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online version can be accessed at <https://link.lens.org/tk10f5UfAbb>.

Competing interests

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Democratizing biotechnology requires more than availability

To the Editor — In their Correspondence “The accelerating pace of biotech democratization,” Jackson et al.¹ find evidence for an accelerated pace at which novel biotechnologies become widely available. They state that biotechnologies that are initially available to only a handful of well-resourced specialists currently take about 4.5 years to spread to people with relatively low levels of technical skills and financial resources. By the end of the decade, the authors predict, this transition is expected to take less than 3.5 years. The authors conclude that the ‘democratization’ of biotechnology is accelerating.

Jackson et al. provide valuable insights into the timeframes for the spread of biotechnologies and raise interesting questions about the technical and societal factors that can explain these changes. However, the conclusion that this increased accessibility amounts to democratization of biotechnology is premature at best. The democratization of science and technology has been extensively studied by scholars in social sciences and humanities over the last thirty years^{2–4}. Without exception, these studies conceptualize democratization not as the need to spread technologies faster and further⁵, but to involve society in the development and governance of technologies, from identifying issues that merit solving in the first place to deliberating the particular technologies used to solve those problems. Equating



accessibility to democracy instead assumes that the technologies in question are by definition desirable and beneficial, while this is exactly what is in question in societal controversies regarding new technologies, including various biotechnologies and their applications⁶.

In addition, by assuming the unconditional desirability of the wide availability of biotechnologies, democratic publics are portrayed as passive recipients of scientific work. Instead, democratic theory invites us to take publics seriously:

to actively listen to publics and to include their interests and concerns in the design and application of new biotechnologies^{7,8}, so that science and society to become mutually responsive to each other⁹. The timeframe from first usage to widespread availability certainly matters, but the praiseworthy objective of democratizing biotechnology invites us to move beyond that. □

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Competing interests

The author declares no competing interests.

Reply to: Democratizing biotechnology requires more than availability

S. S. Jackson et al. reply — Our Correspondence was written with a limited definition of “democratize” in

mind: according to the [Merriam-Webster](#) definition, “to make (something) available to all people.” That is, we were referring

simply to the widespread availability of the biotechnologies studied to those with limited resources and training, and