doubt from five industries. *Rev. Environ. Health.* <https://doi.org/10.1515/reveh-2019-0004>

133. Goodwin, J., Dahlstrom, M.F., 2013. Communication strategies for earning trust in climate change debates. *WIREs Clim Change*. <https://doi.org/10.1002/wcc.262>
134. Grabenstein, J.D., 2013. What the World's religions teach, applied to vaccines and immune globulins. *Vaccine* 31, 2011–2023.
135. Gross, L., 2009. A Broken Trust: Lessons from the Vaccine–Autism Wars. *PLOS Biol.* 7, 1–7.
136. Hagevi, M., 2014. Religion and the environmental opinion in 22 countries: a comparative study. *Int. Rev. Sociol.* 24, 91–109. <https://doi.org/10.1080/03906701.2014.894333>
137. Haltinner, K., Sarathchandra, D., 2021. The Nature and Nuance of Climate Change Skepticism in the United States*. *Rural Sociol.* 86, 673–702. <https://doi.org/10.1111/RUSO.12371>
138. Haluza-DeLay, R., 2014. Religion and climate change: varieties in viewpoints and practices. *WIREs Clim. Change* 5, 261–279.
139. Hâncean, M.-G., Lerner, J., Perc, M., Molina, J.L., Geantă, M., 2023. Assortative mixing of opinions about COVID-19 vaccination in personal networks (preprint). In Review. <https://doi.org/10.21203/rs.3.rs-2719341/v1>
140. Hâncean, M.-G., Perc, M., Lerner, J., 2020. Early spread of COVID-19 in Romania: imported cases from Italy and human-to-human transmission networks. *R. Soc. Open Sci.* 7, 200780. <https://doi.org/10.1098/rsos.200780>
141. Hasbani, M., Brenton, G., 2016. Discursive Strategies and the Maintenance of Legitimacy. *Engl. Lang. Lit. Stud.* 6, 1–15.
142. Hayes, J., Knox-Hayes, J., 2014. Security in Climate Change Discourse: Analyzing the Divergence between US and EU Approaches to Policy. *Glob. Environ. Polit.* 14, 82–101.
143. Hayhoe, K., 2015. Religion and the Roots of Climate Change Denial. *Boisi Cent. Interview* 7.
144. Hendwood, F., Wyatt, S., Hart, A., Smith, J., 2003. 'Ignorance is bliss sometimes': constraints on the emergence of the 'informed patient' in the changing landscapes of health information. *Sociol. Health Illn.* 25, 589–607.
145. Hervieu-Léger, D., 2003. La religion, mode de croire. *Rev. MAUSS* 2, 144–158.
146. Hobson-West, P., 2003. Understanding vaccination resistance: moving beyond risk. *Health Risk Soc.* 5, 273–283.
147. Hoffman, B.L., 2019. It's Not All About Autism: the Emerging Landscape of Anti-Vaccination Sentiment on Facebook. University of Pittsburgh.
148. Hogg, M.A., Adelman, J.R., Blagg, Robert D., 2010. Religion in the Face of Uncertainty: An Uncertainty-Identity Theory Account of Religiousness. *Personal. Soc. Psychol. Rev.* 14, 72–83.
149. Hornsey, M.J., Harris, E.A., Fielding, K.S., 2018. The Psychological Roots of Anti-Vaccination Attitudes: A 24-Nation Investigation. *Health Psychol.* 37, 307–315.
150. Howe, P.D., Markowitz, E.M., Lee, T.M., Ko, C.-Y., Leiserowitz, A., 2013. Global perceptions of local temperature change. *Nat. Clim. Change* 3, 352–356.
151. Humă, B., Alexander, M., Stokoe, E., Tileagă, C., 2020. Introduction to Special Issue on Discursive Psychology. *Qual. Res. Psychol.*
152. Iglesias, E.M., 2021. Foreword: Promoting and Defending Civil Rights in a Time of Coronavirus. *Univ. Miami Race Soc. Justice Law Rev.* 11, 1–6.
153. ILD, 2020. Emil Borcean [WWW Document]. În Lin. Dreaptă. URL <http://inliniedreapta.net/author/emil/> (accessed 9.14.20).
154. INSCOP Research, 2022. SONDAJ NAȚIONAL Agenda România 2050. O conversație despre viitorul României. De la opiniile românilor, la evaluările experților [WWW Document]. [inscop.ro. URL https://www.inscop.ro/noiembrie-2022-sondaj-national-agenda-romania-2050-o-conversatie-despre-viitorul-romaniei-de-la-opiniile-romanilor-la-evaluările-expertilor/](https://www.inscop.ro/noiembrie-2022-sondaj-national-agenda-romania-2050-o-conversatie-despre-viitorul-romaniei-de-la-opiniile-romanilor-la-evaluările-expertilor/) (accessed 11.25.22).

155. Institutul Național de Sănătate Publică, 2018. Analiza evoluției bolilor transmisibile aflate în supraveghere Raport pentru anul 2017 [WWW Document]. URL <http://cnsrbt.ro/index.php/rapoarte-anuale/1003-analiza-evolutiei-bolilor-transmisibile-aflate-in-supraveghere-raport-pentru-anul-2017> (accessed 3.11.21).
156. IRES, 2019. Schimbări climatice și încălzire globală Percepții, atitudini și comportamente ale românilor. IRES.
157. Jacques, P.J., Knox, C.C., 2016. Hurricanes and hegemony: A qualitative analysis of micro-level climate change denial discourses. *Environ. Polit.* 25, 831–852.
158. Jderu, G., 2010. Ordinea interacțională și emoțiile. Homo sentiens în perspectiva sociologiei dramaturgice. *Sociol. Rom.* VIII, 48–64.
159. Jennings, W., Stoker, G., Valgarðsson, V., Devine, D., Gaskell, J., 2021. How trust, mistrust and distrust shape the governance of the COVID-19 crisis. *J. Eur. Public Policy* 28, 1174–1196.
160. Joffe, S., Fernandez Lynch, H., 2020. The FDA should not rush a covid-19 vaccine [WWW Document]. *Wash. Post.* URL <https://www.washingtonpost.com/opinions/2020/06/02/fda-should-not-rush-covid-19-vaccine/> (accessed 6.17.20).
161. Kacha, O., Vint, J., Brick, C., 2022. Four Europes: Climate change beliefs and attitudes predict behavior and policy preferences using a latent class analysis on 23 countries. *J. Environ. Psychol.* 81.
162. Kann, D., 2019. US begins formal withdrawal from Paris climate accord [WWW Document]. *CNN Polit.* URL <https://edition.cnn.com/2019/11/04/politics/trump-formal-withdrawal-paris-climate-agreement/index.html> (accessed 5.20.20).
163. Kata, A., 2012. Anti-vaccine activists, Web 2.0, and the postmodern paradigm – An overview of tactics and tropes used online by the anti-vaccination movement. *Vaccine* 30, 3778–3789.
164. Kata, A., 2010. A postmodern Pandora's box: Anti-vaccination misinformation on the Internet. *Vaccine* 28, 1709–1716.
165. Keane, M.T., Walter, M. V., Patel, B.I., Moorthy, S., Stevens, R.B., Bradley, K.M., Buford, J.F., Anderson, E.L., Anderson, L.P., Tibbals, K., Vernon, T.M., 2005. Confidence in vaccination: a parent model. *Vaccine* 23, 2486–2493.
166. Keinath, K., Church, T., Kurth, B., Hulten, E., 2018. Myocarditis secondary to smallpox vaccination. *BMJ Case Rep.* <https://doi.org/10.1136/bcr-2017-223523>
167. Kennedy, A., LaVail, K., Nowak, G., Basket, M., Landry, S., 2011. Confidence about vaccines in the United States: Understanding parents' perceptions. *Health Aff. (Millwood)* 30, 1151–1159. <https://doi.org/10.1377/hlthaff.2011.0396>
168. Kennedy, B., Hefferon, M., 2019. What Americans Know About Science. *Pew Res. Cent.*
169. Kestenbaum, L.A., Feemster, K.A., 2015. Identifying and Addressing Vaccine Hesitancy. *Pediatr. Ann.* 44, 71–75.
170. Kivits, J., 2004. Researching the "Informed Patient." *Inf. Commun. Soc.* 7, 510–530.
171. Knibbe, K., 2014. Certainty and uncertainty in contemporary spirituality and Catholicism: Finding proof versus destabilizing certainties in popular religion in the Netherlands. *Soc. Compass* 64, 537–549.
172. Kreps, S.E., Kriner, D.L., 2020. Model uncertainty, political contestation, and public trust in science: Evidence from the COVID-19 pandemic. *Sci. Adv.* <https://doi.org/10.1126>
173. Kress, G.R., Van Leeuwen, T., 2006. *Reading Images: The grammar of visual design.* Routledge, New York.
174. Kruger, J., 2011. Extended cognition and the space of social interaction. *Consciousness Cogn.* 20, 643–657.
175. Lamb, W.F., Mattioli, G., Levi, S., Roberts, J.T., Capstick, S., Creutzig, F., Minx, J.C., Müller-Hansen, F., Culhane, T., Steinberger, J.K., 2020. Discourses of climate delay. *Glob. Sustain.* 3, e17.

176. Lamont, M., Swidler, A., 2014. Methodological Pluralism and the Possibilities and Limits of Interviewing. *Qual. Sociol.* 37, 153–171.
177. Lapointe, D., Sarrasin, B., Guillemard, A., 2015. Changements climatiques et mise en tourisme du fleuve St-Laurent au Québec Analyse critique des représentations. *Vertigo - Rev. Électronique En Sci. Environ.* 23. <https://doi.org/10.4000/vertigo.16575>
178. LARICS, 2021. Barometrul Vietii Religioase, interpretarea sociologică a datelor [WWW Document]. LARICS.ro. URL <https://larics.ro/barometrul-vietii-religioase-interpretarea-sociologica-a-datelor/> (accessed 11.24.22).
179. Law & Liberty, 2020. Theodore Dalrymple [WWW Document]. Law Lib. URL <https://lawliberty.org/author/theodore-dalrymple/> (accessed 10.21.20).
180. Le Treut, H., Somerville, R., Cubasch, U., Ding, Y., Mauritzen, C., Mokssit, A., Peterson, T., Prather, M., 2007. Historical Overview of Climate Change Science, in: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge and New York, pp. 94–137.
181. Leask, J., Willab, H.W., Kaufman, J., 2014. The big picture in addressing vaccine hesitancy. *Hum. Vaccines Immunother.* 10, 2600–2602.
182. Leiserowitz, A., 2005. American Risk Perceptions: Is Climate Change Dangerous? *Risk Anal.* 25, 1433–1442.
183. Leming, L.M., 2007. Sociological Explorations: What Is Religious Agency? *Sociol. Q.* 48, 73–92.
184. Leonard, R.J., Pepper, M.D., 2015. Les attitudes face aux changements climatiques et les actions pour la décroissance énergétique des chrétiens pratiquants : les effets des persuasions religieuses et du capital social. *Soc. Compass* 62, 326–343.
185. Lindzen, R., 2018. 2018 Annual GWPF Lecture - Prof Richard Lindzen - Global Warming For The Two Cultures. YouTube.
186. Liu, T., Shryane, N., Elliot, M., 2022. Attitudes to climate change risk: classification of and transitions in the UK population between 2012 and 2020. *Humanit. Soc. Sci. Commun.* 9.
187. Lyotard, J.-F., 1984. *The Postmodern Condition: A Report on Knowledge*. Manchester University Press, Manchester.
188. MacArthur, K.R., 2017. Beyond health beliefs: the role of trust in the HPV vaccine decision-making process among American college students. *Health Sociol. Rev.* 26, 321–338.
189. MacDonald, N.E., 2015. Vaccine hesitancy: Definition, scope and determinants. *Vaccine* 14, 1–4.
190. Madhulatha, T.S., 2012. An Overview on Clustering Methods. *IOSR J. Eng.* 2, 719–725.
191. Marcu, G., 2016. Noi dezvăluiri în ancheta dezinfectanților diluați din spitale: Patronul Hexi Pharma își vindea lui, printr-un off-shore, substanțele active de 7 ori mai scumpe! [WWW Document]. Libertatea. URL <https://www.libertatea.ro/stiri/noi-dezvaluiri-ancheta-dezinfectantilor-diluati-din-spitale-patronul-hexi-pharma-isi-vindea-lui-printr-un-off-shore-substantele-active-de-7-ori-mai-scumpe-1469855> (accessed 8.9.21).
192. Mares, C., 2021. Pope Francis launches 7-year Laudato si' action plan [WWW Document]. CNA. URL <https://www.catholicnewsagency.com/news/247777/pope-francis-launches-7-year-laudato-si-action-plan> (accessed 1.31.23).
193. Marinescu, V., Frumușani, D.-R., 2020. Communication, environnement, et développement durable Études de cas. *Presa Universitară Clujeană, Cluj-Napoca*.
194. Martin, B., 2015. On the suppression of vaccination dissent. *Sci. Eng. Ethics* 21, 143–157.
195. Matei, Ș., Preda, M., 2020. Time capital as a social imaginary. *J. Comp. Res. Anthropol. Sociol.* 11, 51–58.
196. Mays, T., 2021. Is God an “Anti-Vaxxer”? [WWW Document]. Medium. URL <https://medium.com/politically-speaking/is-god-an-anti-vaxxer-8a9ebb58aa3f> (accessed 2.4.22).

197. McDonald, P., Limaye, R.J., Omer, S.B., Bottenheim, A., Mohanty, S., Klein, N.P., Salmon, D.A., 2019. Exploring California's new law eliminating personal belief exemptions to childhood vaccines and vaccine decision-making among homeschooling mothers in California. *Vaccine* 37, 742–750.
198. McKie, R., 2019. Climategate 10 years on: what lessons have we learned? [WWW Document]. The Guardian. URL <https://www.theguardian.com/theobserver/2019/nov/09/climategate-10-years-on-what-lessons-have-we-learned> (accessed 11.25.22).
199. Merton, R.K., 1972. Insiders and Outsiders: A Chapter in the Sociology of Knowledge. *Am. J. Sociol.* 78, 9–47.
200. Messerly, M., Mahr, K., 2022. Covid vaccine concerns are starting to spill over into routine immunizations [WWW Document]. Politico. URL <https://www.politico.com/news/2022/04/18/kids-are-behind-on-routine-immunizations-covid-vaccine-hesitancy-isnt-helping-00025503> (accessed 1.19.23).
201. Metag, J., Füchslin, T., Schäfer, M.S., 2017. Global warming's five Germanys: A typology of Germans' views on climate change and patterns of media use and information. *Public Underst. Sci.* 26, 434–451.
202. Mezza, M., Blume, S., 2021. Turning suffering into side effects: Responses to HPV vaccination in Colombia - ScienceDirect. *Soc. Sci. Med.* 282.
203. Michaels, D., Monforton, C., 2005. Manufacturing Uncertainty: Contested Science and the Protection of the Public's Health and Environment. *Am. J. Public Health* 95, 39–48.
204. Mohamad, I., Usman, D., 2013. Standardization and Its Effects on K-Means Clustering Algorithm. *Res. J. Appl. Sci. Eng. Technol.* 6, 3299–3303.
205. Molek-Kozakowska, K., 2018. Popularity-driven science journalism and climate change: A critical discourse analysis of the unsaid. *Discourse Context Media* 21, 71–83.
206. Morgan, A., 2010. Discourse Analysis: An Overview for the Neophyte Researcher. *J. Health Soc. Care Improv.*
207. Morisson, M., Duncan, R., Parton, K., 2015. Religion Does Matter for Climate Change Attitudes and Behavior. *PLoS ONE* 10. <https://doi.org/10.1371/journal.pone.0134868>
208. Murthy, B.P., Sterrett, N., Weller, D., Zell, E., Reynolds, L., Toblin, R.L., Murthy, N., Kriss, J., Rose, C., Cadwell, B., Wang, A., Ritchey, M.D., Gibbs-Scharf, L., Qualters, J.R., Shaw, L., Brookmeyer, K.A., Clayton, H., Eke, P., Adams, L., Zajac, J., Patel, A., Fox, K., Williams, C., Stokley, S., Flores, S., Barbour, K.E., Harris, L.T.Q., 2021. Disparities in COVID-19 Vaccination Coverage Between Urban and Rural Counties — United States, December 14, 2020–April 10, 2021. *MMWR Recomm. Rep.* 70, 759–764. <https://doi.org/10.15585/MMWR.MM7020E3>
209. Napolitano, F., D'Alessandro, A., Angelillo, I.F., 2018. Investigating Italian parents' vaccine hesitancy: A cross-sectional survey. *Hum. Vaccines Immunother.* 14, 1558–1565. <https://doi.org/10.1080/21645515.2018.1463943>
210. National Conference of State Legislatures, 2022. States With Religious and Philosophical Exemptions From School Immunization Requirements [WWW Document]. URL <https://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx> (accessed 5.18.22).
211. Nature Immunology Editorial, 2008. A case of junk science, conflict and hype. *Nat. Immunol.* 9, 1317.
212. Nichols, T., 2017. The Death of Expertise The Campaign Against Established Knowledge and Why It Matters. Oxford University Press, New York.
213. Nicolay, N., Lévy-Bruhl, D., Gautier, A., Jestin, C., Jauffret-Roustideac, M., 2008. Mandatory immunization: The point of view of the French general population and practitioners. *Vaccine* 26, 484–5493.
214. Nistor, A., Badea, C., 2017. Protest in fata Parlamentului: Libertatea e un drept, vaccinarea e o alegere. Nu vrem dictatura medicala [WWW Document]. Ziare.com. URL

- <http://www.ziare.com/stiri/proteste/sute-de-persoane-au-protestat-in-fata-parlamentului-libertatea-e-un-drept-vaccinarea-e-o-alegere-galerie-foto-1487213> (accessed 4.22.20).
215. Norton, B.G., 1998. IMPROVING ECOLOGICAL COMMUNICATION: THE ROLE OF ECOLOGISTS IN ENVIRONMENTAL POLICY FORMATION. *Ecol. Appl.* 8, 350–364.
216. Nowell, L.S., Norris, J.M., White, D.E., Moules, N.J., 2017. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. <https://doi.org/10.1177/1609406917733847> 16. <https://doi.org/10.1177/1609406917733847>
217. OECD, 2017. Improving the efficiency and outcomes of the Slovak health-care system, in: *ECD Economic Surveys: Slovak Republic*. OECD Publishing, Paris, pp. 103–146.
218. OECD/EU, 2018. Health at a Glance: Europe 2018 State of Health in the EU Cycle. Paris.
219. Ołpiński, M., 2012. Anti-Vaccination Movement and Parental Refusals of Immunization of Children in USA. *Pediatr. Pol.* 87, 381–385.
220. Olson, L.C., 2007. Intellectual and Conceptual Resources for Visual Rhetoric: A Re-examination of Scholarship Since 1950. *Rev. Commun.* 7, 1–20.
221. Onuf, N.G., 2018. Traditional Societies 1. <https://doi.org/10.1093/OSO/9780190879808.003.0003>
222. Orekes, N., Conway, E., 2010. Merchants of doubt. Bloomsbury Press, New York.
223. Our World in Data, 2021. Fossil fuel consumption [WWW Document]. URL <https://ourworldindata.org/grapher/fossil-fuel-primary-energy?time=2019®ion=Europe> (accessed 2.1.23).
224. Paddison, L., 2023. Exxon accurately predicted global warming from 1970s – but continued to cast doubt on climate science, new report finds [WWW Document]. CNN. URL <https://edition.cnn.com/2023/01/12/business/exxon-climate-models-global-warming/index.html> (accessed 1.31.23).
225. Palamenghi, L., Barello, S., Boccia, S., Graffigna, G., 2020. Mistrust in biomedical research and vaccine hesitancy: the forefront challenge in the battle against COVID-19 in Italy. *Eur. J. Epidemiol.* 2020 358 35, 785–788. <https://doi.org/10.1007/S10654-020-00675-8>
226. Panda, D.S., Giri, R.K., Nagarajappa, A.K., Basha, S., 2021. Covid-19 vaccine, acceptance, and concern of safety from public perspective in the state of Odisha, India. *Hum. Vaccines Immunother.* 17, 3333–3337. <https://doi.org/10.1080/21645515.2021.1924017>
227. Pariser, E., 2011. The Filter Bubble What the Internet is Hiding from You. The Penguin Press, New York.
228. Pearce, F., 2010. Claims Himalayan glaciers could melt by 2035 were false, says UN scientist [WWW Document]. The Guardian. URL <https://www.theguardian.com/environment/2010/jan/20/himalayan-glaciers-melt-claims-false-ipcc> (accessed 11.25.22).
229. Pelčić, G., Karačić, S., Mikirtichan, G.L., Kubar, O.I., Leavitt, F.J., Cheng-tek Tai, M., Morishita, N., Vuletić, S., Tomašević, L., 2016. Religious exception for vaccination or religious excuses for avoiding vaccination. *Croat. Med. J.* 57, 516–521.
230. Pennycook, G., McPhetres, J., Bago, B., Rand, D.G., 2020. Predictors of attitudes and misperceptions about COVID-19 in Canada, the U.K., and the U.S.A.
231. Peretti-Watel, P., Larson, H.J., Ward, J.K., Schulz, W.S., Verger, P., 2015. Vaccine hesitancy: clarifying a theoretical framework for an ambiguous notion. *PLoS Curr.* 7. <https://doi.org/10.1371/CURRENTS.OUTBREAKS.6844C80FF9F5B273F34C91F71B7FC289>
232. Peretti-Watel, P., Ward, J.K., Vergelys, C., Bocquier, A., Raude, J., Verger, P., 2019. ‘I Think I Made The Right Decision ... I Hope I’m Not Wrong’. Vaccine hesitancy, commitment and trust among parents of young children. *Sociol. Health Illn.* 20, 1–15.
233. Perez, Samara., Shapiro, G.K., Brown, C.A., Dube, E., Ogilvie, G., Rosberger, Z., 2015. “I didn’t even know boys could get the vaccine”: Parents’ reasons for human papillomavirus (HPV) vaccination decision making for their sons. *Psychooncology* 10, 1316–1323.
234. Pidgeon, N., 2012. Public understanding of, and attitudes to, climate change: UK and international perspectives and policy. *Clim. Policy* 12, 85–106.

235. Piet, G., 2013. Derrière les mots du politique. Le-pire-est-à-venir, un marqueur temporel particulier dans le discours politique en Belgique. *Mots Lang. Polit.* 103, 121–136.
236. Pitulac, T., 2011. Comunități, in: *Sociologie. Polirom, Iași*, pp. 132–170.
237. Poland, C.M., Brunson, E.K., 2015. The need for a multi-disciplinary perspective on vaccine hesitancy and acceptance. *Vaccine* 33, 277–279.
238. Postelnicu, V., 2020. Deputatul PNL Ovidiu Raetchi, amenințat cu moartea, pentru a nu vota legea vaccinării: „Trebuie să vă punem cuțitul la gât!” [WWW Document]. *Libertatea*. URL <https://www.libertatea.ro/stiri/deputatul-pnl-ovidiu-raetchi-amenintat-cu-moartea-pentru-a-nu-vota-legea-vaccinarii-trebuie-sa-va-punem-cutitul-la-gat-2926716> (accessed 4.22.20).
239. Potter, J., Wetherell, M., 1987. *Disourse and Social Psychology*. Sage Publications, London Newbury Park Beverly Hills New Delhi.
240. Pouliot, C., Godbout, J., 2014. Thinking outside the ‘knowledge deficit’ box. *Sci. Soc.* 15, 833–835.
241. Preda, M., Matei, Ș., 2020. TIME CAPITAL IN STRATEGIC PLANNING AND SUSTAINABLE MANAGEMENT. *Transylv. Rev. Adm. Sci.* 61, 105–124.
242. Prior, L., 2003. Belief, knowledge and expertise: the emergence of the lay expert in medical sociology. *Sociol. Health Illn.* 25, 41–57.
243. Puri, N., Coomes, E.A., Haghbayan, H., Gunaratne, K., 2020. Social media and vaccine hesitancy: new updates for the era of COVID-19 and globalized infectious diseases. *Hum. Vaccines Immunother.* 16, 2586–2593. <https://doi.org/10.1080/21645515.2020.1780846>
244. Raileanu, M., 2015. Campanii de mediu vs. sceptici/grupuri lobby. *România pe harta schimbărilor climatice (Environmental Campaigns versus Skeptical/Lobbyists. Romania on Climate Changes Map)*. *Impactul Transform. Socio-Econ. Și Tehnol. Niv. Natl. Eur. Si Mond.* 1.
245. Ramanadhan, S., Galarce, E., Xuan, Z., Alexander-Molloy, J., Viswanath, K., 2015. Addressing the Vaccine Hesitancy Continuum: An Audience Segmentation Analysis of American Adults Who Did Not Receive the 2009 H1N1 Vaccine. *Vaccines* 3, 556–578.
246. Renard, J.-B., 2016. Jean-Marc Ramos (dir.), *La construction de l’idée de temps. Archives françaises (1876-1909)*. *Arch. Sci. Soc. Relig.* 176, 375–377.
247. Riedel, S., 2005. Edward Jenner and the History of Smallpox and Vaccination. *Bayl. Univ. Med. Cent. Proc.* 18, 21–25. <https://doi.org/10.1080/08998280.2005.11928028>
248. Rinaldo, R., Guhin, J., 2019. How and Why Interviews Work: Ethnographic Interviews and Meso-level Public Culture. *Sociol. Methods Res.* <https://doi.org/10.1177/0049124119882471>
249. Robertson, F., 2003. DURKHEIM : ENTRE RELIGION ET MORAL. *Rev. MAUSS* 2, 126–143.
250. Robinson, S.R., 2014. Self-plagiarism and unfortunate publication: an essay on academic values. *Stud. High. Educ.* 39, 265–277.
251. Rosa, H., 2010. *Accélération Une critique sociale du temps*. La Découverte, Paris.
252. Rosselli, R., Martini, M., Bragazzi, N.L., 2015. The old and the new: vaccine hesitancy in the era of the Web 2.0. Challenges and opportunities. *J. Prev. Med. Hyg.* 51, 47–50.
253. Rubin, A., Sengupta, S., 2018. ‘Yellow Vest’ Protests Shake France. Here’s the Lesson for Climate Change. [WWW Document]. *N. Y. Times*. URL <https://www.nytimes.com/2018/12/06/world/europe/france-fuel-carbon-tax.html> (accessed 4.22.20).
254. Rudiak-Gould, P., 2014. Progress, decline, and the public uptake of climate science. *Public Underst. Sci.* 23, 142–156.
255. Rughiniș, C., Flaherty, M.G., 2022. The Social Bifurcation of Reality: Symmetrical Construction of Knowledge in Lay Science-Distrusting and Science-Trusting Discourses. *Front. Sociol.* 7. <https://doi.org/10.3389/fsoc.2022.782851>
256. Rughiniș, Cosima, Vulpe, S.-N., Flaherty, M.G., Vasile, S., 2022. Shades of doubt: Measuring and classifying vaccination confidence in Europe. *Vaccine* 40, 6670–6679. <https://doi.org/10.1016/J.VACCINE.2022.09.039>

257. Rughiniș, C., Vulpe, S.-N., Flaherty, M.G., Vasile, S., 2022. Vaccination, life expectancy, and trust: patterns of COVID-19 and measles vaccination rates around the world. *Public Health* 210, 114–122. <https://doi.org/10.1016/J.PUHE.2022.06.027>
258. Ruijs, W.L.M., Hautvast, J.L.A., van der Velden, K., de Vos, S., Knippenberg, H., Hulscher, M.E.J.L., 2011. Religious subgroups influencing vaccination coverage in the Dutch Bible belt: an ecological study. *BMC Public Health* 11, 1471–2458.
259. Ruijs, W.L.M., Hautvast, J.L.A., van IJendoorn, G., van Ansem, W.J.. C., Elwyn, G., van der Velden, K., Hulscher, M.E.J.L., 2012a. How healthcare professionals respond to parents with religious objections to vaccination: a qualitative study. *BMC Health Serv. Res.* 12, 1–9.
260. Ruijs, W.L.M., Hautvast, J.L.A., van IJendoorn, G., van Ansem, W.J.. C., van der Velden, K., Hulscher, M.E.J.L., 2012b. How orthodox protestant parents decide on the vaccination of their children: a qualitative study. *BMC Public Health* 12, 1–11.
261. Rutjens, B.T., Heine, S.J., Sutton, R.M., van Harreveld, F., 2018. Attitudes Towards Science. *Adv. Exp. Soc. Psychol.* 57, 125–165. <https://doi.org/10.1016/BS.AESP.2017.08.001>
262. Rutjens, B.T., van der Lee, R., 2020. Spiritual skepticism? Heterogeneous science skepticism in the Netherlands. *Public Underst. Sci.* 29, 335–352. <https://doi.org/10.1177/0963662520908534>
263. Sanders, C., Burnett, K., 2019. The neoliberal roots of modern vaccine hesitancy. *J. Health Soc. Sci.* 4, 149–156.
264. Sandu, D., 2022. Community Roots of COVID-19 Infection Rates Between Population Composition and Regional Systems in Romania. *J. Prev.* 43, 673–695.
265. Sandu, F.-G., 2020. THE GREEN NEW DEAL AND ROMANIA: CAUTION OR LACK OF POLITICAL WILL? [WWW Document]. *New Fed.* URL <https://www.thenewfederalist.eu/the-green-new-deal-and-romania-caution-or-lack-of-political-will?lang=fr> (accessed 6.12.20).
266. Sardan, J.P.O. de, 2013. Embeddedness and informal norms: Institutionalisms and anthropology: <http://dx.doi.org/10.1177/0308275X13490307> 33, 280–299. <https://doi.org/10.1177/0308275X13490307>
267. Schmidt, C.W., 2010. A Closer Look at Climate Change Skepticism. *Environ. Health Perspect.* 118, 537–540.
268. Schuman, M., 1995. Managing legitimacy: Strategic and institutional approaches. *Acad. Manage. Rev.* 20, 571–610.
269. Scruggs, L., Benegal, S., 2012. Declining public concern about climate change: Can we blame the great recession? *Glob. Environ. Change* 22, 505–515.
270. Scruton, R., 2020. Sir Roger Scruton - About [WWW Document]. *Sir Roger Scruton.* URL <https://www.roger-scruton.com/> (accessed 10.21.20).
271. Segre, S., 2016. Social Constructionism as a Sociological Approach. *Hum. Stud.* 39, 93–99.
272. Semeniciu, S., 2021. ANALIZĂ "Să nu fim de nicio parte". Patru din cele mai puțin vaccinate șapte județe țin de Mitropolia Moldovei și Bucovinei. Un stareț subordonat lui Teofan a demonizat vaccinul la un miting AUR, fără ca Biserica să reacționeze [WWW Document]. *G4Media.* URL <https://www.g4media.ro/analiza-sa-nu-fim-de-nicio-parte-patru-din-cele-mai-putin-vaccinate-sapte-judete-tin-de-mitropolia-moldovei-si-bucovinei-un-staret-subordonat-lui-teofan-a-demonizat-vaccinul-la-un.html> (accessed 2.4.22).
273. Shelton, R.C., Snavely, A.C., De Jesus, M., Othus, M.D., Allen, J.D., 2013. HPV Vaccine Decision-Making and Acceptance: Does Religion Play a Role? *J. Relig. Health* 52, 1120–1130.
274. Simis, M.J., Madden, H., Cacciatore, M.A., Yeo, S.K., 2016. The lure of rationality: Why does the deficit model persist in science communication? *Public Underst. Sci.* 25, 400–414.
275. Smith, L.A., Stern, N., 2011. Uncertainty in science and its role in climate policy. *Philos. Trans. R. Soc.* 369, 4818–4841.
276. Sobo, E.J., Huhn, A., Sannwald, A., Thurman, L., 2016. Information Curation among Vaccine Cautious Parents: Web 2.0, Pinterest Thinking, and Pediatric Vaccination Choice. *Med.*

- Anthropol. Cross Cult. Stud. Health Illn. 35, 529–546.
<https://doi.org/10.1080/01459740.2016.1145219>
277. Spaan, D.H., Ruijs, W.L.M., Hautvast, J.L.A., Tostmann, A., 2017. Increase in vaccination coverage between subsequent generations of orthodox Protestants in The Netherlands. *Eur. J. Public Health* 27, 524–530.
 278. Stahl, J.-P., Cohen, R., Denis, F., Gaudelus, J., Marinot, A., Lery, T., Lepeit, H., 2016. The impact of the web and social networks on vaccination. New challenges and opportunities offered to fight against vaccine hesitancy. *Médecine Mal. Infect.* 46, 117–122.
 279. Steffes Hansen, S., Gleason, T.R., 2015. Image Control: The Visual Rhetoric of President Obama, in: AEJMC, San Francisco, California.
 280. Stefkovics, Á., Hortay, O., 2022. Fear of COVID-19 reinforces climate change beliefs. Evidence from 28 European countries. *Environ. Sci. Policy* 136, 717.
<https://doi.org/10.1016/J.ENVSCI.2022.07.029>
 281. Sturm, L.A., Mays, R.M., Zimet, G.D., 2005. Parental Beliefs and Decision Making About Child and Adolescent Immunization: From Polio to Sexually Transmitted Infections. *Dev. Behav. Pediatr.* 26, 441–452.
 282. Suldozsky, B., 2017. The Information Deficit Model and Climate Change Communication [WWW Document]. *Oxf. Res. Encycl. Clim. Sci.*
 283. Sutton, J., Harris, C.B., Keil, P.G., Barnier, A.J., 2010. The psychology of memory, extended cognition, and socially distributed remembering. *Phenomenol. Cogn. Sci.* 9, 521–560.
 284. Talja, S., 1999. Analyzing Qualitative Interview Data: The Discourse Analytic Method. *Libr. Inf. Sci. Res.* 21, 459–477.
 285. Tangherlini, T.R., Roychowdhury, V., Glenn, B., Crespi, C.M., Bandari, R., Wadia, A., Falahi, M., Ebrahimzadeh, E., Bastani, R., 2016. “Mommy Blogs” and the Vaccination Exemption Narrative: Results From A Machine-Learning Approach for Story Aggregation on Parenting Social Media Sites. *JMIR Public Health Surveill.* 2, e166.
 286. The European Climate Adaptation Platform Climate-ADAPT, 2019. Romania Summary. *Eur. Clim. Adapt. Platf. Clim.-ADAPT.*
 287. The Lancet, 2021. Access to COVID-19 vaccines: looking beyond COVAX. *The Lancet* 397, 941. [https://doi.org/10.1016/S0140-6736\(21\)00617-6](https://doi.org/10.1016/S0140-6736(21)00617-6)
 288. Timofti, D.A., Dima, M., 2010. ENVIRONMENTAL RISK EVALUATION GENERATED BY EXTREME NATURAL PHENOMENA. *Bul. Ştiinţ. Al Univ. Politeh. Din Timiş.* 55, 119–122.
 289. Toma, V.-V., 2021. Translating Pasteur’s Vision in Eastern Europe, in: *Immunization and States.* Routledge.
 290. Topalov, A.-M., 1987. Religion et sante: le cas de la dietetique des Adventistes du 7e jour. *Soc. Compass* XXXIV, 509–514.
 291. Torfing, J., 2005. Discourse Theory: Achievements, Arguments, and Challenges, in: *Discourse Theory in European Politics.* Palgrave Macmillan, London, pp. 1–32.
 292. Toth, C., 2019. The rational, loving and responsible parent. A discursive construction of the identities of the parents that decided not to vaccinate their children. *J. Comp. Res. Anthropol. Sociol.* 10, 1–14.
 293. Tsugawa, S., Ohsaki, H., 2015. Negative Messages Spread Rapidly and Widely on Social Media, in: *COSN ’15: Proceedings of the 2015 ACM on Conference on Online Social Networks.* pp. 151–160.
 294. United Nations, 2023. What Is Climate Change? [WWW Document]. *Clim. Action.* URL <https://www.un.org/en/climatechange/what-is-climate-change> (accessed 2.1.23).
 295. VAERS, 2022. VAERS Data [WWW Document]. VAERS Vaccine Adverse Event Report. Syst. URL <https://vaers.hhs.gov/data.html> (accessed 3.11.22).
 296. van den Hove, S., Le Menestrel, M., de Bettignies, H.-C., 2002. The oil industry and climate change: strategies and ethical dilemmas. *Clim. Policy* 2, 3–18.

297. Vanderslott, S., Dadonaite, B., Roser, M., 2019. Vaccination [WWW Document]. ourworldindata.org. URL <https://ourworldindata.org/vaccination#public-support-and-skepticism> (accessed 2.17.20).
298. Verger, P., Dubé, E., 2020. Restoring confidence in vaccines in the COVID-19 era. *Expert Rev. Vaccines* 19, 991–993.
299. Vivion, M., Hennequin, C., Verger, P., Dubé, E., 2020. Supporting informed decision-making about vaccination: an analysis of two official websites. *Public Health* 178, 112–119. <https://doi.org/10.1016/j.puhe.2019.09.007>
300. Vlăsceanu, L., 2011. Sociologie. Polirom, Iași.
301. Vulpe S-N and Vasile S (2023) Unvaccinated, Just Like Everybody Else. *Vaccine Hesitancy in a Romanian Religious Community. European Review Of Applied Sociology* 16(26): 16–24.
302. Vulpe, S.-N., 2022. DIVINE PROTECTION AND SCIENCE SKEPTICISM. VACCINATION CONTROVERSIES IN RELIGIOUS ARTICLES, in: VI-INTERNATIONAL EUROPEAN CONFERENCE ON INTERDISCIPLINARY SCIENTIFIC RESEARCH. pp. 865–917. <https://doi.org/978-625-8213-38-6>
303. Vulpe, S.-N., 2021a. Croyance et scepticisme. Les justifications religieuses de l'hésitation à la vaccination et du climato-scepticisme. *Sociol. Rom.* 19, 69–88. <https://doi.org/10.33788/sr.19.3>
304. Vulpe, S.-N., 2021b. Vaccines in times of pandemic. Argumentative time work for vaccine hesitancy October 4 – October 6, 2021, in: 15 Vaccine Congress Online and On-Demand.
305. Vulpe, S.-N., 2020a. Understanding Vaccine Hesitancy as Extended Attitudes. *Eur. Rev. Appl. Sociol.* 13, 43–57. <https://doi.org/10.1515/eras-2020-0005>
306. Vulpe, S.-N., 2020b. Cooling down the future. A discourse analysis of climate change skepticism. *Soc. Sci. J.* <https://doi.org/10.1080/03623319.2020.1848294>
307. Vulpe, S.-N., 2020c. To Vaccinate or Not to Vaccinate against HPV? A Content Analysis of Vocabularies of Motives. *Romanian J. Commun. Public Relat.* 22, 105–123. <https://doi.org/10.21018/rjcpr.2020.3.311>
308. Wallis, G.W., 1970. Chronopolitics: The Impact of Time Perspectives on the Dynamics of Change. *Soc. Forces* 49, 102–108.
309. Ward, J.K., Peretti-Watel, P., Bocquier, A., Seror, V., Verger, P., 2019. Vaccine hesitancy and coercion: all eyes on France. *Nat. Immunol.* 20, 1257–1259.
310. Wetherell, M., Potter, J., 1988. Discourse analysis and the identification of interpretative repertoires, in: Antaki, C. (Ed.), *Analysing Everyday Explanation: A Casebook of Methods*. SAGE Publications Inc., London Newbury Park Beverly Hills New Delhi, pp. 168–183.
311. White Jr., L., 1967. The Historical Roots of Our Ecologic Crisis. *Science* 155, 1203–1207.
312. Wikforss, A., 2014. Extended Belief and Extended Knowledge. *Philos. Issues* 24, 460–481.
313. Wikipedia, 2022. Bărbulești, Ialomița. Wikipedia. URL https://ro.wikipedia.org/wiki/B%C4%83rbule%C8%99ti,_Ialomi%C8%9Ba (accessed 2.8.23).
314. Wiley, K.E., Leask, J., Attwell, K., Helps, C., Barclay, L., Ward, P.R., Carter, S.M., 2021. Stigmatized for standing up for my child: A qualitative study of non-vaccinating parents in Australia. *SSM - Popul. Health* 16, 100926. <https://doi.org/10.1016/J.SSMPH.2021.100926>
315. Wilson, S.L., Wiysonge, C., 2020. Social media and vaccine hesitancy. *BMJ Glob. Health* 5, e004206. <https://doi.org/10.1136/BMJGH-2020-004206>
316. Wolf, J., Allice, I., Bell, T., 2013. Values, climate change, and implications for adaptation: Evidence from two communities in Labrador, Canada. *Glob. Environ. Change* 23, 548–562.
317. Wolfe, R.M., Sharp, L.K., Lipsky, M.S., 2002. Content and Design Attributes of Antivaccination Web Sites. *J. Am. Med. Assoc.* 287, 3245–3248.

318. Wolsko, C., Ariceaga, H., Seiden, J., 2016. Red, white, and blue enough to be green: Effects of moral framing on climate change attitudes and conservation behaviors. *J. Exp. Soc. Psychol.* 65, 7–19.
319. Wombwell, E., Fangman, M.T., Yoder, A.K., Spero, D.L., 2014. Religious Barriers to Measles Vaccination. *J. Community Health* 2014 403 40, 597–604. <https://doi.org/10.1007/S10900-014-9956-1>
320. World Health Organization, 2014. Report on the Sage Working Group on Vaccine Hesitancy.
321. World Meteorological Organization, 2020. WMO Statement on the State of the Global Climate in 2019. Geneva, Switzerland.
322. Wright Mills, C., 1940. Situated Actions and Vocabularies of Motive. *Am. Sociol. Rev.* 5, 904–913.
323. Zaleha, B.D., Szasz, A., 2015. Why conservative Christians don't believe in climate change. *Bull. At. Sci.* 71, 19–30.
324. Zapata, O., 2018. Turning to God in Tough Times? Human Versus Material Losses from Climate Disasters in Canada. *Econ. Disasters Clim. Change* 2, 259–281.
325. Zerubavel, E., 2003. *Time Maps Collective Memory and the Social Shape of the Past.* The University of Chicago Press, Chicago.
326. Zimmerman, R.Z., Wolfe, R.M., Fox, D.E., Fox, J.R., Nowalk, M.P., Troy, J.A., Sharp, L.K., 2005. Vaccine Criticism on the World Wide Web. *J. Med. Internet Res.* 7, e17.
327. Zingg, A., Siegrist, M., 2012. Measuring people's knowledge about vaccination: Developing a one-dimensional scale. *Vaccine* 30, 3771–3777. <https://doi.org/10.1016/j.vaccine.2012.03.014>