
Ethics in Human Subjects Research: Do Incentives Matter?

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There is considerable confusion regarding the ethical appropriateness of using incentives in research with human subjects. Previous work on determining whether incentives are unethical considers them as a form of undue influence or coercive offer. We understand the ethical issue of undue influence as an issue, not of coercion, but of corruption of judgment. By doing so we find that, for the most part, the use of incentives to recruit and retain research subjects is innocuous. But there are some instances where it is not. Specifically, incentives become problematic when conjoined with the following factors, singly or in combination with one another: where the subject is in a dependency relationship with the researcher, where the risks are particularly high, where the research is degrading, where the participant will only consent if the incentive is relatively large because the participant's aversion to the study is strong, and where the aversion is a principled one. The factors we have identified and the kinds of judgments they require differ substantially from those considered crucial in most previous discussions of the ethics of employing incentives in research with human subjects.

Keywords: ethics, incentives, informed consent, research ethics

I. INTRODUCTION

Incentives are employed as a preferred tool of policy in many areas of public life: from bonuses for teachers meant to ensure accountability in education to inducements for businesses to locate in a particular city to tax deductions for charitable contributions. Most of the time and in most areas of life, incentives are employed without ethical qualms. Indeed, incentives are generally taken to be an ethically unproblematic approach to achieving public policy objectives. Offering an incentive seems obviously preferable to coercive policy approaches. But in matters related to medicine, such as procuring organs for

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transplantation, obtaining blood for transfusions and the creation of blood products, and securing participation in medical research, there is considerable sensitivity to and controversy over the use of incentives. In this article, we address the ethical controversies surrounding the use of incentives to participate in medical research.¹ In particular, we examine whether or under what conditions the use of incentives to recruit and retain subjects for research is ethical and whether or under what conditions it is not.² In doing so, we isolate the use of incentives *per se* from other elements in assessing the ethical status of medical research projects.

Questions related to the use of incentives in research are increasingly pressing as the demand for research subjects rises due to policies requiring the inclusion in research of those with a wide range of demographic characteristics (e.g., women, children, racial minorities) as well as policies requiring clinical research sponsored by industry for marketing approval. There are only three acceptable alternatives to create a supply to meet this demand: voluntary participation, wages, and incentives. (The fourth option is required participation—like jury duty or military service, but there are settled norms against coerced participation in research that poses more than minimal risk that are unlikely to be challenged, so we leave this aside).

Our focus here is on incentives; though comparisons with the other two options will illuminate the relevant issues. In practice, all three forms of research participation are operating in the current system side-by-side: much like teaching where there are volunteer teachers, volunteer teachers who receive incentives such as honoraria, and professional teachers. That is, some research participants are volunteers, some receive incentives in the form of cash or medical treatment, and a few use medical research as a regular source of income.

The matter is complicated by the fact that there is one set of ethical considerations that arises whenever incentives are employed, whether in medical research or in school systems or in business, and another set of ethical considerations that are involved in research with human subjects, whether those subjects participate voluntarily or in response to incentives or wages.

Our inquiry resides at the intersection of these two sets. We proceed by examining the ethics of incentives first, then the ethics of human subjects research, and, finally, the areas where the use of incentives either introduces an ethical problem into a medical research setting or aggravates an ethical problem already implicit in it. We find that, in the vast majority of situations, the use of incentives in medical research will not pose ethical problems.

Nonetheless, there are two serious ethical questions that can arise with the use of incentives in medical research: Can the use of incentives constitute “undue influence” or a coercive inducement to participate? and, Can the use of incentives compromise the dignity of the subject? We conclude by offering suggestions about how to assess whether the use of incentives in a particular research project is appropriate.

II. ETHICS AND INCENTIVES

An ethical analysis of incentives requires a definition of the term, but this is surprisingly difficult to do. “Incentive” is used so widely and indiscriminately today that the boundaries of the concept are blurred. One approach to isolating the specific, distinctive meaning of the term is to identify those situations where only the word “incentive” will do and to distinguish them from situations where another would do equally well or better. For example, “incentive” is sometimes used as if it were a synonym for “reward,” but they do not mean exactly the same thing. A reward, unlike an incentive or disincentive, is always understood to be merited or deserved. Though offering a reward may function as a motivator to action, or as an incentive in that sense, rewards do not always function in this way. For example, people are sometimes rewarded unexpectedly for past achievements. They deserve the reward, but, since they did not anticipate it, it does not serve as a motivator.³

Similarly, “incentive” is sometimes used as if it were synonymous with “motivation” generally speaking, and thus a new verb form of the noun has recently entered the language; “incentivize,” which means “motivate.” But there are several important sorts of motivation that are not suggested by these terms. When we speak in this way, we implicitly deny the phenomena of habitual behavior, or action motivated by a sense of responsibility, or the way in which a role model or ideal can serve as motivator. Action that is initiated by the individual or understood as internally motivated is not properly incorporated within the concept of motivation as incentive. Incentives are external prompts to which the individual responds.

Particularly relevant for our purposes is the tendency to confuse incentives with market forces, blurring the distinction between incentives and wages or other forms of material gain. First, incentives need not be monetary. Second, monetary awards come in a variety of forms. Those most often discussed in the medical research literature are incentives, compensation, reimbursement,

and wages. In fact, the last three of these, in contradistinction to incentives, are all forms of compensation broadly understood. Compensation means “rendering equal,” a “recompense or equivalent,” “payment for value received or service rendered,” or something which “makes up for a loss”—as in the term “unemployment compensation.” Compensation in its particular sense renders an equivalent for losses sustained in a given situation, such as injuries sustained due to research. Reimbursement compensates for the costs a person might incur in a given situation, for example, the costs of transportation to and from a research site. Wages provide an equivalent or compensation for effort expended or services received, consisting perhaps of the time and effort spent as a participant in research. Compensation in all of its forms equalizes or redresses a balance, and so, to speak of “fair compensation,” “fair reimbursement,” or “fair wages” is entirely sensible.

But to speak of a “fair incentive” makes no sense, because incentives are not a form of compensation. Instead an incentive is a benefit designed as a motive or incitement to action. For example, a bonus is an economic incentive offered to an employee designed to motivate the employee to produce beyond the usual expectation. The bonus will be the correct amount if it accomplishes that goal efficiently. It cannot be either a fair or an unfair amount, since there is no corresponding loss or expenditure for which it is meant to compensate. It should be obvious then, that compensation and incentives are by no means identical. The per diem received for jury service, for example, is a clear case of compensation, which is not an incentive in any sense. It is only by maintaining a clear view of the distinctive character of incentives that their ethical dimensions can be brought to light.

A recent debate over payment for research subjects illustrates the differences in the ethical issues that emerge when wages are substituted for incentives. Anderson and Weijer (2002, pp. 359–376) challenged Dickert and Grady’s (1999, pp. 198–203) recommendation that research subjects be paid an hourly wage equivalent to the wages paid to unskilled laborers. They argued that wage earners are entitled to an array of rights associated with their status as workers, including the right to overtime compensation, the right to organize, and the right to a standard work week. That is, research subjects as workers would be entitled to the same rights as other workers.

What Anderson and Weijer failed to address is the duties or responsibilities that are also associated with wage labor. Most importantly, if the research subject has contracted to provide a service or to work for a certain number of hours for a certain wage, is she or he still entitled to renege on the contract and

quit the research study? Every major code of ethics for research with human subjects contains the provision that participants ought to have the right to exit at any time. There is a real question as to whether this requirement is compatible with treating research subjects as wage earners. It is a question that does not arise when research subjects are offered incentives to volunteer.

Incentives, strictly speaking, share a certain set of core characteristics, and the concept has a distinctive meaning. Incentives are a particular kind of offer employed in a negotiation: 1) an offer is made which is an extrinsic benefit or a bonus, neither the natural or automatic consequence of an action nor a deserved reward or compensation; 2) the offer is a discrete prompt expected to elicit a particular response; 3) the offer is usually made in the context of an authority relationship—for example, adult/child, employer/employee, government/citizen or government/organization; and 4) the offer is intentionally designed to alter the status quo by motivating a person to choose differently than he or she would be likely to choose in its absence. If the desired action would result naturally or automatically, no incentive would be necessary. An incentive is the added element without which the desired action probably would not occur.

Incentives are one of the various ways in which people can get other people to do what they want them to do. They involve relations of power.⁴ They are best understood as an alternative to other forms of power: persuasion and coercion. In some situations, of course, incentives are the preferred alternative to coercion on ethical grounds. But in others, where persuasion might be an effective alternative, it is to be preferred. And just as there are ethical and unethical forms of coercion (the enforcement of a just law and tyranny for example) and ethical and unethical forms of persuasion (rational argument and fraud or seduction for example), there are ethical and unethical forms of incentives as well. And the standards for determining which is which are essentially the same as they are for judging any exercise of power—for example, the purposes the incentive serves, the voluntariness of the transaction, the effects on the parties involved, and so forth.

But, as mentioned at the outset, the ethical issues raised by the use of incentives often go unrecognized. This is because incentives are often understood, not as a form of power, but as a form of trade. When incentives are understood within this economic paradigm, the ethical issues are obscured. An incentive is seen as an offer of something of value, sometimes with a cash equivalent and sometimes not, meant to influence the payoff structure of a utility calculation so as to alter a person's course of action. In other words, the

person offering the incentive means to make one choice more attractive to the person responding to the incentive than any other alternative. Both parties stand to gain from the resulting choice. As with any form of trade, the negotiation meets certain ethical requirements. That is, a trade involves voluntary action by all parties concerned to bring about a result that is beneficial to all parties concerned. If these conditions were not met, the trade would simply not occur.

Nonetheless, all incentives and disincentives are not alike. We do recognize bribery and blackmail as ethically problematic even though both can be described in neutral terms as situations in which a simple trade takes place: how much is it worth to a customs official to fail to notice a smuggling operation? How much is it worth to one person to know that another will not reveal his criminal past? Is there anything wrong with these sorts of transactions?⁵ In the case of bribery, an incentive is employed to induce a person to act irresponsibly or contrary to his duties.⁶ Its purpose is illegitimate. In the case of blackmail, the “offer” is a threat. Refusing the offer or accepting it both leave a person worse off than the status quo ante. For this reason, blackmail is often considered coercive. Incentives of these sorts ought to be avoided in any area of public policy.

But these are not the only sorts of incentives that are ethically suspect. The use of incentives can undermine the character of the parties involved even when the incentives cannot be characterized as bribes. Incentives may induce people to do the right thing, but for the wrong reason, and thus undermine responsibility, altruism, or other important values. This is essentially the critique of paying blood “donors” offered by Richard Titmuss (1997).⁷ But the argument is familiar from non-medical contexts as well; for example, grades are criticized for undermining students’ ability to appreciate learning for its own sake. And finally, the use of incentives can be manipulative even when the incentives cannot be characterized as outright blackmail. These sorts of incentives are sometimes termed “undue influence.”⁸

Undue influence comes about in two quite different ways. First, a person can be said to exercise undue influence when that person exerts power that he or she rightly wields in one area in an area in which he or she ought not to have any particular power—for example, when a person with money or fame influences political outcomes, jumps a queue, or receives special privileges to the detriment of others. In this case, it is the person who is unduly influential; he or she gets something undeserved at others’ expense. This is a matter of injustice, and not a matter of coercion (Walzer, 1983).

Undue influence of this sort—trading on power in one sphere to influence outcomes in another—is often associated with dependency relationships. For

example, consider the situation where a psychology professor gives students extra credit for agreeing to participate as subjects in research.⁹ This is undue influence because grades, which should reflect learning in the course, are being given for a different purpose, and the teacher is using his or her legitimate authority to grade students' work on its merits to secure an entirely unrelated benefit for himself or herself. If the currency is grades, both the teacher and the students receive benefits they do not rightly deserve. It would be better ethically to offer money in these circumstances in order to separate the incentive from the teacher's academic authority. Better still would be to avoid having teachers use their own students as research subjects.¹⁰

There is a second, quite different sort of undue influence. It occurs when a person exerts power sufficient to induce someone to do something against his or her principles or better judgment. Seductions and pressures of various sorts fall into this category, such as when a boss persuades an employee to cover up company wrongdoing or a charlatan induces someone to part with his or her life savings by promising large rewards. In these cases, it is the influence that is "undue." One of the ethical concerns often expressed in these sorts of cases is that the influence is tantamount to coercion because it is difficult for a vulnerable subject to resist. It is this second sort of undue influence that arouses the greatest concern with respect to medical research, as we shall see below.¹¹

There are thus a number of distinct ethical considerations that must be taken into account to resolve the question of whether the use of incentives is ethically legitimate in any given context. Is the incentive directed at a legitimate purpose, or is it bribery? Is the incentive actually a threat, and therefore coercive, like blackmail? How does this incentive affect values and character? And is it manipulative; a case of undue influence? These are the ethical questions that arise in considering incentives *per se*. We leave these questions aside for the moment to pursue the ethical questions that arise in human subjects research generally. Only then will we turn to the task of establishing ethical criteria for the use of incentives in human subjects research.

III. ETHICS IN HUMAN SUBJECTS RESEARCH

There are certain settled norms regarding the ethics of human subjects research. At the risk of being overly simplistic, much can be learned about these norms by analyzing publicly available ethics codes, declarations, and

policies. In part because many of these were developed and announced in response to cases of unethical research in which the rights and interests of the subjects were ignored by researchers, such as the Nazi medical experiments that ultimately led to the Nuremberg Code, it is not surprising that they traditionally tend to take a protective stance towards research participants and incorporate various requirements to ensure that their rights and interests are protected. For example, these requirements typically include prospective review by a group somehow distinct from the investigator to ensure that benefits from the research are maximized, the risks are minimized, and informed consent is obtained for most research prior to participation.

At about the same time that the framework for the current regulatory approach to protecting research subjects was adopted in the United States, the National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research (National Commission) issued its landmark Belmont Report (1979). The Belmont Report includes a careful discussion about some of the important characteristics of ethical research with human subjects, adopting a “principlist” approach. On this view, three ethical principles are *prima facie* binding in considering research: beneficence, respect for persons, and justice.¹²

The principle of beneficence, the ethical obligation to provide favor or benefit to participants in research, is a key component found in all robust policies on research ethics. Beneficence implies that risks to subjects are minimized and that benefits are maximized. The principle of beneficence can help determine whether a particular research project may be ethically permissible, as a determination separable from consent. That is, certain research ought not be done simply because the risks involved are not proportionate to the potential benefits.

Respect for persons derives from the philosophical principle of autonomy and the political principle of liberty, especially in its negative sense—the right to be left alone. As such, voluntary informed consent becomes one means of ensuring respect for persons in which individuals who are asked to participate in research are given relevant information about the research in a manner in which they can understand it and then authorize their participation. Note that voluntariness of decision-making and participation is key and discussion of the appropriateness of incentives often relate to the extent to which they might affect this.

An agreement to participate in research constitutes a valid consent only if voluntarily given. This element of informed consent requires conditions free of coercion and undue influence. Coercion occurs when an overt threat

of harm is intentionally presented by one person to another in order to obtain compliance. Undue influence, by contrast, occurs through an offer of an excessive, unwarranted, inappropriate or improper reward or other overture in order to obtain compliance. Also, inducements that would ordinarily be acceptable may become undue influences if the subject is especially vulnerable.

Unjustifiable pressures usually occur when persons in positions of authority or commanding influence—especially where possible sanctions are involved—urge a course of action for a subject. A continuum of such influencing factors exists, however, and it is impossible to state precisely where justifiable persuasion ends and undue influence begins. But undue influence would include actions such as manipulating a person's choice through the controlling influence of a close relative and threatening to withdraw health services to which an individual would otherwise be entitled. (United States National Commission, 1979)¹³

While descriptions of respect for persons tend to focus on consent, a broad notion of respect for persons, following Kant, would also incorporate the need to treat participants in research with dignity. For example, the current version of the Declaration of Helsinki stipulates that: "It is the duty of the physician in medical research to protect the life, health, privacy, and dignity of the human subject." (World Medical Association, 2002).

Finally, the principle of justice demands that individual research subjects be selected fairly and that appropriate populations are selected as research subjects. Because historical abuses of research subjects tended to occur among those who were in some way disadvantaged or vulnerable, justice in the selection of subject populations was typically considered as the need to protect such populations from inclusion in research. However, justice has come to be understood in some situations as fairness in access to the benefits of participating in research, for individuals and for groups. AIDS and other disease-based activism in the 1980s offered powerful arguments for access to potentially life-saving but experimental drugs as well as an appreciation that a protective stance towards research participants could lead to serious inequities in the availability of medical treatments (e.g., if drugs are not tested with children, there may not be good drugs available for use with children). As a consequence, there are now multiple policies of government and professional groups requiring the inclusion of various population subgroups in research (Kahn, Mastroianni, & Sugarman, 1998).

IV. PUTTING THE TWO TOGETHER: INCENTIVES AND HUMAN SUBJECTS RESEARCH

Beginning then, with the three established principles guiding human subjects research (beneficence, respect for persons, and justice), we ask whether using incentives in research ought to alter ethical judgments in any of these areas.

One of the prime considerations for whether research meets the test of beneficence is whether it involves a reasonable level of risk in relation to the prospect of benefit. This is a determination that must be made primarily by scientific experts. If the risks are too high, it would be unethical to ask anyone to take them, regardless of whether they would be asked to volunteer or offered wages or incentives. On the other hand, suppose there is an expert determination that a research project involves reasonable risks in relation to benefits. In this case, offering incentives to recruit subjects in itself would not introduce ethical issues into the situation. People are often offered incentives or other sorts of benefits to undertake very risky enterprises or occupations; the example of firefighters comes to mind. A problem would arise here only if the use of incentives were allowed to influence the determination of risk in the first place; that is, if the scientists were released from the responsibility of making an independent, expert judgment and instead concluded that risks that people are willing to take for gain are *ipso facto* reasonable because they are acceptable to them. But the same logic would apply to volunteers as well: just because people are willing to do dangerous things does not mean that they ought to be allowed to do them. With respect to the principle of beneficence at least, incentives are not a factor in the ethical equation.

The situation is altogether different when we turn to respect for persons in the form of autonomy. Here there is an intersection between the requirement that research subjects be recruited without “coercion or undue influence” and the concern that incentives can be coercive or manipulative in a variety of ways. Where exactly is that intersection? It is not at the point of bribery or of blackmail. Incentives in medical research induce people to do something inherently good (assuming of course that the research is necessary, sound in design, and conducted with integrity), not to violate their duties. So they are not bribery. Neither are they blackmail, since incentives are offers and not threats; one can refuse them and remain no worse off than before.¹⁴ The problem centers around the claim that incentives, particularly relatively large incentives, are a form of undue influence or undue inducement.

For quite some time now, this controversial claim has been debated without much apparent motion in the debate. Over 20 years ago, Ruth Macklin (1981, pp. 1–6; 1982, pp. 6–7) and Lisa Newton (1982, pp. 4–6) locked horns over the issue with arguments very similar to those canvassed in a recent article on the ethics of offering incentives to the homeless for participation in drug studies (Beauchamp, Jennings, Kinney, & Levine, 2002, pp. 547–564).¹⁵ On the one hand, those who criticize incentives as undue inducements argue that an offer can be irresistibly attractive.¹⁶ A destitute person may be induced to do something against his or her better judgment, and even almost against his or her will, by the offer of a large amount of money, for example. Such an offer is so close to coercion—operating essentially “against the person’s will”—that it might as well be coercion given the circumstances. Thus, researchers ought to be particularly wary of offering incentives to vulnerable populations since this practice can be an unethical form of coercion.

On the other hand, the critics of this view, characterizing it as paternalistic, argue that to say that an offer is irresistibly attractive is simply to say that the person accepting the offer desired to have the thing offered more than anything else. How can this be characterized as anything other than a free choice? There are, in fact, no such things as undue inducements. What people really object to in these situations is not the incentive, but the fact of inequality that leads some people to choose differently than others. Given the existence of the inequality, to deny destitute people the opportunity to make choices by denying them incentives that we are perfectly willing to offer to wealthier people only because we are afraid that they will make the “wrong” choice is a paternalistic denial of their liberty. From this perspective, to fail to offer incentives is unethical to the extent that it is a deprivation of liberty.¹⁷

Thus, the debate in this form is unresolvable because the positions arise out of irreconcilable paradigms. The argument that incentives maximize choice and therefore maximize freedom arises from the economic paradigm according to which an incentive is simply one form of trade. The alternative argument that incentives can constitute undue influence evaluates incentives as one form of power.

Resolving the dilemma requires acknowledging the element of truth in both of these positions. The proponents of incentives are certainly correct that it is a voluntary action when a very poor person agrees to participate in research in exchange for a large sum of money. But those who characterize this sort of choice as an undue inducement also have a point. We have already seen in the case of bribery and blackmail that all voluntary actions are not alike. There is

cause for concern about the ethics of certain sorts of choices. The problem in this debate has been the focus on the question of the degree of voluntariness or coercion, as if that were the only ethical question. Greater light can be shed by focusing instead on the ethical dimensions of various sorts of choices.

An example may serve to clarify the issues. Many people would find nothing problematic in offering free sterilization procedures in a situation in which overpopulation was a problem. But those same people might very well worry about large monetary incentives to encourage people to take advantage of those services. At the same time, there is little protest in countries where tax breaks are given to parents of large families to encourage population growth, though if there were huge cash payments, ethical concerns might surface. What explains this series of judgments? In the case of sterilization, the assumption is that there are many people who are averse to being sterilized. It may take a large monetary incentive to induce them to do what they would otherwise resist doing. In the case of tax incentives for large families, the assumption is that, all other things being equal, the parents desire additional children. But if there were huge cash awards, they might serve as inducements to people who would really rather not have a child to go ahead and have one anyway. There are obvious implications for the welfare of the child in this case. It is important to do some things for the right reasons, and money is not always one of those reasons.

In general, then, while incentives are always employed to induce someone to do what they otherwise might not, the ethically suspect situation is one in which an incentive is used to induce someone to do something to which they are averse.¹⁸ This is the kind of manipulation, pressure or seduction captured in the colloquial phrase, "against my better judgment."¹⁹ A choice that involves an aversion is different, for example, from the choice between one car and another when I already have decided that I want to buy a car. And the ethical problem is multiplied where the aversion is a principled one or a matter of moral scruple. To deliberately induce religious people to work on the sabbath by offering large incentives would involve an attempt to get them to act against what they see as their duties; it would be a form of bribery.²⁰

The point can be illustrated with examples from medical research as well. In the now infamous hepatitis experiments conducted at the Willowbrook State School, parents were encouraged to enlist their retarded children in a research project requiring the children to be infected with hepatitis (Nelson,

1998, pp. 47–66). The incentive was an offer of a place for the child in a residential treatment facility that otherwise would be difficult to secure. Apart from the ethical problem of the apparent unfairness of allowing some families to jump the queue, the incentive was entirely inappropriate. One might well imagine that these parents were reluctant to allow their children to participate in this research out of a laudable concern for their children. The incentive can be seen as an attempt to use this same concern for their children to overcome their reluctance; that is, as an attempt to induce them to act “against their better judgment.”²¹

This sort of analysis has important implications for the ethics of completion bonuses. A completion bonus for an innocuous research study (for example, filling out a simple questionnaire on several separate occasions or as a means to enhance adherence to an experimental medication over a long time period) poses no ethical problems, and such incentives can reasonably be employed to serve important research purposes. For example, they emphasize to the subject the importance of full commitment to the study in cases where the scientific value of the research depends upon participation over time. But if the research is painful, debilitating, or distressing for the subject (for example repeated biopsies), a completion bonus can be seen as undue influence, not because it is the same as coercion,²² but because it can be used as a seductive pressure to overcome the subject’s reasonable resistance to what he or she is being asked to suffer. Moreover, the ease of voluntary exit from a research study is an important check on the researcher’s judgment as to what is a reasonable level of risk or cost to the research subject. A deliberate attempt to structure incentives so as to overcome reasonable aversions negates that check.

Respect for persons thus requires respect for certain of their values, beliefs, and preferences. It requires refraining from making seductive offers, offers that ought to be resisted in some sense. The practical difficulty, of course, is that one can hardly be expected to know the internal psychological state of everyone to whom an incentive is being offered. And, no matter how small the incentive, one cannot be confident that it will not be large enough to be irresistible to someone.

The principle of respect for persons in research with human subjects also requires that research subjects be treated with dignity, and here too, the use of incentives can exacerbate the ethical problem. Many medical practices involve undignified procedures, embarrassing situations, and degrading experiences. They can be physically invasive, upset the customary boundaries of privacy,

or involve areas of the body generally associated with feelings of shame. People voluntarily, though often reluctantly, tolerate these sorts of indignities when they believe them to be necessary for health care. In the context of medical research, prospective review of the research by IRBs or other responsible entities should be incorporating these issues in their work so that the extent to which subjects may be required to overcome their usual inhibitions when faced with these sorts of medical practices for the sake of the research are minimized.

To volunteer to undergo undignified procedures for altruistic reasons might be considered a particularly noble action. In these cases, does introducing incentives to motivate subjects to participate alter the ethical picture? We think that it does. At the least, it introduces additional ethical issues into the situation. There are some things that it is perfectly ethical to do voluntarily that become suspect when done for gain. (Consider the mercenary soldier who functions as a gun for hire in comparison to the soldier who volunteers to fight for the defense of his country.) In the area of medical research, the concern raised by the use of incentives with respect to dignity is twofold: that individuals will be treated in degrading ways and that a regime of payments for objectified uses of the body might erode the collective respect for personal dignity in the culture.²³ This is a complex issue and one that has been insufficiently discussed in the literature. We are not prepared to offer a full analysis of the matter, but we do think that it is important to put it on the table. In a sense, offering incentives to enlist research subjects in research that involves undignified practices resembles the class of cases discussed under the rubric of undue influence. The aversion to undignified or degrading experiences also ought to be respected.

Finally, we turn to the question of the principle of justice as it applies to fairness in the selection of research subjects. The trend, described above, is towards considering justice as a matter of fair access to opportunities to participate in research, rather than as protection from exploitation for research purposes. But, the use of incentives raises some distinct questions under both conceptions of justice.

Conceiving of justice as protection from exploitation assumes that vulnerable persons need to be protected from the risks of research. The notion of vulnerability in the context of research is quite broad and incorporates a variety of characteristics including the capacity to give consent, the presence of dependency relationships, and poverty. Incentives are simply inappropriate if a person is unable to weigh and evaluate them, and they can be considered an

undue influence in situations of dependency relationships. Moreover, the issue of poverty is of special relevance when considering incentives. If researchers using incentives to recruit want to spend the least possible amount, they might be tempted to seek out poor and vulnerable populations—homeless people, for example. However, this raises concerns about exploitation when the research is burdensome and the benefits are unlikely to accrue to the participating group.

On the other hand, when the conception of justice centers on fair access to research opportunities, careful consideration needs to be given to including populations that might benefit from participation (either in the process of research itself or so that the results of the research will be useful for this population in the future). Although powerful arguments justify the inclusion of a broad range of populations in research, meeting these claims in practice can be challenging due to the need to recruit and retain persons who for historical or other reasons may be reluctant to participate in research. For example, there appears to be lingering distrust in the research enterprise among some persons of color in the United States that some trace back to the historical abuse of African Americans in research such as the US Public Health Service Study of Syphilis that was conducted in Tuskegee, Alabama (Corbie-Smith, Thomas, St. George, 2002, pp. 2458–2463). Accordingly, the need to use incentives to overcome barriers to recruitment in research among this population would not be surprising.

However, important issues are raised about fairness when using incentives in this way. Would it be appropriate to have a differential use of incentives within a particular research project? That is, would it be acceptable to target incentives to persons otherwise unlikely to enroll and to offer them greater incentives than those who would enroll in the absence of such incentives? While a tailored approach such as this might help overcome the barriers to recruitment to meet the demands of justice considered as access, it does raise concerns about fairness for all of those asked to participate. Why should some subjects receive an incentive when others do not?²⁴ Further, it raises other practical and ethical problems. How would incentives be tailored to provide just the right amount of incentive to achieve balanced participation in research? Would bartering of incentives degrade the integrity of the research enterprise and further undermine trust in it? After all we are generally sensitive about inequalities that we can see and there would likely be broad objections, for example, to paying more to richer people if researchers needed their

participation or paying more to African-Americans if researchers particularly needed them to participate.

Empirical data concerning incentives might help to inform decisions in this area. For example, it would be useful to know whether and under what conditions participants would perceive differential incentives as unfair.²⁵ Moreover, empirical data are wanting concerning the effects of the use of incentives on trust in the research enterprise. Similarly, it would be valuable to know the effects of using tailored or differential incentives on trust, participation, and retention in research.

V. CONCLUSIONS

Well-designed and well-conducted medical research can provide critically important public benefits. For this reason, protocols that make it unlikely that research will take place due to a shortage of subjects carry an ethical burden. And conversely, an incentives program that can provide the important public benefits of medical research has a strong ethical claim on its side. Of course, voluntary participation in sound medical research has the fewest ethical problems associated with it. In fact it is an admirable form of altruism, a free gift to unknown others. But the supply of volunteers is unlikely to be sufficient to meet the needs of medical research.²⁶

Incentives can be used to recruit subjects in many situations without any ethical qualms where all other ethical criteria are met—that is to say, incentives *themselves* are not the ethical problem here, generally speaking. If the research meets the usual ethical criteria for human subjects research, the introduction of incentives will generally be benign. Rarely would there be a case that could be classified as bribery or blackmail, for example. However, under certain conditions, incentives are implicated in problems of manipulation in the form of undue influence and in problems of respect for personal dignity. What, then, are those conditions?

We have argued that incentives become problematic when conjoined with the following factors, singly or in combination with one another. Where the subject is in a dependency relationship with the researcher, where the risks are particularly high, where the research is degrading, where the participant will only consent if the incentive is relatively large because the participant's aversion to the study is strong, and where the aversion is a principled one—when these conditions are present, the use of incentives is highly questionable. And

if a number of these conditions are present simultaneously, complexity obviously increases.

This means that there are clear cases, but also many gray areas. We have tried to identify here the essential questions to ask and the essential factors to consider in reaching a determination in the gray areas. Sensitivity to these factors lead to judgments like the following: teachers ought to avoid recruiting their own students as research subjects in return for better grades; large completion bonuses where research is degrading or burdensome are suspect; the use of incentives to recruit subjects for research involving religious or moral concerns ought to be carefully scrutinized, and so forth. These are not clear-cut rules. They are guides for judgment, at most.

But they do not leave us at a total loss. For example, consider the hypothetical case where cash incentives are offered through an advertisement in a high school newspaper for sexually active teenagers willing to participate in a research study. Some religious students object, viewing the incentives as a reward for immoral behavior. And one might imagine others objecting that it undermines the cultural support of teenage abstinence as an important value in a more general sense. But if the incentives offered were free treatment of sexually transmitted infections, counseling, or birth control, the picture could change considerably with respect to these concerns. There are multiple factors involved in assessing the propriety of any particular incentive program and difficult judgments to be made; sometimes, even attention to the kind of incentive that is offered can make an ethical difference.

The factors we have identified and listed above and the kinds of judgments they require differ substantially from those considered crucial in most previous discussions of incentives as undue influence. Where our analysis differs is that we understand the ethical issue of undue influence as an issue, not of coercion, but of corruption of judgment. Believing coercion to be the issue leads to a misplaced emphasis on the size of the incentive as a crucial factor in making the ethical determination.

Consider the Belmont Report's (1979) condemnation of "excessive" and "unwarranted" incentives cited above. Actually, the size of the incentive is not important in itself. If a researcher were to offer \$1000 to a prospective participant to complete a psychological questionnaire, one would consider it a foolish incentive, but certainly not unethical because "excessive" and "unwarranted." Large incentives only become problematic in the presence of the other sorts of factors that we have identified. The question is one of the type of choice that is being made. Undue influence occurs when an incentive is

attractive enough to tempt people to participate in a research study “against their better judgment.” Thus, our analysis differs from others because we do not conclude either that large incentives ought to be rejected as coercive or that all incentives ought to be permitted as opportunities for free choice. We offer an alternative analysis.

Of course, practical difficulties of implementation are inherent in this analysis. First, to avoid making seductive offers or offers that lead people to overcome substantial reluctance, one would have to know individual psychological dynamics at a level that cannot be known. And second, there is a kind of paradox inherent in the situation. Where participants are hard to recruit and there is thus the greatest need for incentives, one ought to be most reluctant to offer them. The need for large incentives can be a rough indicator that there may be an ethical concern that requires attention. We might say as a rule of thumb that, if you cannot secure participation without offering large incentives, people probably have strong aversions to the study. Similarly, if only the indigent will agree to participate in your study and the incentives you are offering are comparable to studies drawing wider participation, the study probably produces strong aversions for one reason or another. Researchers need to pay attention to the implications of a situation where they are finding it particularly difficult to recruit subjects.

As in other areas of bioethics,²⁷ further philosophical work related to the use of incentives in research would be enhanced by relevant empirical data. For example, potential participants in actual clinical trials might be randomly assigned to different groups (for example, no incentive versus an incentive or one incentive versus another) and then be monitored regarding their choice to participate or not and surveyed about their reasons for these decision as well as their beliefs and attitudes towards incentives. Those who chose to participate could also be surveyed after the study (was it “worth it?” do they have regrets?).

In closing, we want to stress that, according to our analysis, most of the time for most research studies, the use of incentives to recruit and retain research subjects is entirely innocuous. But there are some areas where it is not. It follows that there will be some research studies that should not be done on account of ethics requirements with respect to incentives. So be it. The ethical responsibility to improve medical care must be balanced against the ethical responsibility to treat research subjects as autonomous individuals deserving of respect. Incentives used in an ethically appropriate manner can play an important role in striking that balance.

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NOTES

1. There are special issues raised where the research participants are children. These are beyond the scope of this article.
2. Although we are aware of the debate over whether the appropriate term is “subjects” or “participants,” in this article we have elected to use the terms interchangeably.
3. Similarly, in the research context, providing a benefit after the decision to participate has been made is a gift or a token of appreciation, not an incentive properly speaking because the benefit does not serve as a motivator.
4. For elaboration of this claim see Grant (2002, pp. 111–139).
5. Blackmail is a particularly complex case. See Hardin (1993, pp. 1787–1816) and Katz (1966), on the paradox of blackmail.
6. Capitation plans are a form of bribery to the extent that they use the promise of personal gain to induce doctors to neglect their primary duty to their patients. They can be justified only if cost containment is considered a doctor’s ethical duty on a par with patient care. See Pearson, Sabin, & Emanuel (1998, p. 3) and *Pegram v. Herdrich*, 530 U.S. 211 (2000).
7. For a related argument see Nelkin & Andrews (1998, pp. 30–39). A trenchant critique of Titmuss’ position can be found in Arrow (1972, pp. 343–362).
8. The use of this term in conjunction with incentives is an implicit recognition that incentives are a form of power.
9. We assume in this case that the experiment has no educational value to speak of.
10. This issue is discussed in Moreno (1998, pp. 111–130).
11. The distinction between these two kinds of undue influence resembles the distinction in political theory between usurpation and tyranny. Usurpation involves exercising a legitimate power that does not belong to you. Tyranny involves exercising power in a way that is illegitimate no matter who is the actor.
12. For more information about this history, see the Advisory Committee on Human Radiation Experiments (1996).
13. Note that this passage contains language suggesting elements of each of the two forms of undue influence we distinguished above: “Unjustifiable pressures usually occur when persons in positions of authority or commanding influence. . . urge a course of action for a subject” and “Undue influence . . . occurs through an offer of an excessive, unwarranted, inappropriate or improper reward or other overture in order to obtain compliance.” It also includes one case that we would classify as blackmail: threatening to withdraw health services.
14. Of course, if you have a degenerative disease, you will get sicker if you do not agree to participate in a research study that may be the only way to access a potentially beneficial treatment. But your worsened condition will be the result of the natural history of the

- disease, not the result of refusing the offer, as would be the case with blackmail. In addition, there could be some understandable regret over having to make a difficult choice.
15. A similar tension is found in Wilkison & Moore (1997, pp. 373–389) and McNeill’s response (1997, pp. 390–396).
 16. On irresistible offers, see Faden, Beauchamp, & King (1986), chapter 10.
 17. See Newton (1982, pp. 4–6). See also Beauchamp et al. (2002, pp. 547–564). “. . . to categorically exclude subjects from participation in research would constitute an unjustifiable violation of their rights,” (p. 549). Of course, forbidding the use of incentives does not prevent anyone from volunteering.
 18. See Faden et al. (1986, pp. 357–359) where the distinction is made between “welcome” and “unwelcome” offers. The distinction is important and resembles ours. But the authors adhere to the sole criterion of voluntariness arguing, mistakenly we believe, that a choice to accept an “unwelcome” offer is not an autonomous action.
 19. Some would certainly argue that to say “I did it against my better judgment” is an incoherent statement. Whatever you did was what you chose to do; it was the result of your judgment. According to this view, it is equally incoherent to say that “I did it against my will.” When the robber offers you a choice of your money or your life, surrendering your money is still a choice. Coercion as it is ordinarily understood disappears as a meaningful category. See Hobbes (1962, pp. 135, 159). If one takes the position that every action is necessarily a voluntary action (short of being literally physically overpowered), one particularly needs to be able to distinguish in some other language between types of voluntary actions to be true to human experience. To choose with a gun to your head is experienced quite differently than choices that are made in the absence of threats. Ethical argument needs to recognize the distinction in one way or another.
 20. Less directly and less dramatically, though in a similar category, large payments for eggs or sperm function as seductive offers for people with religious convictions opposed to in vitro fertilization. Those individuals are morally obliged to reject such offers. See note 21.
 21. There are always two sides to the coin: the ethics of offering an incentive and the ethics of accepting or rejecting it. Our concern here is with the former, but we should remember that the parents in this case faced an ethical dilemma as well.
 22. We have already noted that there is consensus among international codes and policies regarding the ethics of research that there is a right for participants to exit a study at any time; completion bonuses do not violate that right.
 23. This is similar to Titmuss’ concern that incentives will undermine the collective commitment to altruism as a value. See p. 6 above. It is an issue that is relevant in considering the advisability of payments to organ “donors” or to surrogate mothers as well as in considering incentives to recruit research subjects.
 24. Note that this is an issue of fairness in the sense of treating similarly situated individuals similarly. It is not the same as the issue of whether the incentive is set at a “fair” amount discussed above in section II.
 25. Differential payments and costs are not always considered unfair. Consider for example the different prices paid for airline seats on the same flight.
 26. There is some indication that incentives can be an important motivator (Tischler & Bartholomae, 2002, pp. 363–373). It may be true that widespread use of incentives will reduce voluntarism, though we do not know this. But in any case, that apparent cost must be weighed against the benefit of securing a reliable supply of research participants.
 27. See, for example, Lavori, Sugarman, Hays, & Feussner (1999) and Sugarman (2004).

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