

# TOWARD AN INSTITUTIONAL THEORY OF INTRINSIC MOTIVATION

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## I. Introduction

The notion of intrinsically motivated behavior characterizes an activity performed without regard to external rewards but for the sake of the activity itself. While motivational theories had historically mostly focused on drives and instincts whose role is to lead the individual to satisfy some physical need, the theory of intrinsic motivation rather addresses the “non-tissue-based” needs that can better explain behaviors such as play and exploration. The core argument of the contemporary psychological theory with regard to intrinsic motivation has largely converged towards the view that, in acting onto their environment, human beings tend to strive for competence and self-determination, and in doing so they are drawing on “the energy source that is central to the active nature of the organism” (Deci & Ryan, 1985, p. 11), which is intrinsic motivation. More precisely, “intrinsic motivation is the innate, natural propensity to engage one’s interests and exercise one’s capacities, and in so doing, to seek and conquer optimal challenges” (*ibid.*, p. 43). As such, the concept is relevant for—besides psychology—a wide scope of social and behavioral sciences since it concerns the perennial *why* question of voluntary human action.

So, the concept of intrinsic motivation draws the attention to the benefits derived from the activity itself. Interestingly, deriving utility from the action itself is somewhat in contrast with the standard economic theories that argue for the utility of ends and disutility of means. In other words, input is conceptualized as cost and output as benefit. For example, work is in standard accounts conceptualized only as a means to earn income which in turn enables individuals to acquire goods and services which then have the capacity to increase their utility. The general view stemming from this sees work as a nuisance, as something to be minimized whenever possible. Or compensated for with a variety of monetary rewards. Together, so the argument goes,

these form the incentive structure that motivates people to engage in an activity that they, supposedly, would rather not.

One of the most famous findings of the experimental research into intrinsically motivated behavior is the so-called “hidden cost of reward” (see Lepper & Greene, 1978; Deci, 1976): external intervention, when perceived by the subject as controlling, will result in diminished self-determination and self-esteem and, in turn, impaired performance due to lowered intrinsic motivation; thus, there might be substantial “hidden” costs involved. This explanation has been evoked numerous times with regard to variety of cases (the famous ones include blood donation and picking up children on time from the daycare), and has, more recently, been integrated into economics by Bruno Frey in the form of *motivation crowding theory* (Frey, 1997; Frey & Jegen, 2001)<sup>1</sup>.

In his account Frey posits the “hidden cost of reward” problem in the context of the standard economic price theory that argues that higher reward always leads to increased performance. He “saves” the theory by modeling intrinsic motivation as a regular incentive that is competitive to tangible ones, yet which is in many cases more valued by the actors than monetary compensation. In other words, he models it as a regular *substitution effect*.

In doing this, he builds on a psychological account that is itself built on an individualistic view of human cognition, rather than seeing human action and reasoning as fundamentally *situated* in the environment<sup>2</sup>. This is not unlike most of the other attempts to integrate economics and psychology that primarily draw on the results of experimental research performed in abstract laboratory environments, where isolated individuals are performing isolated tasks. Consequently, the roles played by social, institutional and natural environments are not, or are at least insufficiently, accounted for. Situated cognition perspective, on the other hand, argues that, “[because of limits on our information-processing abilities] we off-load cognitive

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<sup>1</sup> Another account has been developed by Benabou & Tirole (2003), in which they aim to “analyse the “hidden costs” of rewards and punishments from an economic and cognitive perspective, rather than just posit an aversive impact on motivation” (p. 490). While they do develop a much more rigorous account than Frey, the fundamental understanding of the issue and approach to study it are arguably the same. In their words: “This information-based, strategic analysis distinguishes our approach from Frey’s reduced-form treatment of these issues” (p. 491).

<sup>2</sup> This point has been put forward by researchers in the field broadly defined as *situated cognition*, mostly as a reaction to cognitivism’s overly focus on mental representations. In general, situated cognition recognizes that mental activity is dependent on the situation or context (Robbins & Aydede, 2009). For an overview of the theory, see e.g. Robbins & Aydede, 2009; Roth & Jornet, 2013.

work to the environment” (Wilson, 2002, p. 626). That leads us to a much more integrated vision of cognition and action, one that sees an individual fundamentally embedded in the environment. I address this issue in a recent paper on *ecological rationality* (Dekker & Remic, n.d.) where we argue that the results of integrating psychology into economics ultimately do not depend only on the type of economics we do but also on the type of psychology we employ.

The aim of this paper is, firstly, to critically engage with Frey’s account in order to assess the points where his treatment of intrinsic motivation as an abstract incentive seems unsatisfactory for a fuller understanding of human cooperative behavior; and secondly, to provide some directions for an account of intrinsic motivation approached from a more institutionally-minded perspective, where the shifting subjective meanings of rules are the relevant factors to be explained. With this goal in sight, the paper proceeds as follows: section II provides an overview of Frey’s (1997) motivation crowding theory and critically engages some illustrative cases brought forward by Frey and Jegen (2001); section III proceeds by presenting three generalized points of critique, adding possible alternative explanations and appropriate theoretical treatments; section IV further develops an account based on the gained insights into the situated nature of economic action and its role in the motivational structure; section V concludes the paper.

## **II. A brief run-through of *motivation crowding theory***

*“Do people act just because they expect a monetary gain? Do they work solely because they are paid? I claim that this is not so: people undertake many activities simply because they like them. I claim even more: a higher monetary compensation crowds-out this inner motivation in important circumstances.*

*To offer higher pay then makes people less committed to their work, and may reduce their performance.”*

*(Frey, 1997, p. ix)*

*Homo Oeconomicus*, a creature that roams the world maximizing her utility exclusively by responding to (monetary) incentives, has been a popular target of criticism for decades. However, most of these critiques are coming from outside—or at least from the fringes of—the standard economic theory, so it is, therefore, that more interesting to see how economists respond to empirical claims that seem to run against the main postulates of the established theory. After stating the central problem

and framing it as a challenge to the price theory of standard economics, Frey makes sure to position himself firmly within the mainstream thought: “The (relative) Price Effect which captures the price system’s essential mechanism is fully accepted. The Crowding-out Effect introduced here is an *additional* force working in exactly the *opposite direction*” (Frey, 1997, p. x, emphasis in original). By doing this he sets the tone for the rest of the book—intrinsic motivation is not an enemy to the price effect, but, when treated in the right way, a legitimate part of the standard economic model.

Crowding Effect is essentially modeled as a substitution effect “where individuals reduce the motivation under their control (intrinsic motivation) when an external intervention by pricing or regulating confronts them with an extrinsic motivation” (Frey, 1997, p. 121). By doing this, Frey constructs an extension of the *Homo Oeconomicus*, which he calls *Homo Oeconomicus Maturus*. This economic man is “more ‘mature’ in the sense that he is endowed with a more refined motivational structure” (Frey, 1997, p. 118). The main Frey’s point being that it allows us to integrate into economic theory the Crowding Effect as working in the opposite direction as Price Effect.

The violation of the Price Effect is the central puzzle that Frey addresses. As standard theory suggests, “a higher monetary reward (price) induces more of an activity” (Frey, 1997, p. 119). The basic model of supply and demand indicates that in the former case this relationship is positive (price is a gain), and in the latter it is negative (price is a cost). However, evidence shows that in some cases the dynamics seem to be *reversed*: introducing payment for voluntary work results in less work being done; fining the parents who do not pick up their children on time from the daycare centre results in them being late even more often; environmental morale gets corroded when monetary incentives are introduced, etc.

The evidence clearly calls for a reassessment of the standard theory that, as it is, cannot account for these cases. Frey goes about that by integrating the social psychologists’ work on intrinsic motivation into economic theorizing. His new economic account, baptized as *motivation-crowding theory*, takes the concept of intrinsic motivation, treats it as a sort of an incentive that makes people want to engage in particular activities, and creates a model where imposition of external intervention (most often monetary incentives) crowds-out incentive of intrinsic

motivation<sup>3</sup>. Following this logic, intrinsic motivation is seen in this model as a sort of a desirable state of mind. External intervention corrupts this state of mind, which brings about such adverse effects as drop in productivity, lack of enjoyment, or even a complete behavioral change. Moreover, this corruption is irreversible—intrinsic motivation, once crowded-out, does not return back to the previous state when the external intervention is pulled away. The expulsion from the Garden of Eden is permanent. All things considered, by modeling Crowding Effect as a substitution effect, Frey manages to kill two birds with one stone: he provides an explanatory account of the puzzling evidence, and seamlessly integrates it into the standard theory.

While the apparent simplicity of the model is without a doubt an attractive feature of Frey's account that found a fruitful application in the standard economic theorizing about various topics, from artistic practices to workplace behavior, the basic empirical research on which it is built is, however, not as uncontested as Frey would like us to believe. With regard to an analogous topic of “whether emergent norms of cooperation and constructivist incentive schemes are substitutes, the latter crowding out the former”, Smith (2007, p. 223) points out that different studies have shown them being both substitutes (“formal rules undermine informal cooperative rules”) as well as complements (“contracts facilitate the self-enforcement of relational elements beyond contractibility”). Frey does acknowledge the criticisms of the experimental designs and cites Lepper et al. (1999) in pointing out that “30 years of research demonstrating that extrinsic rewards can have *both positive and negative effects* on subsequent intrinsic motivation, depending upon the *specific conditions of the study*” (cited in Frey & Jegen, 2001, p. 598, emphasis added); yet he does not really go further in addressing the rather important point of how conditions of the study affect experimental results.

Calling attention to the problems of experimental design in psychology has become an important part of the critique of the prevailing ways of integrating economics and psychology that mostly converged into the so-called new behavioral economics. Particularly problematic are generalizations based on laboratory

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<sup>3</sup> “[T]he ‘crowding-out effect’ ... is one of the most important anomalies in economics, as it suggests the opposite of the most fundamental economic ‘law’, that raising monetary incentives reduces, rather than increases, supply. Under relevant circumstances, it is therefore not advisable to use the price mechanism to elicit a higher supply, and one should moreover rely on a quite different type of incentive, namely intrinsic motivation.” (Frey & Jegen, 2001, p. 590)

experiments performed on a single task in a ‘clinical’ environment. This approach has its theoretical backup in the approach to psychology that emerged from developments after WW2 known as cognitive revolution. In general, this view sees cognition and learning as based on “representations stored and processed in the mind” (Roth & Jornet, 2013, p. 463). In contrast to this view, *situated cognition* views cognition and learning as fundamentally situated (Brown, et al., 1989). “The activity ... is not separable or ancillary to learning and cognition. Nor is it neutral. Rather, it is an integral part of what is learned. Situations might be said to co-produce knowledge through activity” (*ibid.*, p. 32). Thus, the role of the environment is crucial for the unfolding of the activity and thus for the motivational factors ‘co-produced’ in the activity.

So, we first need to reassess the proposed psychological interpretation of the experimental results, before we go on considering its integration into economics. For this purpose I will present, and problematize, two of the cases that are used by Frey and Jegen (2001) as illustrations of the puzzle.

#### Case 1: Blood donation

Here, the basic issue is that people donate less blood if they receive payment for it than if not. Generally, in Frey’s language this means that external intervention in the form of monetary rewards crowds-out the intrinsic motivation of people to donate blood, an activity they are undertaking ‘simply because they like it’. Thus, if we want people to keep donating blood, we should not attempt to pay them for it.

However, it is not entirely clear what this ‘liking the activity’ actually means. Is it really about people being intrinsically motivated to engage in the physical act of sticking a needle and pump out blood from their bodies? As absurd as this question sounds, it is vital in order to point us to the fact that without understanding the meanings underlying the blood donation, it is impossible to say anything more substantial about the reality of the case.

Generally, we can express the two states, before and after the introduction of monetary payment, in the following way:

*Before*     I am donating blood out of my wish to help people in need.

*After*      I am selling my blood for money.

When put in this way, it is easy to see why the amount of people willing to donate blood would fall in the second case. On the one hand, there is a negative social stigma attached to exchanging one's body parts for money, and on the other, charity is seen in a positive light in our society. Therefore, without understanding the deeper meanings underlying blood donation and trade of body parts, it is impossible to understand what is really going on.

Now, let's consider another variation of the statements:

*Before* I donate blood because that's the accepted norm in my community.

*After* Receiving money for blood is a shameful thing; only morally questionable people are willing to do it.

Many of the blood donors may be driven by established social norms of charity, so to speak about intrinsic motivation would be in this case rather inaccurate. When we expect what others will do and then act accordingly in order not to break the social norm, it is hard to speak of the activity as motivated by abstract intrinsic motivation. The norm can also change. If receiving money for blood gradually becomes accepted, the effect would disappear. Looking from this perspective, the coordination of blood donation depends more on the social norms and expectations than on purely intrinsic motivation.

#### Case 2: Collecting children from the daycare centre

This case stems from the paper by Gneezy and Rustichini (2000). In their experiment they introduced fines for the parents that fail to collect their child on time from the daycare centre. The results indicated that the number of late-coming parents increased significantly and, additionally, did not drop back to the previous levels after the fines were cancelled. Frey's explanation is that parents' intrinsic motivation to keep to the time schedules was crowded out by the external intervention in the form of a penalty (negative reward). To make matters even worse, "intrinsic motivation was *crowded out for good*" (Frey & Jegen, 2001, p. 602, added emphasis) thus suggesting a particularly damaging corrupting effect on intrinsic motivation.

The first puzzling thing about this explanation is that it is not clear what intrinsic motivation applies to. Are parents really intrinsically motivated to be on time? Are they on time really simply because they like it? It seems so in this case as

well that it is impossible to really understand what is going on without addressing the underlying meanings of the situation.

Interestingly, Frey actually provides an explanation that seems to be fully on spot: “The introduction of a monetary fine transforms the relationship between parents and teachers from non-monetary into monetary one. [...] [T]he feeling now is that the teachers are ‘paid’ for the disamenity of having to stay longer” (Frey and Jegen, 2001, p. 602). However, he takes this observation as a cause for diminished intrinsic motivation, instead of embracing it as it is and trying to work it out. Intrinsic motivation explanation seems to again be employed in an ad hoc fashion in the situation that does not really resemble any involvement of intrinsically motivated behavior. If we take the underlying meanings and social norms seriously, we see that when you introduce the money (e.g. fine), the environment of meanings changes, so the norm now is not to respect the unwritten ‘do not be late’ rule, but can be expressed with standard economic explanation that the resources (time) will go to the one that values them the most. Thus, parents can now ‘buy’ the extra time they need in order to pick up their children. Because it is in very hard in general to impose the unwritten social norm, the meaning of the new situation gets sticky, and therefore the rates are not lowered after the appeared return to the previous state.

### **III. Main points of critique and the way forward**

As emphasized, Frey’s account approaches intrinsic motivation as an abstract multiple-purpose state of mind that is applicable to any kind of activity, which enables him to incorporate it seamlessly into standard economic theorizing. It becomes just another incentive, not much different in its essence to other, external, incentives with which it is competing. As a solution to the puzzling evidence it is also introduced in a rather ad hoc manner, somehow suggesting that people ‘simply like’ the activities that are, as such, not even remotely fun (it is hard to argue that the explanation for blood donation is based on people being intrinsically motivated to engage in the activity of sticking needles in their veins). Thus, he fails to provide a deeper understanding of the subjective meanings of these acts, which would certainly result in a clearer causal account and a more realistic picture of human behavior.

From my perspective, the core question with regard to motivation is why is economic and social world being propelled forward in the first place at all. In this

section I want to shift the focus to how motivation in economic and social activities is fueled by meanings that individuals hold about states of affairs, social relationships, and activity itself. I proceed by indicating three generalized points of critique and, based on each of those, provide possible theoretical treatments that I believe would lead to an alternative account—toward a more institutionally minded theory of intrinsic motivation.

### ***1. Intrinsic motivation and situated action***

The notion of intrinsically motivated action implies a special relationship between the actor and the activity itself. What is important to realize, though, is that there is a substantial difference between activities such as playing or exploring, and activities such as donating blood and picking up your child on time from the daycare centre. While the former are to a large extent sustained by their engaging and challenging nature (they are simply “fun to do”), the latter are actually sustained by the rules and norms followed for their perceived long-term benefit. This distinction seems so fundamental that it becomes hard to simply put them both under the same umbrella of intrinsic motivation.

The key factors to consider are *the situation in which the activity is embedded* (the environment), and *the bodily aspects of activities where body dexterity is central* (e.g. in sports, music, and craftsmanship in general). As mentioned, it has been argued that human action and cognition are fundamentally situated and embodied, thus the subjective experiences and held meanings are crucial for understanding them. The nature of situated action lies in the interplay between the subject and the environment, and thus cannot be adequately described by referring to a pre-existing internal state, such as intrinsic motivation. New meanings will emerge as the activity unfolds, and these meanings will, in turn, affect further developments.

Activity is rarely the goal, or end, in itself. But, regardless of the intentions, it is the most important, because it represents the bedrock for the development of the social world. While intentions, as expressed by goals, do not matter for the understanding of the abstract “timeless” structural relationships (which are in a way rather straightforward, and so they often lend themselves easily to a formalistic treatment), they of course do matter for the emergence and assignment of meanings, and thus for the development and institutional change. As a result, the standard means-ends framework, as reflected in the standard economic theory, is not that

relevant for us if what we are after is the understanding of the social world in its situated reality.

What is important to realize is that meaning does not simply “reside” in things. It needs to be constantly negotiated and sustained through practices. Rules and practices structure a social activity and give meaning to it, and from these emerged meanings come incentives. In turn, the structure of the incentives as brought forward by the institutional environment will determine how the allocation and utilization of resources will look like in a particular setting. Different ways of structuring the aggregated social activity will lead to different outcomes due to the different meanings that will in turn give birth to different incentive structures. Some may even be self-destructive, others may only barely be able to sustain good life. Change is inevitable, but it can go many places. Since, analogously, external interventions also have different meanings in different situations, addressing these shifts in meanings will provide a much richer account of the ‘hidden cost of reward’ phenomenon.

## ***2. Intrinsic motivation and game theory***

Engagement in an activity, contribution to the public good, or any other action that can be characterized as intrinsically motivated, can be seen also through the eyes of game theoretic models. Strategic action is always dependent on expectations of what others will do, and it seems that many of the cases demonstrating the hidden cost of reward can be explored through the lens of strategic social interaction.

However, the classical game theoretic models and experiments have an important shortcoming for studying behavior that is situated and contingent on meanings held by participants, since they are usually performed in a highly abstracted environment. Dictator games, for example, are played as an abstract game with abstract numerical values, and get interpreted *ex post* by the researchers when they provide an explanation for the results. However, as Osborn et al. (2015) argue, these kinds of interpretations get, as the game is unfolding, constantly narrativized also in the minds of the participants who, in turn, deal with the problem not as researchers presented it on the paper but as presented to them by their narrativized (imagined) interpretations of the situation. This bears important negative consequences for the results of such games, since it can be argued that the level of control over the conditions is actually not as great as is usually believed by the researchers.

Again, the key issue here is the subjective meaning that participants in the experiment assign to a specific choice situation. If the designers of the experiment do not adequately *situate* the choice situation, participants will do it themselves. This point also constitutes the core of the critique of the so-called ‘Linda problem’ from the behavioral economics literature, where it can be convincingly argued that, due to their ‘intuitive’ filling in of the missing information, respondents choose the realistically more ‘probable’ (albeit not probable in the narrow technical sense) option.

Additionally, according to Bicchieri (1993), we cannot assume that agents have all the information needed for the formation of correct expectations. Since a precondition for attaining a Nash equilibrium is the commonality of beliefs among the agents, “what must be explained is precisely how rational players come to have correct beliefs in the absence of any conclusive evidence about how other players are going to choose” (Bicchieri, 1993, p. 33). In contrast to the theory of rational expectations that “assumes that agents’ beliefs, which take the form of subjective probability assessments, coincide with the objective probabilities (i.e., the relative frequencies) of economic events” (p. 2) in order to explain commonality of beliefs, her account builds on the role that social norms play in the process of belief formation and change (see Bicchieri, 2006).

Let us examine the case of reciprocity. For Frey this is simply a special case of intrinsic motivation (Frey & Jegen, 2001) but he does not explain the underlying dynamics that would enable us to understand what is it that the actors are acting on when engaging in reciprocated behavior. However, Chamlee-Wright (2010) argues that reciprocity is a generalized social norm whose presence is dependent on the underlying shared mental models held by individuals in a particular community. Thus, “a generalized norm of reciprocity is more likely to prevail in a community that holds to the mental model that kindness to a stranger in need generates some positive outcome (e.g., spiritual reward or a more hospitable neighborhood) than in a community that expects strangers, particularly strangers presenting themselves in need, to be swindlers” (Chamlee-Wright & Storr, 2015, p. 254). This clearly points us again to a direction of norms and subjective meanings, since they play a crucial role in establishing expectations within the community. Treatment of reciprocity as a sort of individual preference does not reveal the real dynamics that lead to such cooperative outcomes.

For now, the crucial insight is that a game theoretic treatment of the problem needs to take all of the mentioned issues into account, and at the moment the direction of the ‘narrativization’ of the games seems promising.

### ***3. Intrinsic motivation and freedom***

Deci and Ryan posit their research activities in the following context: “[O]ur overriding, sociopolitical interest is examining the possibilities and obstacles for human freedom. [...] It is our hope that, by engaging in a serious investigation of motivational issues, we can make some small contribution toward the larger goal of human freedom” (1985, p. viii). So, there is, in their view, a direct link between issues regarding intrinsic motivation and the issues regarding human freedom. The self-determination theory, with its emphasis on self-determination and self-esteem that get corroded when individual feels controlled or her motivation ignored, thus clearly intends to make a political statement as well. Therefore, external interventions do not only bring about a potential loss of intrinsic motivation, they also suggest that the subject is less free the more the environment gets regulated.

To claim this means to imply that free man is a man in the “natural state”—free of oppressive and controlling rules of conduct. However, a highly structured environment should not automatically be assumed an oppressive one as well, hindering the individual’s intrinsic motives through regulation. Games are a great example, where the presence of clear rules and rewards actually enables the intrinsic motivation to emerge. Not only that the environmental structure should always be taken into account; it is impossible to imagine a human action that is not situated in some form of environment (social, natural, or institutional).

What seems to be implied in the accounts of intrinsic motivation is that the crowding-out effect is something to be minimized or entirely avoided if our objective is to maximize human freedom. However, there is a bit of confusion between the negative freedom (“freedom from”) that Deci and Ryan seem to embrace, and the positive freedom (“freedom to”) that appears to be more relevant when we are considering the relative impact of a particular institutional arrangement. Particular behavioral assumptions are thus simply less relevant for understanding the nature of freedom in the human society.

So, to simply assume that extrinsic intervention automatically means lack of freedom is thus not correct, and a deeper investigation of the nature of the rules, meanings of the rules, and the situations in which activity happens, will enable us to construct a richer account of the relationship between motivation and freedom as well. This requires a rather transformed point of view and it is the aim of this paper to point forward to, and to argue for, one such possibility.

#### **IV. Environment and the formation of shared understandings**

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Recent disputes about the proper integration of psychology and economics have been in large part revolving around the question about the role that environment plays in the models of behavior (see Dekker & Remic, n.d.). Despite substantive criticisms, the mainstream thought is still mostly based on the purely mental models of cognition, focusing on studying the isolated individuals performing isolated tasks. In a similar fashion, the treatment of motivation as presented by Frey advances the view of motivation largely independent of context, institutions and meaning.

An alternative in the cognitive psychology has been recently proposed in the form of *situated cognition*, thus providing a firmer psychological ground for theorizing in the social sciences. Accepting the *situated* nature of every activity reveals the crucial role that the environment plays for the development of meanings, learning, and creation of new knowledge. All this has a direct influence on motivation, which can thus be portrayed as being in constant dynamic development. To understand these dynamics means to understand the fluctuations of motivation that appear to be taking place as the environment is changing. To understand this also means to understand the *situational logic* that is surrounding the behavior and decision-making in the social/institutional context of shared understandings. This promises a much broader theoretical integration than has been proposed by Frey.

## **V. Conclusion – toward an institutional theory of intrinsic motivation**

This paper presents an alternative take on the phenomenon known as ‘the hidden cost of reward’. Critical assessment of Frey’s (1997) classic integration of the psychological theory of intrinsic motivation into economics reveals his account as rather unsatisfactory for understanding the underlying dynamics of the phenomenon. In contrast, the institutionally oriented theory of intrinsic motivation is proposed as an alternative attempt to integrate the puzzling empirical findings into the theoretical framework of economics and broader social science.

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