‘Experimental pregnancy’ revisited

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Abstract

In this paper, I reflect on an important article by Bob Veatch in the inaugural issue of the Hastings Center Report, entitled “Experimental Pregnancy.” It is a report and elegant analysis of the Goldzieher Study, in which nearly 400 women were randomized to receive hormonal contraception or placebo absent consent or disclosure about placebo use, resulting in several pregnancies. Noting the study’s limited notoriety, I first consider the narratives that have instead dominated bioethics’ approach to pregnancy and research: thalidomide and diethylstilbestrol (DES). These narratives have facilitated a narrow focus on avoiding fetal risk, to the exclusion of other ethically relevant considerations. I then revisit “Experimental Pregnancy” and offer two ways in which Bob’s analysis serves as an important corrective, first, by foregrounding research subjects (persons who are or may become pregnant), and second, by normalizing pregnancy and thus foregrounding foundational ethical considerations that are sometimes lost amidst pregnancy’s presumed exceptionalism.

Keywords Contraceptive research · Pregnancy · Goldzieher · Research ethics · Abortion

Introduction

Over the last fifty years, considerations about pregnancy have dramatically shaped the direction and focus of biomedical research, including the parameters of what is considered ethical. The potential for pregnancy was a key factor leading to the widespread exclusion of women from studies, based in concerns about exposing potential fetuses to study-related risk [1]. Nearly every study enrolling individuals of childbearing age entails stringent requirements for contraception; research

1 While I use the term “women” in this paper, I recognize that not all persons who are or may become pregnant identify as women, and I also use gender inclusive language where possible and appropriate. The lessons here are meant to apply to all such persons, regardless of gender identity.
participants who become pregnant are usually removed from the study and research interventions are discontinued. People who are pregnant or of childbearing potential continue to be excluded from or under-represented in research, even where risks are minimal or where gender- or pregnancy-specific data are urgently needed to inform practice [2–4].

It is curious, then, that a study reported in Bob Veatch’s article in the inaugural issue of the Hastings Center Report, entitled “‘Experimental pregnancy’: the ethical complexities of experimentation with oral contraceptives,” [5] has not received more consideration from the bioethics community. Indeed, in my past efforts (if they are any measure) to make sense of the ways in which the biomedical research agenda has failed to serve women and people who may become pregnant, neither the study nor Bob’s insightful article had come to my attention (though I have since discovered that they have been referenced on occasion in important bioethics texts [6, 7] and reports [8]). Both are notably absent from the recently published timeline of the history of bioethics based on input from a range of prominent bioethics scholars [9].

To consider the details of the case—and Bob’s article about it—makes the relative silence surrounding it all the more curious. The study (known as the Goldzieher study after the principal investigator) enrolled nearly 400 women who requested contraception from a San Antonio clinic [10]. Almost all were poor and Mexican–American; none had previous experience with oral contraceptives. The primary aim of the study was to determine whether or not “minor” side effects associated with various formulations of the Pill could in fact be linked to the synthetic hormones in commercially available products or products under development. To evaluate possible differences, participants were randomized to receive one of four contraceptive preparations or a placebo for six months. None were told they could be given placebos—or that they were participating in research. Side effects, including headaches, nervousness, depression, and weight gain, were reported across groups, with one key difference: of seventy-six women who received a placebo in place of oral contraception, at least three became pregnant, compared to one across all other groups.

Results of the study were presented at the annual meeting of the American Fertility Society, the leading society of reproductive health scientists and professionals. Media reports on the study led to nearly immediate public outrage [11, 12] citing stark deception of vulnerable research subjects. The study was subsequently discussed at considerable length at the 1973 Senate Hearings on Human Experimentation [13] that led to the establishment of the National Commission in 1974. In fact, in testimony before the Senate Subcommittee, Henry Beecher showcased the Goldzieher study (drawing on Bob’s report on it) as evidence that when it comes to ensuring the ethical conduct of research, “we have a very long way to go.” Senator

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2 Henceforth, I will refer to the paper as “Experimental Pregnancy.”

3 According to initial media reports following the meeting of the American Fertility Society, “Experimental Pregnancy,” and the 1973 Congressional hearings, ten women taking placebos became pregnant. According to scientific publications of the study however (Goldheizer, 1971), seven women became pregnant, six of whom were in the placebo group.
Mondale, in responding to Beecher’s testimony, cited the Goldzieher study alongside Tuskegee as “utterly outrageous, immoral, and an insult to the human spirit” [13].

This leads one to speculate about why the study did not find its place alongside Tuskegee, Willowbrook, or others which any student of bioethics (and one hopes, medicine) could readily cite. One possibility was that the allegations of wrongdoing were false, or overblown. Yet, the methods and findings were published in a pair of articles in prominent journals [10, 14], and the facts of the case—including the absence of informed consent—were subsequently confirmed along with additional details of concern [15]. Another possibility is that the scale of the violation (in terms of numbers of people directly harmed) was smaller than other cases of deception in research, though hundreds were deceived. Or perhaps it was the view that pregnancy constitutes a contingent harm, compared to infliction of infectious disease—though it is arguably more impactful in terms of life course and not without the prospect of significant implications for health [16, 17]. Another still is that the context of reproduction added a layer of complexity which distracted in some way from the key ethical issues at hand—reflecting a familiar if problematic pattern of marginalizing female violation or experience. Or perhaps there were just so many other cases of unethical research emerging at the time that it was lost in the sea of research abuses.

Whatever the reason, the case and Bob’s article speak to the lacuna that has been the interests of pregnant and childbearing people in the biomedical research agenda. Specifically, Bob’s article highlights a particular kind of violation of women’s interests in biomedical research, as relevant today as it was fifty years ago. In doing so, it offers important lessons for identifying and addressing ethical considerations at the intersection of research and pregnancy. I begin this essay by considering the narratives that have dominated bioethics’ approach to pregnancy and research, which have led to a narrow focus on avoiding research-related fetal risk to the exclusion of other ethically relevant considerations. I then offer two ways in which Bob’s “Experimental Pregnancy” serves as an important corrective, first, by foregrounding research subjects (persons who are or may become pregnant); and second, by normalizing pregnancy and thus foregrounding foundational ethical considerations that are sometimes lost amidst pregnancy’s presumed exceptionalism. As such, “Experimental Pregnancy” is worth revisiting—not just as a tribute to Bob Veatch’s legacy, but as a source of important lessons for how the research ethics community might better serve the interests of women and childbearing people.

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4 Indeed in counterpoint, many have noted that carrying a pregnancy to term, intended or not, can entail profound, potentially life-threatening risks and burdens that clearly exceed other research risks considered significant. See e.g., law professor Michelle Goodwin’s (2021) essay on her pregnancy and life-saving abortion (2021); and Grimes (2006) analysis indicating that pregnancy entails a higher risk of maternal death than does abortion—with pregnancy-related morbidity and mortality disproportionately borne by people of color.
Fetal risk and biomedical research

An important critique of biomedical research over the last fifty years is that it has failed to recognize the interests and sometimes the personhood of women and childbearing people. To some extent the failure is one of representation: women and childbearing people have been under-represented in research historically, leading to consequential and persistent evidence gaps regarding dosing and safety of a range of indicated medications [3]. It has also been a failure of recognition and respect: when women and childbearing people have been included in biomedical research, their interests have not been addressed. In some cases, women have been studied as vessels or vectors of disease or as the “environment” for the fetus, rather than ends in themselves [18–20].

The failure to conduct responsible and responsive research with women and childbearing people has been linked in part to a cultural anxiety about fetal risk [21, 22], stemming from a set of circumstances and harms (and lessons) different from those that the Goldzieher study represents. Indeed, where reproductive ethics are concerned, two other cases from the 1950s and 60s have had an outsized impact on the shape of research and the ethical considerations in which it has been grounded.

One is the thalidomide disaster, in which thousands of women prescribed the drug for morning sickness gave birth to children with major birth defects, including severe limb reduction abnormalities known as phocomelia. The drug, developed by a German company, was approved by more than twenty countries, including Canada, Great Britain, Australia and Sweden. Although approval was blocked in the US by Food and Drug Administration (FDA) official Dr. Frances Kelsey, the drug was widely dispensed in the US as an investigational product. By 1962, the link between thalidomide and birth defects was established, with more than 8000 children affected worldwide. In response, Congress passed the Kefauver-Harris Amendment, instituting a rigorous process for drug approval by the FDA [23].

The other is the case of diethylstibesterol (DES), prescribed to thousands of women to prevent miscarriage and later linked to reproductive tract cancers of their daughters who had been exposed to the drug during gestation. The drug was approved by the FDA in 1947. In 1971, data linking use of DES in pregnancy and an otherwise rare genital tract cancer in teenage offspring was reported; by then, however, an estimated 1.5 million children had already been exposed. Revelations of harm led to numerous lawsuits against the pharmaceutical companies that produced the drug [24].

Important as the thalidomide and DES stories are, they belie a certain orientation: a narrow focus on fetal risk. They are stories about the vulnerability of the fetus to medication, the permeability of the placenta, and the risks associated with intervention in pregnancy. Together, they have had a profound impact on views of pregnancy in general and of biomedical research in particular, manifesting in a strong emphasis on limiting research-related risk to the fetus, primarily by excluding women and pregnant people from biomedical research. The
stance was codified in Department of Health, Education and Welfare (DHEW) (now Department of Health and Human Services (DHHS)) regulations published in 1974 which designated pregnant women as a “vulnerable” population; and in FDA guidelines in 1977 recommending that women of childbearing potential be excluded from early phases of most drug trials [25, 26].

Importantly, neither thalidomide nor DES was a case of research-related harm. And it has since been noted that the response to the two cases was paradoxical—and ultimately counterproductive—since the widespread harms in both cases were results of inadequate research before the marketing and distribution of a drug, but their legacy was to make researchers less inclined to conduct the research needed to prevent a similar outcome in the future [23]. Avoidance of pregnancy exposures in research contexts led to consequential gaps in the evidence base to inform the use of medications and vaccines in women and pregnant people, as well as reticence to use indicated and sometimes lifesaving drugs in pregnant or potentially pregnant populations. Ultimately, the aversion to imposing fetal risk in the research setting has meant that risks are shifted to clinical settings, where they expand. The “quixotic quest” [27] to eliminate fetal risk in research has, paradoxically, placed potentially greater numbers of childbearing individuals and their offspring in harm’s way.

**Foregrounding subjects**

As Bob’s remarkable paper makes clear, the intersection of pregnancy and research raises a host of other important considerations, beyond fetal status or risk. “Experimental Pregnancy” is not a paper about the fetus. It is a paper, rather, about people who are or may become pregnant in research contexts. The harms considered are not harms to fetuses, but to subjects themselves. What sets Bob’s paper on the Goldzieher study apart from the dominant (and ultimately misleading) narrative about fetal risk and research around pregnancy, is that it instead foregrounds research participants as persons of primary concern. In fact, the term “fetus” does not appear anywhere in the paper (“conceptus” appears once). The harms considered (including the

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5 The designation of pregnant women as a “vulnerable” population has long been critiqued, as it inaccurately portrays individuals who are pregnant as incapable of making informed decisions for themselves or their offspring, and has contributed to reluctance to conduct of research during pregnancy. In 2018, revisions to the Common Rule (45CFR46, Subpart A) removed pregnant women from the list of populations considered to be vulnerable.

6 The harms of focusing too narrowly on fetal risk in research have, over time, gained attention: first, in the 1990s, with the establishment of the Women’s Health Initiative and passage of the NIH Revitalization Act leading to expanded inclusion of non-pregnant women in biomedical research; and next in the 2000s with the Second Wave Initiative contributing to establishment in 2017 of the DHHS Task Force on Research Specific to Pregnant and Lactating Women (PRGLAC) to address gaps in knowledge and research on safe and effective therapies for pregnant and lactating women. Nevertheless, concern about fetal risk still often leads to exclusion, even where research holds the prospect of benefit or where there are no evidence-based alternatives in clinical settings. One context where patterns and consequences of exclusion have been particularly impactful is HIV, as detailed in guidance for inclusion of pregnant persons in HIV and coinfection research (available at www.hivpregnancyethics.org).
harm that is unintended pregnancy) and questions raised pertain to subjects, and the research community’s responsibility to safeguard their health and interests.

That pregnant persons and those of childbearing potential are foregrounded in Bob’s analysis of the Goldzieher study stems, to some degree, from the absence of obvious fetal harm, of which the presence or mere possibility can swamp other considerations, even as we draw lessons from other case studies. Notably, deception was also a key feature where studies of DES were conducted. In an early study evaluating the effectiveness of DES for preventing miscarriages, women were randomized to receive the drug or placebo. Similarly, none were told they were participating in a study, what drug they were taking, or whether it might be a placebo [28]. Problematic as this deception was, the primary take-away from DES as a case study for the bioethics and research communities has been to reinforce aversion to fetal risk and the imperative to avoid imposing it in research contexts. Absent the specter of birth defects or generational harms, the Goldzieher study taps into a different set of questions than is usually asked at the intersection of pregnancy and research.

In his analysis, Bob highlights a range of questions he considers “worth asking.” Many such questions focus on research-related harm to women. Let us consider a few.

What is the experimental subject’s role in [deciding] … whether the results of an experimental procedure are even potentially worth [doing the study]? [5] (emphasis added)

Quite clearly, the subjects in the Goldzieher study had no role in making such a determination. The Goldzieher study was, by the researchers account, an effort to determine whether widely reported side effects of contraceptives were “physiological or psychological.” This was a priority for researchers, including Goldzieher, who was keen to gather data that might mitigate pharmaceutical companies’ current concern about marketing contraceptives to a public wary of side-effects—or, as he put it, to counter “bureaucratic negativism based on the principle that it is better to be criticized for withholding the benefits of a new drug than for turning one loose which might have some adverse effects” [14].

Moreover, it is hard to imagine that if study subjects (or end-users) were asked, they would have considered the study “worth doing.” Their priority (as patients presenting to a contraception clinic) was presumably effective and affordable contraception. Moreover, they are likely to have encountered a health care environment in which their subjective complaints were dismissed as imagined, unimportant, or “all in their heads” [29]. As such, it is not at all clear that potential participants or even

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7 As Rebecca Dresser noted in 1994, this was a key complaint of the Women’s Health Movement, noting for example that physicians dismissed the sexual difficulties a large minority of women report following hysterectomy, and failed to tell women of their likelihood prior to procedures. She goes on to argue that bioethics should understand gender bias in the health system as an ethical problem, and that, following the Women’s Health Movement, should “take detailed accounts to constitute women’s experiences in the healthcare system … and attend carefully to the particular before moving on to general statements or principles.” In many ways, that effort is in direct opposition to the goals of the Goldzieher study.
end-users would have endorsed such an aim—especially given that it entailed risk of unintended pregnancy.

The answer to the question is that subjects should have a say. And their views are, at last, starting to inform research design and priorities [30]. Indeed, one thing I have learned in considering the intersection of research and pregnancy is that we have much to learn from tapping into the perspectives of women and childbearing people. As a matter of ethics, their perspectives can and should shape research priorities and design considerations. Moreover, I have discovered that values of potential research participants can inform and reframe bioethics debates themselves, whether they are about the ethics of stem cell research [31], the appropriateness of requiring contraception for study participation [32], or the ethics of involving partners or families in discussions about and consent for research enrollment [33].

So, the lesson here—prodded by Bob’s insightful query—is not simply that a study like this was not “worth it,” but that taking seriously the views of research participants and possible end users most definitely is.

Consider then, another question:

**Why could patient subjects not be told** … that there is a placebo group in the experimental design? [5] (emphasis added)

It is a good question, for which Goldzieher had a revealing answer. According to an audit of the study, Goldzieher offered that he had given the approach to consent “much thought” and decided to tell the women only that the pill they would be taking had “unproven effectiveness” because they would not be able to understand the term “placebo” and might be offended by the term “dummy pills” [17]. He was later quoted as saying, “If you think you can explain a placebo test to women like these, you’ve never met Mrs. Gomez from the west side” [34].

Again, here, the appropriate answer is that they could and should have been told, and the failure to disclose the use of a placebo establishes the study among the notorious examples of deceptive research. That was not, however, the conclusion of an ad hoc committee of the local medical society, which eventually absolved Goldzieher. In the doctor’s defense, the committee noted that “double blind placebo-controlled trials are an ethical, necessary and approved method of research,” and that proper informed consent was obtained in that “individuals were aware of the possibility of pregnancy.” [35] Moreover, they noted, the women in the study were advised to use a vaginal contraceptive cream (which was known, even in the 1960s, to be an ineffective form of contraception). Instead of inculpating Goldzieher, the society laid blame on the women themselves, citing the “admitted carelessness on the part of these patients” [35].

It is at best a bad faith conclusion—to blame subjects for the transgressions of researchers. But the conclusion of the committee, alarming as it is, is illuminating in two related ways. One, the decision to exonerate Goldzieher helps dispense with the idea that the violation could be blamed on a single bad actor or poorly conceived study, but rather that it was a product of a more systemic problem within biomedical research. Two, that it occurred in the context of contraceptive research with women suggests a particular kind of system related to gender: misogyny. As philosopher Kate Manne argues in her book on the topic, cultural norms have sustained—and
continue to sustain—a social system that allows for hostility toward women who violate expectations or do not serve men’s interests [36]. As such it is a familiar move, that is, blaming women for pregnancies for which others are responsible and deploying gendered norms to obscure important violations of reproductive autonomy. Another lesson, then, is the importance of considering how gendered norms within social structures shape how research is developed, deployed, and justified.

Further, we cannot ignore Goldzieher’s slur in describing the ethnicity of the research participants. To this end, Bob asks:

**Why is it that the subjects for the experiment are ‘almost all of them Mexican-American and poor’?** Will the astute scientist now ask whether the same results would be obtained among upper-middle class women? [5] (emphasis added)

The problems with enrolling vulnerable populations in research are now well-recognized and have been extensively debated, if not resolved. Drawing on these debates, one possible answer is that only these women would enroll in such a study because they lacked other options for contraception, or because they were swayed by ancillary benefits (money, health care, transportation) that the study provided. In short, it is a clear case among countless others of exploitation in clinical research.

But given that it was contraceptive research, the Goldzieher study highlights issues at the intersection of race, ethnicity, socioeconomic status and gender which have been largely overlooked in research ethics debates. They are issues that stem from what scholars call *stratified reproduction*—a pattern throughout US history in which the fertility and childbearing of poor women and women of color are not valued equally to those who are white and affluent. It is evident in a range of public policies and practices, from treatment of women during slavery to coercive sterilization practices to contemporary approaches to family planning [37]. These scholars urge us to recognize the ideology of stratified reproduction in considering the ethics of both past and current policies and practices.

Another answer to Bob’s third question, then, is that the women enrolled were considered “appropriate” research subjects primarily because their fertility and childbearing were (dis)valued compared to that of affluent white women. The Goldzieher study was allowed to proceed—and Goldzieher was professionally exonerated—because of a long-standing ideology of stratified reproduction in which the fertility of certain groups has been devalued. One need not look far for evidence of such. In response to concerns about pregnancies among research participants, Goldzieher was quoted as saying, “we could have aborted them if the abortion statute here in Texas weren’t in limbo right now” [5].

There is much to criticize about the comment, not least of which the erasure of women themselves (presuming “them” is the paper’s other reference to the fetus). I will offer here though that this public comment by a prominent contraceptive researcher serves as stark evidence of stratified reproduction, to the extent that abortion—on the brink of *Roe v. Wade* in Texas—could be trivialized as “back up for pregnancies induced for the good of scientific experiment” [5]. Thus, we are offered another lesson: where reproduction is at issue in research, consider who is participating, and how the ideology of stratified reproduction might be shaping the debate.
Relatedly, Bob asks a different, if equally important, question regarding abortion:

*Should not one at least consider the physical and psychological consequences [of abortion] to the woman, if not the conceptus?* [5] (emphasis added)

Yes, one should. But for decades since “Experimental Pregnancy” was published, many pro-choice advocates have shied from the question, understandably worried about the impact the answer might have on abortion access. In recent years, however, advocates have converged around what they call a reproductive justice framework, noting that the historical tendency to focus narrowly on legal access to abortion has obscured other issues of critical concern to women, particularly women of color [38].

Reproductive justice, they explain, includes (1) the right not to have a child, (2) the right to have a child, and (3) the right to parent in a safe and healthy environment. Part of this is simply recognizing—as Bob does—that for some, abortion may not be the answer to an unplanned pregnancy. Instead, the circumstances surrounding conception—that may manifest oppression, exploitation, control of women and girls—are key issues of concern. A further lesson, then, is that while access to abortion may be an important consideration in studies where pregnancy is possible, reproductive justice requires attention to a broader set of circumstances to determine whether a study is permissible. Bob’s question, then, helpfully prods us toward the important task of applying a reproductive justice framework in research ethics analyses.

**Normalizing pregnancy**

I have so far highlighted a handful of the questions raised in “Experimental Pregnancy” that in foregrounding subjects’ interests rather than fetal risk, offer lessons regarding the intersection of research and reproduction. But the paper is also noteworthy in the way it identifies many of the questions around which, in the decades that followed, bioethics scholarship has converged and from which key tenets of ethical research have emerged [7, 39, 40]. In addition to deception and informed consent, they include such topics as scientific value, fair subject selection, conflicts of interest, the role of oversight, publication ethics including the use of unethically-acquired data, compensation for research-related harms, and trust.

All are issues for research ethics generally—they are not specific to the context of pregnancy, but rather are as relevant to a study of contraception as they are to one of cancer immunotherapy or HIV prevention. Which brings me to the second way in which “Experimental Pregnancy” offers a helpful frame for addressing pregnancy-related health contexts: it normalizes them. For just as the presence of (or potential for) a fetus has tended to distract attention from the interests and personhood of those who are or may become pregnant, the fact or prospect of pregnancy has had the tendency to distract attention away from broader ethical considerations relevant to any research study. In other words, debate regarding the ethics of reproductive research has been distorted by pregnancy exceptionalism—the idea that pregnancy is
so special that persons who are pregnant should be treated differently than others, in biomedical research and elsewhere.

I draw the concept of pregnancy exceptionalism from another area for which exceptionalism has shaped practice, policy and ethics: genetics. The term “genetics exceptionalism” was deployed initially in the 1990s to denote (and critique) the claim that genetic information was “so distinct in concept, practical implications, and moral import that it deserved to be singled out from other types of health-related information” [41]. Scholars argued instead that while genetic information had some unique properties that warrant close attention, it was not so different from other kinds of health information that it deserved to be singled out in this way. Rather, Murray notes he and others concluded that “it was wiser not to regard genetic information as wholly distinctive in kind,” but rather to consider it in context. Compared to other health-related information, genetic information “had its particular qualities that deserved to be understood and accommodated, but the similarities were even more important” [41] (italics added).

This is true for pregnancy as well. No doubt there are ways in which pregnancy is exceptional and may present exceptional circumstances—not least of which are the prospect of abortion, including constraints on access and potential criminalization that will follow the recent overturning of Roe in the United States (an important topic beyond the scope of this paper). Moreover the particularities of pregnancy (or potential pregnancy) may be highly relevant to deliberation and development of ethical policy and practice. For instance, I and co-authors have argued against using the term ‘patient’ to describe a fetus who may be a subject of clinical or research intervention, as it may distort reasoning in two ways: first, by encouraging a tendency to think of the fetus as separate from the pregnant person (when in fact their bodies and interests are intertwined), and second, by failing to regard obligations to the fetus and pregnant person as equal. How these tendencies distort is beyond the scope of my current reflections, but I offer the fetus-as-patient debate to make the point that attending to particulars (in pregnancy and genetics) is necessary and appropriate, but as with genetics they must be considered in context. Part of what makes pregnancy different (as the previous section made clear), rather, are its social, cultural, and historical contexts, in which reproduction is stratified, gender oppression and misogyny are prevalent, and where the views of marginalized populations have not adequately informed debates or priorities.

The problem with the exceptionalism that has plagued pregnancy and genetics both is the presumption that what makes either exceptional “launches it into some unique universe of moral, legal, and policy concerns” [41]. But this is not the case. Research in which pregnancy is present or possible is not always different. Sometimes, ensuring pregnancy-related research is ethical requires putting aside the fact of pregnancy in the first place.

The principle of justice, for instance, has done important work in efforts to advance responsible inclusion of women and pregnant people in biomedical research [3, 42, 43]. There is now widespread agreement that justice requires not just fair distribution of burdens, but fair distribution of benefits of research [44]. Unfortunately, pregnant people have been treated as an exception to this principle, leading to both gaps in evidence and limited access to important or life-saving interventions.
As a recent example, pregnant persons were excluded from initial COVID-19 treatment and vaccine trials, even as they faced higher risks of adverse outcomes with infection and vaccine platforms being studied posed no theoretical reproductive risk. Advocates and policymakers have highlighted the cycle of exclusion as “profoundly unjust” and called—with some success—for accelerating COVID vaccine and therapeutics trials in pregnancy [45, 46]. In February 2021, enrollment for a randomized trial to assess the safety and efficacy of COVID vaccines in pregnancy was announced.

There are countless other examples where foundational principles do critical work around pregnancy, but the important point here is that sometimes pregnancy isn’t exceptional—that pregnancy does not change the fact that a research subject is a person who deserves respect for autonomy, access to research benefits, and evidence to inform their care. In raising questions relevant to anyone participating in research—scientific value, conflict of interest, oversight, publication ethics, responsibility for research-related harms, trust—“Experimental Pregnancy” is a reminder that pregnancy sits well within the universe of research ethics more generally. We should, to borrow a phrase [41], welcome pregnancy into the “commodious abode” of research ethics. With his extraordinary reflection on the state of and prospects for the ethical conduct of research in the United States, Bob Veatch does just that.

Conclusion

I would have liked to ask Bob why he thinks the Goldzieher study did not, in the end, find a more prominent place in the history of bioethics. Most certainly his answer would be different than what I have offered here, and so I will have to wonder, as we do, about conversations we wish we’d had with people who have left us. But I will say it has been a gift to revisit “Experimental Pregnancy” to discern the lessons it offers for reproduction and research today. What I see is an example of how we might expand our ethics lens, beyond the complex territory of fetal risk, in foregrounding the people who will participate and (one hopes) benefit from research. Moreover, as a prescient catalogue of challenges for the research community writ large, the paper offers a reminder not to be blinded by pregnancy exceptionalism—to treat individuals who are or may become pregnant as people (not vessels, vectors, or even merely mothers-to-be), and respect their humanity as research subjects. Fifty years on, “Experimental Pregnancy” still has wisdom to bear.

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