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Who's striking, and who's not? Avoiding and acknowledging bias in youth climate activism research

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Abstract

The *School Strike 4 Climate* is a timely opportunity for education and research sectors to support youth stories in climate change policy, and foster impactful relationships between researchers, teachers and students. But much research in this space has inherent selection biases where youth representation in research is limited by place (such as attendance at a protest), snowball sampling (often within already engaged groups) or through education channels (such as private or independent schools), ultimately leading to unrepresentative response samples. This comment explores the challenges and opportunities for equitable inclusion of teenage voices in environmental research, including some practical approaches (such as inclusion of public schools) to ensure more diverse samples are represented. Implications for how the existing body of research should be viewed is discussed, highlighting an existing lack of representation of students that do not overtly engage with climate activism or *School Strikes*.

Keywords: public school; research methods; school strike; school; youth

Introduction

Climate change is an increasingly political topic (Maeseele, 2009; Pechar, Bernauer & Mayer, 2018) and as with many other political millstones in history (see Bessant, 2020), young people are caught in the crossfire as victims of climate change inaction, and of circumstances which they have not created. But 'issues' are what bring democratic publics into existence: 'implication in an affair is what sparks public involvement in politics' (Marres, 2005, p. 14). The *School Strike 4 Climate* movement (A.K.A. *Skolstrejk för Klimatet* or *Fridays for Future*) is a prime example of a bottom-up public of youth finding pathways to engagement with polity, through an issue that will affect them deeply and personally in decades to come.

In their movement, *School Strikers* face a complex ecosystem where agency is afforded to them by people in positions of power, and political engagement is seen as something that is acquired in a top-down fashion from parents, schools or 'more knowledgeable' adults (Andersson, 2015). These same young people are often dismissed as too inexperienced to participate in politics (Bessant, 2020b), or further criticised for their perceived inability to engage with climate policy, specifically (Feldman, 2020). By classic measures of political engagement, they are often seen as 'disengaged' from polity, not participating in forms of political behaviour that previous generations would easily identify (such as campaigning or joining unions) (Delli Carpini, 2000), despite youth political behaviours simply evolving over time (Norris, 2003; Pickard, 2019).

With this patchwork of adult governance and stereotypes, it fast becomes clear that young people are not a homogeneous group, and many factors can influence how young people engage with

climate change or environmental activism. These include: parental influences (Mead et al., 2012); practical barriers such as transportation issues, particularly for regional or remote students (Stuart, Thomas & Donaghue, 2018); structural barriers such as school administrations themselves (Vromen & Collin, 2010); or a lack of efficacy when it comes to their engagement (see, e.g. Stuart et al., 2018). Each of these adult structures plays a role in enabling or disabling youth voice in the *School Strike,* and thus, in research about the *School Strike.*

Investigators of the *School Strike* have an obligation to act deliberately and persistently to ensure young people are a key part of any research that looks to tell the story of student-led climate change narratives. As Mayes (2019) states, 'agency is not possessed by speaking subjects, but is materially assembled, and ethical responsibility is immanent' (p. 1192), and researchers are the ones with this responsibility in the academy. But, as explored here, connecting with these students can be exceptionally challenging. Therefore, the research community must also keep in mind the inherent biases that may exist within the body of work forming with a *School Strike* focus, and be sure to not over represent particularly engaged young people as a normative standard within our work. Without these considerations, we are not only at risk of creating an overly romantic understanding of youth political engagement, but also entrenching marginalisation of underrepresented groups and perpetuating intergenerational inequalities.

This piece explores some of the present sampling challenges when it comes to engaging with young people on the *School Strike 4 Climate*, and how the research community might consider their practice and interpretation of new research moving forward in light of these biases.

Present Challenges

A key challenge with *School Strike* research arises when climate change engagement (such as at *School Strike* events) is centralised and framed as ubiquitous among young people: how can we ensure nonparticipants or other diverse groups are equally represented in research? Often, research describing nonactivist behaviours and beliefs extrapolate from those who do attend protest events (Stuart et al., 2018). That is, attendance-enabling factors are explored, and the absence of these taken as reasons for non-attendance at a protest. But there may be any number of reasons why publics (including young people) may disengage from scientific issues, which are distinct and different from either apathy (see Burns & Medvecky, 2018) or protest attendance (see Feldman, 2021). Despite this, much international and local research on the *School Strike 4 Climate* movement has taken advantage of convenience sampling through *School Strike* events themselves. Wahlström et al. (2019), for example, surveyed European protest attendees (aged 14–19) at the global *School Strike* event on 15 March, 2019, to gain a better understanding of protestors' motivations for attending. Expanding further afield, the same researchers also explored the September 2019 *Strikes* across the globe, including Australia (de Moor, Uba, Wahlström, Wennerhag, & de Vydt, 2020). These studies are some of the largest we have seen to date on the *School Strike* movement, with over 5000 participants across 18 nations (collectively). Such research projects prioritise the perspectives of young people present at events or already engaged with the *School Strike* movement. Given the many and varied reasons why a young person may not engage with a *School Strike* event, however, research that focuses on event participation misses key exploration areas such as barriers to attendance, motivators to attend for those that were unable to, or even how young people are engaging with climate change in their own diverse communities. With events alone, it's impossible to get a full picture of how and why teenagers would engage with public climate change discourse (or not), as non-participant voices are inherently left out.

Stepping away from event-centric research, *School Strike* researchers may look to online platforms to connect with young people on climate change issues. But online spaces also rely on group membership (see, e.g. Conroy, Feezell, & Guerrero, 2012), and spaces occupied by teenage students are unlikely to cross over with networks occupied by research staff. To work with teenagers

for *School Strike* research, it is possible to rely on existing networks (political groups on Facebook, academic networks on Twitter, via direct email to colleagues, etc.) for recruitment, but adult social media habits are not reflective of teenage habits. Only 6% of regular Facebook users, for example, are aged 13–17 (Social Media News, 2020). Ultimately, the crossover between our academic online group membership, and those of teens, is scarce. On platforms where algorithms are largely responsible for the content we consume, such as Instagram (Agung & Darma, 2019; Instagram, 2021), connecting with young people outside of our own curated (adult-focused) networks is a difficult task. Both online or event-focused pathways highlight the risk of recurrently engaging with the same groups of students—keen participants, or those already in our online communities—and potentially misrepresenting them as a dominant view of how young people engage (or do not) with climate change activism.

To examine a phenomenon so intrinsically linked to education as the *School Strike 4 Climate*, it would also stand to reason that schools present an opportunity for research to connect with students to conduct research on youth climate activism. Public schools, however, can be notoriously taxing to access for academic research projects (Renes, Ringwalt, Clark & Hanley, 2007). For example regional jurisdictions can require lengthy ethical vetting processes that can cost research projects months or even years of precious time (both in Australia and abroad). This can lead to an over reliance on Catholic and Independent institutions for study participants, and while not a matter of simply 'lesser or better' educational outcomes between public (government-funded) and non-government schools, non-government schools tend to serve more advantaged populations (Flack, Walker, Bickerstaff & Margetts, 2020). At the same time, anecdotally, restricting access to the broader, more diverse pool of schools can lead to some non-government schools being overwhelmed by requests to engage their students, with several requests per week not uncommon. Not only does this put excess strain on non-government school administrators, but repeatedly engaging with school students from non-government schools faces the same risk as online or event-sampling: that an unrepresentative group of students is presented as normative. Factors such as socio-economic status will influence the school life of a student, and individual schools cannot be expected to simply ameliorate this influence on their own (Smith, Parr, & Muhidin, 2019).

In sum, selection biases may be influencing the voices presented in youth and *School Strike* research, as connecting with young people that are disengaged from climate activism or discourse are unlikely to be readily approached to participate in research. With these in mind, there are several considerations for researchers in youth activism fields to take on board, both for best practice in methods moving forward, and for our collective interpretation of the emerging body of work.[1]

Implications: Methods and Practice

These selection biases may be pervasive, but not unavoidable, and there are several steps that researchers can take to ensure diversity in represented students. For example, researchers would be well placed to ensure resourcing for relationship and application development to undertake research in state run public schools. In Australia, 65.7% of all students in 2019 were enrolled in public schooling (compared to 19.5% Catholic and 14.8% Independent schools) (Australian Bureau of Statistics, 2020). In March of 2019, over 150,000 Australian students participated in more than 60 strikes across Australia, many of which were in regional or remote areas (SS4C Australia, 2020), where remote and regional students also predominantly attend government schools, with lower numbers of very remote (13.3%), remote (21.8%) and outer regional (25.8%) students enrolled in Catholic or Independent non-government schooling than their major city counterparts (36.4%) (Australian Bureau of Statistics, 2020). Similarly, 83.7% of all First Nations students also attend government schooling (Australian Bureau of Statistics, 2020). This means that inclusion of public schools in *School Strike* research likely means higher contributions from regional or First Nations students, as well as other students from diverse (socio-economic, linguistic, cultural) backgrounds.

Working with students in the public sector, however, is only possible if regulators also enable relationships between academia and government schools to flourish. Critics of 'student voice' work have argued that 'student engagement' can turn into another mechanism for controlling young people's body and speech (Mayes, 2020). We see this in the *School Strike 4 Climate* case, where parental or academic control may be influencing participation in a *Strike* (see, e.g. Feldman, 2021). For example, many state-level administrators currently only enable youth participation in research via parental consent, even with older, upper high school students in the public system. Policies such as these tightly govern which young people can have a 'voice' and which cannot, as (for example) those that return permission forms are proportionally more likely to be female and from higher income families, and less likely to be from minority backgrounds (Esbensen, Melde, Taylor & Peterson, 2008). On a pragmatic level, policies such as these also contravene the federal-level National Statement on Ethical Conduct in Human Research (2015), which advocates for participation in research according to understanding and maturity level, rather than age. Though just a small example of bureaucratic process, steps such as removing the need for parental consent forms can signal more agency being handed to young people (despite it being at the hands of a governing body).

Investigating the *School Strike 4 Climate* in government schools may put state education departments in a delicate position of enabling research into dissent from the very systems they support. But withholding access further solidifies the exact power young people are rebelling against. Departmental administrators hold great gate-keeping power in *School Strike* research, and endorsement of government school inclusion can add a rich diversity in student engagement that cannot be fully captured through events, online, Independent or Catholic schools in isolation.

If researchers are enabled to connect with students via schools, there are further considerations for minimising sampling bias among participants. For example, surveys or focus groups should be conducted in 'neutral' classrooms, such as English or 'home room' classes, rather than in classes where students may already be engaged with the research topics, such as in Science or Political and Legal studies. Precedent for eliminating this form of bias includes Bostrom et al. (2012), who undertook survey research with 644 undergraduate business students from universities across Austria, Bangladesh, Finland, Germany, Norway and the United States, on support for climate change policy. Their study specifically noted that business school students were selected as an attempt to control a level of cultural influence that may have arisen from choosing students in disciplines heavily associated with climate change engagement. Similarly, there may emerge in these settings a 'social desirability bias' (see, e.g. Krumpal, 2013) where students restrict their responses so as to not deviate from social norms of their peers. Tools such as Most People Projection Questioning, where respondents are provided an opportunity to share potentially undesirable opinions as though they were an estimate of others' feelings or behaviours (Ostapczuk & Musch, 2011) can also prove useful in these scenarios.

Implications: Beyond the Practicalities

It's important to highlight that such complex systems of research take time and resourcing that other pathways may not. Imperatively, researchers should acknowledge that any outside influence on a school can detract from an already overloaded curriculum (Renes, Ringwalt, Clark, & Hanley, 2007). School staff are an absolutely essential part of school-based research (Alibali & Nathan, 2010), so ensuring that there is adequate time in the research project to support and account for school-based disruptions will result in smoother research for all. This is especially the case when endorsements of truancy to attend a *Strike* could come with considerable risk to teaching staff as well as students themselves. As part of this, researchers must also be comfortable with varying their approach school-to-school, as no two institutions are exactly the same (Wagner, Tubman & Gil, 2004), and may come with different approaches to building and maintaining genuine research partnerships. Similarly, engaging teachers authentically during early stages of a project can allow for external input on the study design (Alibali & Nathan, 2010) and lead to better project outcomes for all parties.

There is a danger, however, that these relationships can be to the detriment of young voices in research. Aside from young people themselves, many actors exist in the process of public education research, including the investigator, university administration and ethics committees, school teaching staff, and departmental administrators. Each of these actors exists within, and benefits from, power structures that can influence how young people are enabled to share their *School Strike* story. Each has a role to play in ensuring productive, inclusive, and ethical research is undertaken with (not 'on') teenagers in study of the *School Strike*, as well as development of projects that can be mutually beneficial for both research and school systems. Mayes (2020) in their work on 'voice' and its role in youth-centred research, reflects that inclusion of students in school reform can push young people to the expected norms of a well-behaved pupil. That is to say, structures of governance within a school can lead to '"no pedagogically acceptable language" to contest school practices' (Mayes, 2020, p. 460). For example, in my own research, positive relationships with school executives have led to 'nominations' of exemplar students to be the face of their school in our discussions of the *School Strike* (Feldman, 2021). This governmentality may limit opportunities for students (whether cognisant or not) to freely criticise the powers that influence their daily lives and choices around the *School Strike*.

Non-empowered students in these structures may be labelled as 'disengaged' from the research or from *School Strikes* more broadly. Science education often champions that publics (such as young people) should be 'engaged with' scientific issues (such as climate change) in order to make democratic decisions on scientific topics (see, e.g. Stocklmayer, Bryant & Gore, 2002). But there is a danger here that alignment with normative scientific positions becomes directly associated with exercising political agency (by 'understanding' and therefore acting on 'the science') (Burns & Medvecky, 2018). Following this logic, those expressing a different view are criticised as antiscience and hence 'anti-democratic' (p. 122). It is crucial, then, that these perspectives and biases are acknowledged in the framing or hearing of youth voices that may choose not to participate in the *School Strike*, climate discourse, or science education. Given the positioning of the *School Strike* as inherently 'good' among many research participants (including those in my own work), it can be easy to dismiss those who may hold oppositional views to the *Strikes*.

Therefore, when interpreting published youth research, it is imperative that the academic community not gloss over these biases that may have been created in observing, documenting, or working with school and youth communities. An awareness of those voices that may have been governed out of our conversations regarding the *School Strike* needs to be at the front of mind. It is important, too, to hold this awareness alongside claims of 'disengaged' students when compared to 'engaged' or keen research participants: there are many experiences and perspectives that have been left out of present research, and its yet unknown what these are. Without these perspectives, it's impossible to get a better understanding of youth participation in (or abstention from) the movement, as well as how the *School Strike* has shaped discourse and engagement with climate change among school aged people.

Conclusion

The *School Strike 4 Climate* movement is a case study in young people rebelling against abstract and powerful actors (Holmberg & Alvinius, 2019). It also has the potential to model equitable inclusion of young people in research. However, without multiple avenues for connecting with students, this may not be possible: Explicit and implicit biases exist via the many sampling methods and power structures exercised to engage with young people in research. As a community of practice, it is crucial that these biases are openly and continually discussed, to mitigate the risk of overglamourising participation in *Strikes* as normative and pervasive. While *School Strike* research is a new and evolving area, avoiding perpetuation of bias within the same privileged groups can ensure a rich, diverse, and empowered voice for *Strikers* and other youth research partners. Climate change effects all young people, regardless of their location, socio-economic status or cultural background. The least we can do is try to reach them.

Note

1 It should also be noted here that research perspectives of culture and protest are dominated by the Global North, with an inherent Western bias. While outside the scope of this piece to fully explore these critiques, see Nilsen, Pleyers & Cox (2017) for an editorial overview of social movement theories in post-colonial societies.

References

Agung, N., & Darma, G. (2019). Opportunities and challenges of instagram algorithm in improving competitive advantage. *International Journal of Innovative Science and Research Technology*, 4(1), 743–747. Retrieved from www.ijisrt.com743,

Alibali, M.W., & Nathan, M.J. (2010). Conducting research in schools: A practical guide. *Journal of Cognition and Development*, 11(4), 397–407. DOI 10.1080/15248372.2010.516417.

Andersson, E. (2015). Situational political socialization: A normative approach to young people's adoption and acquisition of political preferences and skills. *Journal of Youth Studies*, 18(8), 967–983. DOI 10.1080/13676261.2015.1020926.

Australian Bureau of Statistics. (2020). Schools. Retrieved December 5, 2020, from https://www.abs.gov.au/statistics/people/education/schools/latest-release.

Bessant, J. (2020). *Making-up people: Youth, truth and politics*. Routledge.

Bessant, J. (2020b). From Denizen to Citizen: Contesting representations of young people and the voting age. *Journal of Applied Youth Studies*, 3(3), 223–240. DOI 10.1007/s43151-020-00014-4.

Bostrom, A., O'Connor, R.E., Böhm, G., Hanss, D., Bodi, O., Ekström, F., . . . Sælensminde, I. (2012). Causal thinking and support for climate change policies: International survey findings. *Global Environmental Change*, 22(1), 210–222. DOI 10.1016/j.gloenvcha.2011.09.012.

Burns, M., & Medvecky, F. (2018). The disengaged in science communication: How not to count audiences and publics. *Public Understanding of Science*, 27(2), 118–130. DOI 10.1177/0963662516678351.

Conroy, M., Feezell, J.T., & Guerrero, M. (2012). Facebook and political engagement: A study of online political group membership and offline political engagement. *Computers in Human Behavior*, 28(5), 1535–1546. DOI 10.1016/j.chb.2012.03.012.

de Moor, J., Uba, K., Wahlström, M., Wennerhag, M., & de Vydt, M. (2020). Protest for a future II Composition, mobilization and motives of the participants in Fridays For Future climate protests on 20-27 September, 2019, in 19 cities around the world.

Delli Carpini, M.X. (2000). Gen.com: Youth, civic engagement, and the new information environment. *Political Communication*, 17(4), 341–349. DOI 10.1080/10584600050178942.

Esbensen, F., Melde, C., Taylor, T.J., & Peterson, D. (2008). Active parental consent in school-based research: How much is enough and how do we get it? *Evaluation Review*, 32(4), 335–362.

Feldman, H.R. (2020). A rhetorical perspective on youth environmental activism. *Journal of Science Communication*, 19(6), C07.

Feldman, H.R. (2021). Teen motivations for participation and non-participation in environmental protests. *Frontiers in Political Science*, 51. DOI: 10.3389/fpos.2021.662687.

Flack, C.B., Walker, L., Bickerstaff, A., & Margetts, C. (2020). *Socioeconomic disparities in Australian schooling during the COVID-19 pandemic, Socioeconomic disparities in Australian schooling during the COVID-19 pandemic*. Melbourne, Australia, Retrieved from ======https://search.proquest.com/docview/2449687330?accountid=14511%0Ahttps://ucl-new-primo.hosted.exlibrisgroup.com/openurl/UCL/UCL_VU2?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:book&genre=report&sid=ProQ:ProQ%3Aaustralianeducationindex&atitle=&tit.

Holmberg, A., & Alvinius, A. (2019). Children's protest in relation to the climate emergency: A qualitative study on a new form of resistance promoting political and social change. *Childhood-A Global Journal of Child Research*, 27(1), 78–92. DOI 10.1177/0907568219879970.

Instagram. (2021). How instagram feed works. Retrieved January 6, 2021, from https://help.instagram.com/1617763228546325.

Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: A literature review. *Quality and Quantity*, *47*(4), 2025–2047. DOI 10.1007/s11135-011-9640-9.

Maeseele, P. (2009). NGOs and GMOs a case study in alternative science communication. *Javnost*, *16*(4), 55–72. DOI 10.1080/13183222.2009.11009014.

Marres, N. (2005). Issues spark a public into being: A key but often forgotten point of the Lippmann-Dewey debate. In B. Latour & P. Weibel (Eds.), *Making things public*. Cambridge, MA: MIT Press, 10.1145/1183316.1183334)

Mayes, E. (2019). The Mis/uses of 'voice' in (post)qualitative research with children and young people: Histories, politics and ethics. *International Journal of Qualitative Studies in Education*, *32*(10), 1191–1209. DOI 10.1080/09518398.2019.1659438.

Mayes, E. (2020). Student voice in school reform? Desiring simultaneous critique and affirmation. *Discourse*, *41*(3), 454–470. DOI 10.1080/01596306.2018.1492517.

Mead, E., Roser-Renouf, C., Rimal, R.N., Flora, J.A., Maibach, E., & Leiserowitz, A. (2012). Information seeking about global climate change among adolescents: The role of risk perceptions, efficacy beliefs, and parental influences. *Atlantic Journal of Communication*, *20*(1), 31–52. DOI 10.1080/15456870.2012.637027.

National Statement on Ethical Conduct in Human Research. (2015). National Health and Medical Research Council, the Australian Research Council and the Australian Vice-Chancellors' Committee. Retrieved from http://www.nhmrc.gov.au/guidelines/publications/e72.

Nilsen, A., Pleyers, G., & Cox, L. (2017). Social movement thinking beyond the core: Theories and research in post-colonial and postsocialist societies. *Interface: A Journal for and About Social Movements*, *9*(2), 1–3.

Norris, P. (2003). Young people & political activism: From the politics of loyalties to the politics of choice? Paper presented at the Council of Europe Symposium, pp. 1–32,

Ostapczuk, M., & Musch, J. (2011). Estimating the prevalence of negative attitudes towards people with disability: A comparison of direct questioning, projective questioning and randomised response. *Disability and Rehabilitation*, *33*(5), 399–411. DOI 10.3109/09638288.2010.492067.

Pechar, E., Bernauer, T., & Mayer, F. (2018). Beyond political ideology: The impact of attitudes towards government and corporations on trust in science. *Science Communication*, *40*(3), 291–313. DOI 10.1177/1075547018763970.

Pickard, Sarah. (2019). *Politics, protest and young people. Political participation and dissent in 21st century Britain*. London, UK: Palgrave Macmillan.

Renes, S.L., Ringwalt, C., Clark, H.K., & Hanley, S. (2007). Great minds don't always think alike: The challenges of conducting substance abuse prevention research in public schools. *Journal of Drug Education*, *37*(2), 97–105. DOI 10.2190/T467-T0K6-8140-8635.

Smith, C., Parr, N., & Muhidin, S. (2019). Mapping schools' NAPLAN results: A spatial inequality of school outcomes in Australia. *Geographical Research*, *57*(2), 133–150. DOI 10.1111/1745-5871.12317.

Social Media News. (2020). Social Media Statistics Australia – January 2020.

SS4C Australia (2020). School Strike 4 Climate, Australia. Retrieved from https://www.schoolstrike4climate.com/.

Stocklmayer, S., Bryant, C., & Gore, M. (2002). *Science communication in theory and practice*. Dordrecht: Kluwer Academic Publishers.

Stuart, A., Thomas, E.F., & Donaghue, N. (2018). "I don't really want to be associated with the self-righteous left extreme": Disincentives to participation in collective action. *Journal of Social and Political Psychology*, *6*(1), 242–270. DOI 10.5964/jspp.v6i1.567.

Vromen, A., & Collin, P. (2010). Everyday youth participation? Contrasting views from Australian policymakers and young people. *Young*, *18*(1), 97–112. DOI 10.1177/110330880901800107.

Wagner, E.F., Tubman, J.G., & Gil, A.G. (2004). Implementing school-based substance abuse interventions: Methodological dilemmas and recommended solutions. *Addiction*, *99*(Suppl. 2), 106–119. DOI 10.1111/j.1360-0443.2004.00858.x.

Wahlström, M., Sommer, M., Kocyba, P., de Vydt, M., De Moor, J., Davies, S., … Buzogany, A. (2019). *Protest for a future: Composition, mobilization and motives of the participants in Fridays for future climate protests on 15 March, 2019 in 13 European cities*. Keele University.

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