The Ethics of Incentivizing the Uninformed. A Vignette Study

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Economists often espouse incentives, since they can lead to desirable outcomes simply by enlarging the set of voluntary choices available. Becker and Elias (2007), for instance, argue that allowing incentives for living organ donation (which are currently prohibited in all countries except Iran) would be a Pareto-improvement. Ethicists, by contrast, are typically queasy about incentives, in particular as they apply to transactions like organ donation, medical trial participation, or surrogate motherhood. Our aim is to better understand the empirical nature of the constraints that ethical concerns place on markets (Roth, 2007; Ambuehl, Niederle and Roth, 2015; Ambuehl, 2017).

In a recent working paper (Ambuehl and Ockenfels, 2017) we show both theoretically and experimentally that when the acquisition and processing of information about a transaction is costly, individuals with higher marginal costs of information often respond more to a given increase in the incentive. Hence as incentives rise, people who find it more difficult to become well-informed about the transaction comprise an increasing fraction of participants. They elect to participate based on a less complete understanding of the consequences of their choice (see Section II.C for intuition).

Incentives may thus be at odds with *informed consent*. This fundamental principle of bioethics maintains that a decision maker should decide not only voluntarily but also in light of all relevant information, properly comprehended (Belmont Report, 1978).

Will people express reservations about incentives if they lead to the selection effects we document in our working paper? On the one hand, such behavior is consistent with Bayesian rationality. Hence, within a standard welfare economics framework, it does not give rise to concern. On the other hand, a mechanism that causes people to participate based on a worse understanding of the transaction is in uncomfortable company with the principle of informed consent, no matter whether rational or not.

We examine this question by means of a vignette study. Respondents provide judgments regarding incentives for human egg donation when potential participants differ in cognitive ability. We design the survey with two goals in mind. First, we disentangle concerns about incentivizing people who differ in cognitive ability from concerns with incentivizing the poor. This is a relevant distinction for a policy maker aiming for political feasibility. If, empirically, ethical concerns center around a lack of comprehension about the consequences of the transaction, then the moral acceptance of an incentive policy can be improved by interventions such as stringent informed consent requirements. By contrast, informational interventions will not ease concerns that primarily relate to economic inequality. Second, we aim to determine whether concerns about incentives for people with heterogeneous costs of information acquisition are related to the mechanisms we document in our working paper. We test a necessary condition: How do respondents think incentives affect the selection of participants, and how do they think cognitive ability moderates the effect of incentives on information acquisition and processing? Only if the respondents accurately

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anticipate the theoretically predicted mechanisms are they a plausible reason for their concerns with incentives.

I. Vignette

Our vignette briefly describes the transaction of paid egg donation and highlights the need for information acquisition that arises from its complexity. We introduce two women thinking about donating eggs in exchange for $8,000, and explicitly describe both their cognitive ability and level of education, as well as their financial situation. For each respondent, the two women vary along one of the dimensions and are equal along the other, yielding the four treatments (ability varies, rich), (ability varies, poor), (high ability, finances vary), and (low ability, finances vary).[1] To mute the association between ability and income, respondents consider variation in financial resources that arises from inheriting half a million dollars, rather than from differential wage rates.

We conducted the survey on October 31 and November 1, 2016, on Mechanical Turk with a total of 502 respondents. Each respondent was paid $5 for participation, and attrition was independent of treatment (see Online Appendix for details and survey).

II. Results

A. Ethical Judgments

The majority of our respondents disapprove of a rise in the incentive for egg donation if it leads to negative selection regarding cognitive ability. We elicited their judgment of an increase in the incentive by $4,000 from an ethical point of view, and asked them to assume that the women who would participate for $12,000 but not for $8,000 are mostly low-ability women. A striking 59.2% of our 502 respondents think that ethically speaking, the clinic should not raise the incentive, compared to 10.8% who think the opposite, and 30.0% who are indifferent, as panel A of Table 1 shows. In stark contrast, many fewer respondents disapprove of raising the incentive when they are asked to assume that it leads to negative selection regarding financial means. In this case, only 32.1% think the clinic should *not* raise the incentive, whereas 21.0% think it should, and 46.8% are indifferent.

These results reflect respondents' opinions, elicited in a separate question, about who should be incentivized. We asked whether it is more ethically sound to offer $8,000 to the high or the low ability woman in exchange for egg donation if one additional donor is needed. 28.4% of respondents answer high, 3.2% answer low, and the remaining 68.4% are indifferent, as panel B in Table 1 shows. By contrast, respondents feel less strongly, and less unanimously, about targeting women depending on financial resources. 86.1% percent are indifferent regarding targeting poor or rich women, and those who are not fall about equally on either side.

We also find that while, on average, only a minority of 10.2% of respondents consider an $8,000 incentive for egg donation unethical, this, too, significantly varies with the cognitive ability of the incentivized, as panel A in Table 2 shows. About 16% of respondents think that incentivizing low-ability women is unethical. This number decreases to 5% as ability is raised, a change of 11 percentage points (averaged over income). Varying financial resources by half a million dollars, by contrast, changes the fraction of people who consider incentives unethical only by a statistically insignificant 2 percentage points (averaged over ability).

There is an interesting discrepancy between the large fraction of respondents who disapprove of a rise in the incentive, and the small fraction who consider the original incentive unethical. Many respondents seem to subscribe to the view that once somebody has declined an offer, one should not attempt to 'bribe' them into changing their mind and doing "the right thing for the wrong reason" (Grant, 2006).

[1] We randomized the order of presentation and the assignment of names to women on the individual level.

Table 1—Percentage of participants.

A. Raise incentive?	Do not	Do	Indiff.
Selection: ability	59.2	10.8	30.0
Selection: income	32.1	21.0	46.8
B. Target whom?	Low	High	Indiff.
Ability	3.2	28.4	68.4
Income	6.7	7.1	86.1
C. Which policy?	Info.	Pay	Neither
More ethical	67.7	16.7	15.5
Donors prefer	10.4	78.9	10.8
D. Law	Oppose	Support	Neither
Mandatory info.	24.3	62.4	13.3
Exam	28.3	56.4	15.3
E. Predict selection	Low	High	None
Ability	64.0	18.4	17.6
Income	75.8	19.0	5.2

Note: Numbers reflect the percentage of respondents selecting into each column. Panels A - C only use the respondents for whom the respective attribute was varied. Panels D - E use all respondents.

B. Policy Judgments

How can one increase the number of participants in a transaction like egg donation in a way that respondents will view as ethically sound? Grant (2006) suggests that persuasion "on the basis of reason alone might be considered the morally exemplary form of power".

To test this intuition, we asked respondents to explicitly compare two policies that would both raise the expected number of participants by the same amount, and would generate an additional $4,000 in expenses per donor. The first policy would increase the incentive payment by $4,000. The second policy would leave the incentive payment unchanged, but use the funds to provide information such as meetings with previous donors, and psychological counseling. Panel C of Table 1 shows that 67.7% of the respondents feel that the information policy is more ethical than the higher incentive. In stark contrast, only 10.4% predict that potential donors would prefer the information policy; 78.9% predict donors would prefer the higher incentive.

This discrepancy suggests a demand for paternalistic interventions to ensure that participants in a transaction like egg donation are sufficiently well-informed. Indeed, respondents explicitly state such preferences by preferring to withhold an increase in payment to egg donors that would lead to a selection of less well informed donors (our first result).

As a second such measure, respondents indicated opposition or support for two paternalistic policies. A first policy would require potential egg donors to attend mandatory information sessions and to interview five previous donors. As panel D of Table 1 shows, 62.4% of respondents express support for this policy; only 24.3% oppose it. Support recedes only mildly (to 56.4%) for an even more heavy-handed policy that would additionally require potential donors to pass a thorough exam about the possible consequences of egg donation. (Opposition rises to 28.3%.)

These attitudes are consistent, on the individual level, with respondents' predictions of behavior. The beginning of the survey elicited, for each woman and each participation decision she could have made, how likely the respondent thought that given the information acquired by the woman, her decision was in her own best interest. As panel A of Table 3 shows, the less likely a respondent thinks a woman's decision to participate is in her own best interest, the more likely they support mandatory information sessions, and the more likely they consider increasing participation through informational interventions more ethical than increasing it through higher incentives.[2,3]

Interestingly, whether a woman's decision to abstain is judged as being in her best interest has no predictive power; only judgments about the decision to participate have. Respondents' policy attitudes depend on their beliefs about decisions that may cause a woman to be worse off than had

[2]This result refutes the alternative hypothesis that respondents' reservations about incentivizing low-ability egg donors primarily concern the potential offspring.

[3]Only for the policy that requires passing an exam before participation do predictions of individual decision quality fail to predict support, perhaps because the heavy-handedness becomes the dominant consideration.

she never been offered the transaction, but not about those that cause her to forgo a potential benefit.

Table 2—Effects of ability and fin. resources

A. P(incentive unethical)	Low	High Ability	Diff.
	0.16***	0.05**	-0.11***
	(0.02)	(0.02)	(0.03)
		Income	
	0.11***	0.08***	-0.02
	(0.02)	(0.02)	(0.03)
B. ΔP(ask another donor)	Low	High Ability	Diff.
First donor			
encouraging	-0.55***	-0.09*	0.46***
	(0.05)	(0.05)	(0.07)
discouraging	0.37***	0.50***	0.13*
	(0.05)	(0.05)	(0.07)
Difference	-0.92***	-0.59***	0.33***
	(0.07)	(0.07)	(0.10)

Note: Each panel jointly estimated using seemingly unrelated regression. Values averaged over dimension that is hold constant within subject. The variables in panel B coded as 1 = more likely, 0 = just as likely, -1 = less likely.

C. Predictions of Behavior

Finally, to test whether moral concerns are plausibly related to the selection effects described in Ambuehl and Ockenfels (2017), we asked respondents to predict how incentives affect the women's behavior. We asked these questions before we elicited ethical judgments.

Respondents faced the following scenario. A woman interested in donating eggs in exchange for $8,000 has informed herself by talking to a previous donor. That donor has encouraged participation. The woman considers searching for one more previous donor to interview, but she is not quite sure whether it is worth the effort. Now she learns that the fertility center has raised the compensation for egg donors to $12,000. How will this change the likelihood that the woman contacts an additional donor? And how will this effect differ if the previous donor had instead discouraged participation? For each of the women, each respondent saw both these questions.

Panel B of Table 2 shows the results. Confirming the theoretical and experimental result in Ambuehl (2017), respondents predict that women who have talked to a discouraging donor will become more likely to contact another donor as the incentive rises. Indeed, if the opportunity cost of non-participation rises by $4,000, a Bayesian should exert more effort to ensure that the decision to abstain is not a mistake. At the same time, respondents predict that if the first donor was encouraging, then, as incentives rise, women become less eager to obtain a second opinion. This behavior is also consistent with rationality. The additional incentive provides partial insurance against *ex post* undesirable outcomes, causing a Bayesian to reduce the acquisition of costly information that may prevent *ex post*-mistaken participation.

Importantly, respondents predict that incentives will change information acquisition more strongly for women with lower cognitive ability. As Panel B of Table 2 shows, they predict that after receiving encouraging information, the higher incentive significantly deflates low ability women's propensity to contact another donor, but barely affects high ability women. The effect of ability is significantly smaller if the initial information was discouraging.

Such information acquisition behavior implies that low ability women will respond more strongly to an increase in the incentive, and will therefore be selected disproportionately (see Ambuehl and Ockenfels (2017)).

Indeed, our respondents anticipate these selection effects. We asked whether the women who participate for $12,000 but not for $8,000 would be more frequently high or low ability women. Panel E of Table 1 shows that a 64%-majority predict that the marginal participant would more frequently be a low ability woman (18.4% predict the opposite, and the remainder predict no selection effects).

Predictions about selection relate to those about information acquisition on the individual level. Panel B of Table 3 shows that respondents predict stronger selection effects if they have predicted a stronger ef-

fect of cognitive ability on the response of information acquisition to a higher incentive.[4]

Hence, respondents' moral concerns are plausibly related to the effects of incentives documented in Ambuehl and Ockenfels (2017).

Table 3—Individual consistency.

A. Choice in own best interest	participate	abstain
Support for		
mandatory info.	-0.095*	0.020
	(0.049)	(0.052)
mand. info. + exam	-0.081	0.040
	(0.053)	(0.056)
Info. more ethical than incentive	-0.100**	-0.022
	(0.048)	(0.050)
B. $\partial_{ability}\partial_{inc.}P$(find additional donor)	after first donor happy	unhappy
Selection effect of incentive on ability	-0.129**	0.048
	(0.053)	(0.047)

Note: Each panel jointly estimated using seemingly unrelated regression. Panel A uses all respondents, panel B only those for whom ability was varied. Independent variable in Panel A coded as 1 = more (0 = less) likely in best interest than not.

III. Conclusion

Informed consent requires adequate information and comprehension. Our vignette study considers a situation in which this requirement is in conflict with libertarian principles. It is motivated by the results in Ambuehl and Ockenfels (2017) who show that individuals with higher marginal costs of information acquisition often respond disproportionately much to a rise in the incentive, and decide to participate based on a lesser understanding of the consequences of their choice. Our respondents have qualms about incentivizing people for whom information acquisition and comprehension is more difficult. These concerns are directly related to the ability to understand the transaction, and are not simply a side-effect of concerns with incentivizing the poor. As a result, respondents express a pronounced preference for policies that increase adherence to the principle of informed consent, even if they are overtly paternalistic.

Respondents correctly predict how ability changes the effect of incentives on information search, and how incentives change the selection of participants. These predictions, and the individual-level consistency between the two, show that moral concerns with incentives are plausibly related to the mechanism documented in Ambuehl and Ockenfels (2017).

Designers of incentive systems for transactions such as organ donation who aim for political feasibility may likely benefit by taking these concerns into account. Our results suggest that policies might be effective that ensure that participants have a thorough understanding of the possible consequences of their choice. This is particularly important in situations where economic incentives may lead to a higher fraction of participants for whom obtaining and appropriately comprehending information is more difficult. Potential applications extend to all transactions in which salient upsides are pitted against potentially complex downsides that demand thorough but costly information acquisition. Examples include human research participation, surrogate motherhood, and personal finance decisions.

[4]For all of these variables, respondents indicated not only the sign but also the strength of the effect.

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