

Involuntary Social Experimentation: Revisiting the Case for a Moratorium

n 2019 the Sveriges Riksbank Prize ('Nobel' prize) in Economics was awarded for the use of experiments to evaluate social policy interventions in former colonies. These social experiments, the Nobel Committee (2019) claims, have 'helped to alleviate global poverty' and have 'the potential to further improve the lives of the worst-off people around the world'. It is striking then, that the award makes no mention of ethics of experimentation on highly vulnerable people. In this piece, I revisit the evidence I gathered on informed consent in social experiments in former colonies, which suggests that many studies face serious problems with informed consent (Hoffmann 2020). My intention is to show that involuntary experimentation is an important ethical and intellectual issue for Southern scholars.

The argument is composed of four moves. First, I explain how the design of many experiments pose serious obstacles to informed consent. Second, I aim to show that involuntary experimentation on vulnerable people in former colonies is unethical: it violates their personhood, increases the risk of unintended harm, and establishes continuities with colonial experimentation. Third, I engage with objections that informed consent is unnecessary, and that the demand for informed

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consent in social experimentation is an illegitimate infringement on the sovereignty of the state. I argue that these objections are unjustified, and that informed consent is a central component of democratic social policy. As a result, instead of strengthening social policy, involuntary experimentation weakens it. Fourth, I aim to show that the political economy dynamics of social experimentation mean that existing regulatory mechanisms are likely to be ineffective. However, social experimentation is still a relatively low-stakes enterprise compared with medical experimentation, and there is therefore a window of opportunity develop more effective regulation. In light of this, Southern scholars have a clear responsibility to call for a moratorium on social experiments and to participate in establishing more effective ethical safeguards.

Obstacles to informed consent

I begin by revisiting the evidence on informed consent. The evidence comes from a systematic review of all randomised controlled trials (RCTs) published between 2009 and 2014 in 'top economics journals' that had been previously conducted by Peters et al. (2016). I used their review because it indicates the standards of journals considered to be the most rigorous in the discipline.

In the original article, I focused on experiments conducted in Africa, Asia and Latin America (58 out of a total of 92 studies). To extract information on informed consent, I used a minimalist criterion: participants knew they were in some sort of study before agreeing to participate. This did not require them to know that they were in an experiment, or to know the details of the experiment before consenting to participate. By this criterion, 78 per cent of authors did not discuss informed consent, 12 per cent stated that participants were intentionally left ignorant, and 10 per cent indicated informed consent for some sort of study. However, no study indicated whether participants were explicitly aware that they were being experimented upon. (Table 1). This silence on informed consent, and in some cases explicit denial thereof, suggests that it is considered less important than other elements of the experimental design.

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Table 1: Features	ot ex	neriments	ın	tormer	colonies	related	to	informed consent
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	% not stated	% no	% yes	Total
Participants consented to participate in some sort of study	78	12	10	100
Participants aware that they were in an experiment	100	0	0	100
Cluster randomisation	0	36	64	100
Institutional setting	0	76	24	100
Impoverished participants	0	3	97	100
Child participants	0	84	16	100
Addresses design constraints on ability to opt out	100	0	0	100
Approved by university ethical review board	91	0	9	100

However, the experimental design of many of these studies presents serious obstacles informed consent. One barrier concerns the practice of randomly allocating treatments to clusters, such as schools or clinics. Cluster randomisation often makes unfeasible informed consent (Lignou 2018). This is because it may be costly to leave the service of the implementing agency (such as switching schools), or participants may be locked into the service (such as relying on social welfare). or the service may be the cheapest or most convenient option (such as using the closest clinic). Although 64 per cent of the studies employed cluster randomisation, no study discussed whether participants could not opt out because it was costly to leave the cluster, and how this was addressed

Asecond barrier to consent concerns the vulnerability of participants. Sixteen per cent of studies used children as participants, yet only one study explicitly gained the consent of parents. Twenty-four per cent used institutional settings, such as clinics or schools, but no study discussed whether participants believed they would suffer professional consequences if they refused to participate and how this was addressed. And nearly all

the studies involved the allocation of scarce resources to impoverished participants, but no study discussed whether penury compelled people to participate and how this was dealt with.

By design then, it appears that most of the studies in the review had serious built-in obstacles to informed consent. I discuss methodological reasons for suspending informed consent below, but first I consider the ethical implications of involuntary experimentation.

The ethics of informed consent

The suspension of informed consent on vulnerable people is consequential. First, it raises the distinction between treating humans as persons who have a right to participate or not as they so choose, versus treating them as subjects to be manipulated for research purposes. (Barrett and Carter 2010: 520). It is for this reason that informed consent was incorporated into the International Covenant on Civil and Political Rights as one of the 'inalienable rights of all members of the human family . . . derive[d] from the inherent dignity of the human person.' (UN General Assembly 1966). This framing casts

the absence of informed consent as a violation of personhood in and of itself, outside of any negative consequences it enables. Seen this way, involuntary experimentation arguably violates the personhood of some of the world's most vulnerable people – impoverished black and brown people, many of whom are women.

Second, it increases the risk of unintentional harm. If participants are aware of the true nature of the intervention, its risks and trade-offs, they may be able to alert experimentalists to unintended negative consequences. This is important experiments that allocate critical resources, such as income or healthcare, to impoverished people. Withholding or providing resources to particular groups may harm vulnerable groups or catalyse contestations that are socially destabilising (Acemoglu 2010). The principle is a general one: while each individual has rich, complex and deep knowledge about herself, experimentalists necessarily have sparse and inadequate knowledge participants (otherwise about they would have no reason to study them). Since all social experiments are characterised by information asymmetries between experimentalists and participants, experimentalists do not fully

know what harms they may cause. Insofar as informed consent allows participants the opportunity to reduce experimentalists' ignorance, it plays an invaluable role in reducing the risk of harm.

Third, the suspension of informed consent increases the risk of establishing historical continuities with colonial experimentation.

While many colonial experimentalists hoped to help the lives of the poor and contribute to science, their experimentation was often involuntary and harmful, and had the effect of positioning entire regions as though they were 'living laboratories' in which scientific curiosity and the urge for beneficence could be satisfied (Tilley 2011). Stark

regional asymmetries in authorship heighten this risk (Table 2). Of the experiments conducted in former colonies in the literature review, 84 per cent of lead authors were at institutions in the United States or Western Europe. No first authors were located in Africa or Latin America, and only 5 per cent were in Asia.

Table 2: First author location of experiments conducted in former colonies

	Frequency	Percentage
Africa	0	0
Asia	3	5
Europe	10	17
Latin America	0	0
United States	39	67
World Bank	6	10
Other	0	0
Total	58	100

Dealing with objections

suspension of informed consent in social experiments is typically a response to the problem of external validity, or the ability to apply the findings outside the context of the study to another place or time (Barrett and Carter 2010). If participants know that they are in an experiment then they may behave differently than they under non-experimental would conditions, so that the outcomes of an intervention might not scale-up to a population. Yet the standard solution in medical research assigning a placebo – is not possible in most social experiments (Peters, Langbein, and Roberts 2016). Thus, there is a prima facie 'greater good' argument for violating informed consent – it helps ensure the external validity of experiments in order to contribute evidence for more beneficial policies.

With or without informed consent, however, social experiments face serious problems of external validity. The effects observed in the sample are unlikely to be similar to the effects in the population due to general equilibrium and political economy effects (Heckman 1992; Moffitt 1992; Deaton 2010: 2010), while the perception that experiments are non-parametric and theory-free is inconsistent with claims to generalisability (Muller 2015; Deaton and Cartwright 2016). And even if experimental results could generalise to different people or times, this assumes that experiments lead to more beneficial policies than alternative forms of research. This is a counterfactual claim for which no experimental evidence has yet been forthcoming (Chelwa and Muller 2019). Indeed, the role of medical experiments in harmful outcomes, such as the opioid crisis, cautions against

strong claims about policy benefits (Deaton forthcoming). Thus, appeals to external validity do not address concerns about suspending informed consent; instead they simply shift the terrain to even thornier methodological issues regarding external validity and uncertainty.

Defendants of involuntary experimentation might instead argue potential that the harms of social experimentation trivial in comparison to medical experimentation, and that indeed, the potential benefits of suspending informed consent outweigh its harms. Singer et al. (2019) provide the following analogy to advance this utilitarian argument:

The philosopher Derek Parfit asks whether a person trapped in a collapsing building may break an unconscious stranger's toe in order to save a child's

life. Most agree that 'using' the stranger in this way is ethically permissible. Similarly, RCTs have occasionally identified interventions that are tens or even thousands of times more effective than others.

However, this is a poor analogy. The example of the trapped person involves just three people in a tightly circumscribed scenario. Social experiments typically involve large numbers of people in porous and complex social settings. In the systematic review discussed above, the majority of studies had sample sizes ranging from thousands of individuals to millions of households (Peters, Langbein and Roberts 2016). This complexity and scale necessarily involve information asymmetries experimentalists between participants. Thus, not only are the potential harms not fully knowable, but the potential benefits as well. A utilitarian argument requires some knowledge about the possible harms and benefits of an action in order to weigh them against each other. Yet the very mechanism by which better information about prospective harms and benefits could be derived - informed consent - is ruled out by appeal to the supposedly beneficial consequences. The utilitarian argument against informed consent falters on the grounds of circularity.

Another line of defence is to appeal to the fact that social experiments typically piggyback on existing interventions conducted by governments, NGOs or firms. Thus, if interventions are going to be imposed unilaterally, then social experimentalists may as well gain knowledge from these interventions, which can be used to identify any harms (Singer, Baker and Haushoffer 2019). This echoes a well-established view that all social policy interventions

are experiments, but the point is to make the knowledge from these interventions socially useful. Writing in 1938, for instance, the British social theorist Beatrice Webb argued:

All administration, whether from the motive of profit-making or from that of public service, whether of the factory or the mine, of the elementary school or the post office, of the cooperative society or the Trade Union...necessarily amounts to nothing less than 'experimenting in the lives of other people.' (Cited in Oakley 2000: 318.)

The difference is that social experiments unveil the cloak of secrecy in government interventions and therefore make useful contributions to knowledge. However, as early proponents of 'reforms as experiments' recognised, this does not entail suspending the principle of informed consent, for doing so evades personal responsibility (Campbell 1969; Campbell and Russo 1999). This version of the argument is weak, because it relies on buck-passing.

A stronger version of this argument is that it is inconsistent to require social experimentalists to gain informed consent, when one does not require the implementing agency, and particularly governments, to gain informed consent (MacKay and Chakrabarti 2019; Meyer et al. 2019). This is an important demand for consistency. instead of waiving the principle of informed consent for experimentalists, as these authors suggest, there are strong reasons to insist on a consistent commitment to informed consent.

Thefirstreason concerns the problem of asymmetrical information. If governments and NGOs ought to ensure the well-being of the people they serve, then informed

consent is an important mechanism by which they can reduce their ignorance of the harms and benefits of social policy interventions. From this perspective, informed consent is an important component of strengthening the ability of governments and NGOs to benefit people.

The second reason applies particularly to governments that claim legitimacy on the grounds that they represent the will of the people they govern. MacKay and Chakrabarti (2019) argue that legitimate governments do not need to gain informed consent in social experiments, because policy programming is part of their 'right to rule'. On this view:

Individual residents are legitimately sovereign over those spheres of action protected by their right to autonomy, and governments are legitimately sovereign over those spheres of action protected by their right to rule. Provided they respect the limits of their right to rule, governments do not therefore infringe their residents' rights to autonomy by engaging in policy making. (MacKay and Chakrabarti 2019: 5)

As they acknowledge, this assumes 'governments and their residents possess mutually exclusive spheres of sovereignty'. This reasoning in manifest in the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research 1978), which waives the requirement for informed consent in experiments conducted by the United States government.

Yet this is a thin model of democracy. It implies that democratic participation should be limited to sporadic voting, and is consistent with autocratic governance, so long as autocracy is limited to the period

between elections. It also assumes that an elected government is viewed with equal legitimacy by all residents. But the legitimacy of a government is in part a function of the ways in which it treats its residents. The Belmont Report was published just six years after the Tuskegee Study of Untreated Syphilis on unconsenting black men concluded (Washington 2006). It was followed a decade later by a government-funded trial which forcibly administered a lethal drug to black and Latino orphans who were HIV positive. The trial only concluded in 2001 (Yearby 2016). A blanket assertion about the legitimacy of a government, and its sovereign right to withhold consent, elides struggles over who has the right to be treated as human. In doing so, it fails to take into account the harms a government might inflict on people it implicitly deems to be less than human.

The claim that governments and their residents inhabit mutually exclusive spheres of sovereignty is also at odds with the everyday practice of democratic governance. Governments plausibly derive their legitimacy in part from their openness to residents' participation in policymaking and implementation. This includes consultation with residents regarding prospective law making, residents actively participating in and sometimes resisting law-making through legal challenges and political action, and residents monitoring and evaluating policy implementation in order to hold government to account. These activities are all tied to the spirit of informed consent. Making this principle explicit is not at odds with a government's right to rule. On the contrary, it would appear to embody it.

However, this does not imply a dogmatic and unyielding insistence

on the principle of informed consent. To do so would be to deny historical context and unequal power relations. A government raising taxes on the wealthy is a different matter from the government raising taxes on the poor. We might with reason believe that the protestations of the wealthy have a less legitimate claim on the government than the complaints of the poor, since the former fight for privilege, while the latter fight to survive. Similarly, it is common to relax the requirements for informed consent when conducting experiments to investigate powerful actors who engage in unethical or illegal behaviour, such as racial discrimination or money-laundering (Findley and Nielson 2015).

In both research and governance then, informed consent ideally functions as a baseline principle for protecting the most vulnerable and can only be waived with strong contextual justification. In governance especially, it is a constitutive element of legitimate rule – it is the thread used to stitch together the social compact between government and its residents, out of which a democratic social policy is woven

Considered carefully then, the violation of informed consent in social experiments is incoherent. Social experiments manifestly aim to make a positive contribution to social policy. Yet, the violation of informed consent undermines the realisation of a democratic social policy. This is the political argument against involuntary experimentation: that it constitutes a prima facie threat to democratic social policy.

The case for a moratorium

All of the experiments in the systematic review were published in prestigious journals, and while none of them mentioned any form of ethical review, they were presumably approved by their universities' institutional review boards. This suggests that the mechanisms for regulating social experimentation are ineffective.

Weak regulation is likely a function of the political economy of social experimentation. Over the last two decades, there has been a dramatic increase in the use of experiments to evaluate the outcomes of social policy interventions in former colonies. One of the key drivers of this increase is the Abdul Latif Jameel Poverty Action Lab (J-PAL), which was founded by two of the 2019 Nobel laureates, Esther Duflo and Abhijit Banerjee. Since its inception in 2003, J-PAL has posted 876 social experiments in 80 countries, where the largest proportion were conducted in African countries (Jatteau 2018).

While J-PAL is not transparent about its finances, by some estimates it received around US\$300 million between 2003 and 2018 (Servet 2018). This funding comes from a range of institutions such as the World Bank, the UK's Department for International Development and the Gates Foundation. And J-PAL's footprint is set to grow with the Nobel Prize, which has not only served to deepen the prestige of social experimentation in general and their institute in particular, but has also allowed the laureates to source an additional US\$50 million in donor funding to extend J-PAL's programme worldwide to institutions and researchers in former colonies (Kremer 2019).

Indeed, it appears that J-PAL has been influential in the World Bank, which has been a key driver of social experimentation, as both a project and research funder, and as a thinktank. In 2005, the

Bank commissioned a research evaluation headed by Banerjee, which condemned the Bank's projects for lacking rigorous impact evaluation (cited in Jatteau 2018). This view was echoed by the Evaluation Gap Working Group (2006), which included authors from J-PAL, and development actors, such as the World Bank and the Gates Foundation. That same vear, the World Bank established a dedicated impact evaluation unit (DIME) composed of former J-PAL associates to conduct RCTs. The number of RCTs used in World Bank evaluations subsequently increased from a baseline of zero in the year 2000 to just over twothirds of all evaluations in 2010 (Bédécarrats, Guérin and Roubaud 2019).

This shift in World Bank policy accompanied changes has more generally in international development policy to focus on results-based management. These guidelines were formulated in the 2005 Paris Declaration on Aid Effectiveness and reiterated by all the major conferences on official development assistance in Accra in 2008, Busan in 2011 and Addis Ababa in 2015 (Bédécarrats, Guérin and Roubaud 2019). Since then, a number of dedicated RCT funding agencies have been established. The Strategic Impact Evaluation Fund was founded in 2007, the Global Agriculture and Food Security Program in 2009, and the Impact **Evaluation to Development Impact** in 2014.

This suggests that social experimentation has rapidly become a multinational enterprise, one with significant financial and political interests. It is also a high prestige activity, one with ivy league universities in the United States at the centre of the research network (Jatteau 2016). The combination of these

factors has likely helped J-PAL develop a model of policy influence that focuses on driving demand by 'co-creating' experiments with governments, NGOs and funders (Gyamfi and Park 2019). As a result, key institutions, which might have held experimentalists accountable, are no longer at arm's length from the research and their will to enforce ethics may be undermined by a conflict of interests (Hoffmann 2018).

Given these constraints, existing models for regulating experiments are likely incapable of being effective. It is difficult for national entities to regulate multinational industries. It is not easy for poor countries or universities to veto unethical experiments by donors or wealthy Northern universities. And it is challenging to make the case for caution in an international policy context enthusiastically advocating experimentation as the gold standard. As such, ensuring ethical experimentation will likely require new models of regulation, which involve Southern scholars and governments working collaboratively.

It is within this context that the experimental economist Sarin (2019) has urged the 2019 Nobel laureates to call for halting all experiments on vulnerable people until effective ethical safeguards are established. This is an important intervention, but it fails to account for the responsibilities of Southern scholars to our societies and elides the role that Southern scholars have played in enabling unethical experimentation. It is our responsibility to insist that experiments in our societies follow rigorous ethical protocols, and we should be at the forefront of ensuring this is enforced. This does not imply that Northern scholars have no responsibility to prevent unethical experimentation, but it is with our own conduct that I am concerned.

The prospects for more effective regulation of social experiments look bright comparison medical experimentation. According to one estimate, between 2007 and 2017, 360 million people participated in a registered clinical trial (Narita 2019). In comparison, only 22 million people were enrolled in social experiments (in disciplines such as economics, political science, and psychology). The sheer scale of medical experimentation suggests that there are substantially greater financial and political obstacles to effective regulation when compared with social experimentation.

In light of this, I believe Southern scholars have three clear responsibilities. First, we have a duty to call for a moratorium on experimentation until effective regulatory mechanisms are established. Second, we have an obligation to understand the constraints on effective regulation. In this regard, we have much to learn from medical scholars, who have long grappled unethical experimentation. And third, we have a responsibility to resist unethical experimentation participate in establishing effective ethical safeguards. These social responsibilities flow from intellectual freedoms, CODESRIA's community has longrecognised (Diouf and Mamdani 1994). For intellectual freedom is not merely a negative freedom from constraints. It is also a positive freedom to serve. Defining and enforcing the proper bounds of social experimentation is crucial to upholding the dignity of some of our most vulnerable people, reducing the risk of harm, and mitigating continuities with colonial experimentation. It is also a small,

but important step in reclaiming the intellectual project of democratic social policy, and indeed, as Chelwa and Muller argue in this issue, the broader intellectual project of development.

References

- Acemoglu, Daron, 2010, "Theory, General Equilibrium, and Political Economy in Development Economics." Journal of Economic Perspectives 24 (3): 17–32.
- Barrett, Christopher B., and Michael R. Carter, 2010, "The Power and Pitfalls of Experiments in Development Economics: Some Non-Random Reflections." Applied Economic Perspectives and Policy 32 (4): 515–48. https://doi.org/10.1093/aepp/ppq023.
- Bédécarrats, Florent, Isabelle Guérin, and François Roubaud, 2017, "All That Glitters Is Not Gold. The Political Economy of Randomized Evaluations in Development." Development and Change 0 (0): 1–28. https://doi.org/10.1111/dech.12378.
- Campbell, Donald T., 1969, "Reforms as Experiments." American Psychologist 24 (4): 409. https://psycnet.apa.org/record/1969-17253-001.
- Campbell, Donald T., and M. Jean Russo. 1999, Social Experimentation. Vol. 1. Sage Publications, Inc.
- Chelwa, Grieve, and Sean M. Muller, 2019, "The Poverty of Poor Economics." Africa Is a Country (blog). 2019. https://africasacountry.com/2019/10/the-poverty-of-poor-economics.
- Deaton, Angus, forthcoming. "Randomization in the Tropics Revisited: A Theme and Eleven Variations." In Randomized Control Trials in the Field of Development: A Critical Perspective., edited by Florent Bédécarrats, Isabelle Guérin, and François Roubaud. Oxford: Oxford University Press.
- —, 2010, "Instruments, Randomization, and Learning about Development." Journal of Economic Literature, 424–455. http://www.jstor.org/stable/20778731.
- Deaton, Angus, and Nancy Cartwright. 2016, "Understanding and Misunderstanding Randomized Controlled Trials." NBER Working Paper 22595. Cambridge, MA: National Bureau of Economic Research.

- Diouf, Mamadou, and Mahmood Mamdani, eds. 1994, Academic Freedom in Africa. Dakar: CODESRIA.
- Evaluation Gap Working Group, 2006, "When Will We Ever Learn? Improving Lives Through Impact Evaluation." Washington, D.C: Centre for Global Development. https://www.cgdev.org/sites/default/files/7973_file_WillWeEverLearn.pdf.
- Findley, Michael, and Daniel Nielson. 2015, "Obligated to Deceive? Aliases, Confederates, and the Common Rule in International Field Experiments." In Ethics and Experiments Problems and Solutions for Social Scientists and Policy Professionals, edited by Scott Desposato. New York: Routledge.
- Gyamfi, Bridget Konadu, and Bethany Park, 2019, "How to Keep Good Research from Dying a Bad Death: Strategies for Co-Creating Research with Impact." Innovations for Poverty Action (blog). January 2, 2019. https://www.poverty-action.org/blog/how-keep-good-research-dying-bad-death-strategies-co-creating-research-with-impact.
- Heckman, James J., 1992, "Randomization and Social Policy Evaluation." In Evaluating Welfare and Training Programs, edited by Charles Manski and Charles Garfinkel, 547–70. Cambridge, Massachusetts: Harvard University Press.
- Hoffmann, Nimi, 2018, "When Are Experiments Corrupt?" Journal of Contemporary African Studies 36 (4): 532–52. https://doi.org/10.1080/02589001.201 9.1579893.
- Hoffmann, Nimi, 2020, "Involuntary Experiments in Former Colonies: The Case for a Moratorium." World Development Symposium on Experimental Approaches in Development and Poverty Alleviation (127).
- Jatteau, Arthur, 2016, "Faire Preuve Par Le Chiffre? Le Cas Des Expérimentations Aléatoires En Économie ['Evidence by Numbers? The Case of Randomized Controlled Trials in Economics']." PhD dissertation, Paris: Université Paris-Saclay, Ecole Normale Supérieure.
- ——, 2018, "The Success of Randomized Controlled Trials." Historical Social Research/Historische Sozialforschung, Special Issue: Economists, Politics, and Society. New Insights from Mapping Economic

- Practices Using Field-Analysis, 43 (3): 94–119. https://www.jstor.org/stable/pdf/26491530.pdf?refreqid=excelsior %3A85269e6dca8d2a2dd974cf550d2 5382c
- Kremer, Michael, 2019, "Prize Lecture." Presented at the The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019, Stockholm University, December 8. https://www.nobelprize.org/prizes/economic-sciences/2019/kremer/lecture/.
- Lignou, Sapfo, 2018, "Informed Consent in Cluster Randomised Trials: New and Common Ethical Challenges." Journal of Medical Ethics 44 (2): 114– 20. https://doi.org/10.1136/medethics-2017-104249.
- MacKay, Douglas, and Averi Chakrabarti, 2019, "Government Policy Experiments and Informed Consent." Public Health Ethics 12 (2): 188–201. https://doi.org/10.1093/phe/phy015.
- Meyer, Michelle N., Patrick R. Heck, Geoffrey S. Holtzman, Stephen M. Anderson, William Cai, Duncan J. Watts, and Christopher F. Chabris, 2019, "Objecting to Experiments That Compare Two Unobjectionable Policies or Treatments." Proceedings of the National Academy of Sciences 116 (22): 10723–10728.
- Moffitt, Robert, 1992, "Evaluation Methods for Program Entry Effects." In Evaluating Welfare and Training Programs, edited by Charles Manski and Charles Garfinkel, 231–52. Cambridge, Massachusetts: Harvard University Press.
- Muller, Seán M., 2015, "Causal Interaction and External Validity: Obstacles to the Policy Relevance of Randomized Evaluations." The World Bank Economic Review 29 (suppl 1): S217–25. https://doi.org/10.1093/wber/lhv027.
- Narita, Yusuke, 2019, "Experiment-as-Market: Incorporating Welfare into Randomized Controlled Trials." HCEO Working Paper Series. Chicago: Human Capital and Economic Opportunity Global Working Group, University of Chicago.
- National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1978, "The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research." Washington, D.C: Superintendent of Documents.



- Oakley, Ann, 2000, "A Historical Perspective on the Use of Randomized Trials in Social Science Settings." Crime & Delinquency 46 (3): 315–329.
- Peters, Jörg, Jörg Langbein, and Gareth Roberts, 2016, "Policy Evaluation, Randomized Controlled Trials, and External Validity—ASystematic Review." Economics Letters 147 (October): 51–54. https://doi.org/10.1016/j.econlet. 2016.08.013.
- Sarin, Ankur, 2019, "Indecent Proposals in Economics." The India Forum (blog). October 29, 2019. https://www.theindiaforum.in/article/indecent-proposals-economics.
- Servet, Jean-Michel, 2018, L'économie comportementale en question. Paris: Charles Leopold Mayer. https://www.amazon.fr/L%C3%A9conomie-comportementale-question-Jean-Michel-Servet/dp/2843772087.
- Singer, Peter, Arthur Baker, and Johannes Haushoffer, 2019, "Are Randomized Poverty-Alleviation Experiments Ethical? By Peter Singer, Arthur Baker and Johannes Haushofer Project Syndicate." Project Syndicate (blog). November 6, 2019. https://www.project-syndicate.org/commentary/ethics-of-random-controlled-trials-to-fight-poverty-by-peter-singer-et-al-2019-11.
- Nobel Committee (The Committee for the Prize in Economic Sciences in Memory of Alfred Nobel), 2019, "Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019: Understanding Development and Poverty Alleviation." Stockholm: The Royal Swedish Academy of Sciences. https://www.nobelprize.org/uploads/2019/10/advanced-economicsciencesprize2019.pdf.
- Tilley, Helen, 2011, Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950. Chicago: University of Chicago Press.
- Yearby Ruqaiijah, 2017, "Missing the 'Target'." American Journal of Law & Medicine 42(4): 797-833.
- UN General Assembly. 1966. *International Covenant on Civil and Political Rights*. United Nations Treaty Series, vol. 999: 172:346.
- Washington, Harriet A., 2006, Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present. Doubleday Books.