

Choosing Less over More Money: The Love of Praiseworthiness and the Dread of Blameworthiness in One-Player Games

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Abstract: Why choose less money over more when no one is watching? A central tenet of economics is that this behaviour can be explained by intrinsic motivation. But what does intrinsic motivation entail? What encourages it? This paper answers these questions through a Smithian lens: moral motivation includes not only a naturally strong love of praise and dread of blame but also a natural, and stronger, love of being worthy of praise and dread of being worthy of blame, even if neither is necessarily given. I rely on quantitative and qualitative data from economic experiments to illustrate this claim. While the current scholarship on Smith has applied his theory to situations in which our actions either evoke reactions from others or have monetary consequences for them, I extend his insights to receiver games (Tjøtta 2019) and dice-rolling games (Fischbacher and Föllmi-Heusi 2013) aimed at eliciting self-regarding concerns, that is, actions affecting the interests of only ourselves. I argue that these games accentuate the strength of the love of praiseworthiness in guiding behaviour, emphasising its immediate reference to others and foundation in intentions along with outcomes.

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I. INTRODUCTION

Maria Pia Paganelli ends the chapter “Smithian Answers to Some Experimental Puzzles” with an observation and an encouragement: “Adam

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Smith is increasingly being read by experimental, behavioural and neuro-economists. He still has a lot to offer all of us” (2009, 22). I agree. So far, the Smithian love of praise/praiseworthiness and dread of blame/blameworthiness has been cited to explain behaviour in experimental games such as the ultimatum game, dictator game, trust game, and prisoner’s dilemma game (Ashraf, Camerer, and Loewenstein 2005; Brown 2011; Meardon and Ortmann 1996; Paganelli 2009; Smith and Wilson 2019; Young 2009). A key aim of many experimental games has been to rule out selfish reasons for a variety of other-regarding behaviours, allowing the researcher to elicit subjects’ intrinsic motivations.¹ While the Smithian love of praiseworthiness and dread of blameworthiness could certainly be the strongest intrinsic motives in these settings, distinguishing them from extrinsic motivations, such as the mere love of praise and dread of blame, is empirically and theoretically challenging, if not impossible. With this as a backdrop, one could claim that the love of praiseworthiness and praise are merely two different names for the common dichotomy between extrinsic social motives and intrinsic moral motives—concepts that are borrowed from social psychology and applied to economics (Bénabou and Tirole 2003; Bénabou and Tirole 2006; Frey and Oberholzer-Gee 1997; Gneezy and Rustichini 2000; Scitovsky 1976). This claim would not be entirely wrong.

At first, the interwoven relationship of our moral motivations accords with Smith’s own discussion in *The Theory of Moral Sentiments* (1759).² We desire not only to act according to what results in actual praise and avoids blame from others but also have a natural love of being worthy of praise and fear of being worthy of blame, even if neither can be given. Smith rightfully notes that these two principles “resemble one another” and are “often blended with one another” (*TMS*, III.ii.2, 114). But there exist two palpable differences between Smith’s account and how economists usually view motivational concepts: Smith’s argument is not based on a dichotomy, either when it comes to the substance of the love of praise and praiseworthiness, or what makes a praiseworthy character. Asserting that “in every well-formed mind this second desire [the love of

¹ Remic (2021) offers an important and interesting discussion of the concept and definitions of intrinsic motivation and how they have been used by economists, emphasising the challenge of importing competing psychological theories of intrinsic motivations into economics.

² This and all subsequent references to *The Theory of Moral Sentiments*, abbreviated as ‘*TMS*’, will be to the Glasgow edition (Smith [1759] 1982). References include, in this order, part, section (if applicable, in lowercase roman numerals), chapter and paragraph (both in Arabic numerals).

praiseworthiness] seems to be the strongest of the two” (*TMS*, III.ii.7, 117) did not prevent him from observing a necessary interdependence between the two loves. Our intrinsic moral motivations do not exist in a vacuum, so to speak. Our love for being worthy of praise and fear of being worthy of blame are influenced by a variety of external factors interacting in concert. What is more, the love of praiseworthiness and dread of blameworthiness have qualities that transcend (monetary) outcomes. In addition to pleasurable and less pleasurable outcomes, intentions are what manifest respect in others and, in turn, ourselves.

Taking all of the above together, regardless of how hard the experimentalist tries to create a non-social situation, it will necessarily entail a reference to others.³ Acknowledging the influence of this external component when discussing intrinsic motivations is significant in order to explain how we have learned to become aware of undeserved praise and incapable of being truly satisfied with it. But are there some decision environments that evoke such redirected judgements more than others, emphasising the strength of the socially constructed love and dread in guiding behaviour? As Paganelli (2009) points out, compared to the ultimatum game, the dictator game is a good candidate to elicit such judgements. However, while this game is non-strategic in the game-theoretical sense where actual praise and blame cannot occur from another person, it does not give rise to entirely self-directed moral judgements, as one’s actions do in fact have monetary consequences for another person. A growing literature has shown that, the fact that the dictator’s decision affects others, is sufficient to compel subjects to be other-regarding and restrict narrow self-interest (Cappelen et al. 2017; Dana, Weber, and Kuang 2007; Krupka and Weber 2013). Behaviour in the dictator game does not, so the argument goes, necessarily reflect solely intrinsic motivation but may also be driven by extrinsic motivation.

In this paper, I extend the application of Smith’s theory of moral motivations to receiver games (Tjøtta 2019) and dice-rolling games (Fischbacher and Föllmi-Heusi 2013). Importantly, I do not want to suggest that these games isolate the love of praiseworthiness and dread of

³ In social science, a social relation or social interaction is any relationship between two or more individuals. See, for instance, Rummel (1976) for a comprehensive discussion of social interaction and behaviour. In game theory, a game usually consists of at least two players where one player’s payoff is contingent on the strategy implemented by the other player. In one-player games, such as the receiver and dice-rolling games, this strategic component is absent, and subjects make a decision that will only affect themselves in terms of material payoff.

blameworthiness. Rather, I argue that they emphasise how socially rooted our intrinsic motivations really are. The features of one-player games, as seen from the perspective of economics and game theory, do not explicitly involve external rewards or costs. The setting is very simple: subjects are asked to choose between receiving more or less money. The desire for praise (positive payoff) and the fear of blame (negative payoff) from others is absent by experimental design. Moreover, actions have monetary consequences only for subjects themselves, as opposed to the ultimatum and dictator games, in which subjects decide on payoff allocations affecting both themselves and another person (Berg, Dickhaut, and McCabe 1995; Forsythe et al. 1994; Güth and Tietz 1990). The results show that even in these seemingly non-social situations, subjects commonly choose less money over more (Abeler, Becker, and Falk 2014; Tjøtta 2019; Utikal and Fischbacher 2013). In many ways, these games resemble Smith's notion of a "solitary place" (*TMS*, III.1.3, 110) in which individuals lack the social mirror of what are the objects of praise and blame, allowing them to fully endorse their self-love, often understood in economics to mean choosing more money over less. But what these games ultimately enable is the elicitation of Smith's self-directed process of moral judgement. An internal assessment of praiseworthiness and blameworthiness, the habit experimental subjects have acquired in redirecting judgments toward their own conscience—to the "well-formed mind" (*TMS*, III.2.7, 117)—promoting behaviour consistent with a love of praiseworthiness that, in Smith's world, has social roots.

To help flesh out my arguments, I pay particular attention to the receiver game due to its attractive design encompassing both quantitative and qualitative data. In doing so, I extend Tjøtta's (2019) discussion of the relevance and importance of Smithian insights for this class of games. I argue that an application of Smith's theory to these games adds at least two points of reflection regarding how we theoretically model human nature and how we empirically interpret it. First, through interacting with others and seeking praise and avoiding blame from the "man without", we gradually learn, through experience, how to turn the lens inward to the "man within" (*TMS*, III.2.32, 130). Thus, what experimentalists refer to as intrinsic motivations to explain why subjects choose less money bear necessary connections to the external world in Smith's model. It is our desire to be approved of by others that allows us to learn to view ourselves from without, which in turn lets us see the difference between something being praised and something being worthy of praise. Second,

the determination of what actions are praised and praiseworthy or blamed and blameworthy cannot be inferred only through analysing monetary outcomes. Smith warns us of making such shortcuts and offers a more nuanced picture; people are neither altruistic saints nor self-interested sinners. With their sociality comes the importance of intentions and deservingness, in addition to actions and outcomes. This means that choosing less and choosing more money in an economic experiment may indeed be different in the monetary outcome space, but these two actions need not be based on entirely different motivations—both may be understood as being encouraged by a love of praiseworthiness or a dread of blameworthiness.

To explain subjects' motivations and why they sometimes choose less money over more even in one-player games, the remedy in economics has typically been to alternate preference formulations: one merely re-specifies the utility function to include different other-regarding motivations or to reflect an intrinsic preference for less money. However, behaviour in these games cannot be explained by social preference models, as decisions lack explicit consequences for other experimental subjects—there is not another utility function to take into account. We are left with explanations advancing intrinsic motivation and built-in aversion concepts (Bénabou and Tirole 2003; Dufwenberg and Dufwenberg 2018; Kajackaite and Gneezy 2017; Romaniuc 2017). Such ad hoc conceptualisations not only violate one of the core economic assumptions of payoff-maximising agents but also contribute to explaining “all apparent contradictions” that Nobel laureate Gary Becker (1976, 5) warned about. Becker argued that “the assumption of stable preferences [...] prevents the analyst from succumbing to the temptation of simply postulating the required shift in preferences to ‘explain’ all apparent contradictions to his predictions” (5).

In what follows, I present the ultimatum game and dictator game, showing how Smith's theory has been applied to these games by the scholarship applying his insights to economic decision-making. I proceed to introduce the receiver game (Tjøtta, 2019) and the dice-rolling game (Fischbacher and Föllmi-Heusi 2013). To lay the foundation for further discussion of the role of the love of praiseworthiness and the dread of blameworthiness in one-player games, I analyse answers to open-ended questions from Tjøtta's (2019) receiver game. The results from the qualitative analysis strengthen Smith's claim that the love of praiseworthiness symbolises the love of approval from our *socially* acquired character. Importantly, this love extends beyond monetary outcomes: the role of

character, deservingness, and other-regarding concerns are motivations reported not only by subjects who choose less money but also by a substantial minority of those who choose more. The paper ends with concluding remarks.

II. EXISTING APPLICATIONS OF SMITH'S MORAL THEORY

II.1. *The Ultimatum Game*

In the ultimatum game, introduced by Güth, Schmittberger, and Schwarze (1982), an anonymous person named the *proposer* (Person A) is endowed with an amount of money (\$10) and has to decide how much to keep. What is not kept is offered to an anonymous *responder* (Person B). The responder has to either accept or reject this offer. If the responder accepts the offer, the money is shared according to the proposer's initial offer ($x, 10-x$). However, if the responder rejects the offer, both players receive nothing (0, 0), as illustrated in Figure 1. The prediction is, according to game theory, a sub-game perfect Nash equilibrium in which the proposer gives as little as possible to the responder and the responder accepts any positive amount.

The results of the ultimatum game show that individuals participating in these experimental games frequently violate the equilibrium predictions (Camerer and Thaler 1995; Güth and Tietz 1990; Roth et al. 1991). The proposers offer approximately 40% of their endowment, whereas about half of the responders reject what they perceive to be unfair offers in which they would receive less than 30% of the total sum (Tisserand 2014). Hence, neither the proposer nor the responder acts to maximise material self-interest.

The scholarship on Smith has offered additional points of view that go beyond monetary outcomes, thereby enriching the decision process presented in Figure 1 (Paganelli 2009; Smith and Wilson 2018). In the Smithian sense, outcomes are secondary to the conduct governing actions; we judge others, and we know others are judging us. When determining the praise and blame of an action, we focus on why the action occurred in the first place or, as Smith puts it, the "sentiment or affection of the heart from which any action proceeds" (*TMS*, I.i.3.5, 18). We judge an action or reaction according to the cause that gave occasion to it and the consequences it produces.

Judgements that focus on causes are what Smith terms judgments of propriety and impropriety. After entering the actor's situation, we judge whether actions and reactions are appropriate to their circumstances.

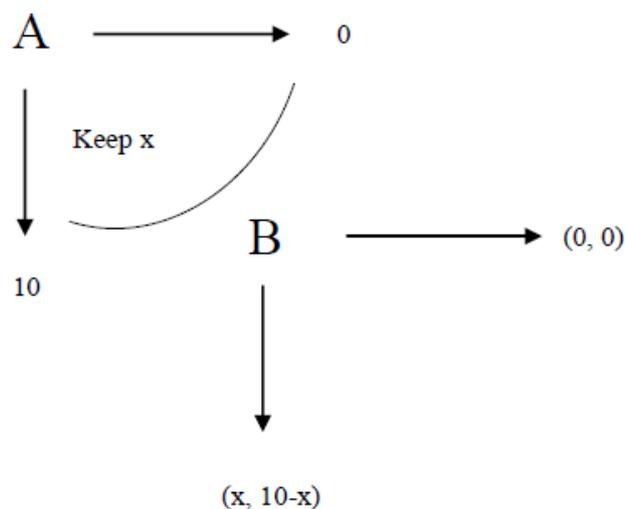


Figure 1: The Ultimatum Game

Judgments that focus on consequences are termed judgements of merit and demerit; one enters the situation of those who benefit (or are harmed) by that action, judging whether beneficial or harmful effects are proper in evoking either gratitude or resentment. Smith further maintains that we rule out the reactions of those who have a personal stake in what is happening, as that would influence moral judgement. Here, the impartial spectator enters the scene, constituting the conscience and setting an impartial (as possible) standard for what is generally deemed worthy of approval and disapproval.

To explain the responder's behaviour (Person B), the scholarship points to the relevance of reciprocity, both positive and negative (Hoffman, McCabe, and Smith 2008; Paganelli 2009; Young 2009). Positive reciprocity is present when someone reciprocates a cooperative action with gratitude, or in the economic sense, a positive monetary payoff. Negative reciprocity, or what Smith refers to as resentment, is the responder's and impartial spectator's willingness to punish non-cooperation in social exchange with a negative payoff. The responder may be willing to forego whatever was offered by Person A out of resentment because "to us, [...] that action must as surely appear to deserve punishment, which every body who hears of it is angry with, and upon that account rejoices to see punished" (*TMS*, II.i.2.4, 70).

Now, turning to the proposer's behaviour (Person A), it is plausible that they make few low offers because of their habit of seeking common ground with others. Motivated by the incentive of being granted praise and praiseworthiness and avoiding blame and blameworthiness, by both person B and the impartial spectator, the proposer uses the expected

approval or disapproval as an indicator of whether sentiments are appropriate to their causes and the merit and demerit of the consequences produced. Smith explains that “we are pleased when they approve of our figure, and are disobliged when they seem to be disgusted. We become anxious to know how far our appearance deserves either their blame or approbation” (*TMS*, III.i.4, 111). In order to achieve mutual agreement, Person A moderates behaviour according to standards that are expected to constitute appropriate behaviour and what “would be our own [conception], if we were in his case” (*TMS*, I.i.2, 9).

II.II. The Dictator Game

To probe further into what really motivates the proposer’s behaviour, experimental economists compared the ultimatum game to a new game: the dictator game (Forsythe et al. 1994; Kahneman, Knetsch, and Thaler 1986). While the ultimatum game has been an important instrument for eliciting people’s preferences for fairness and reciprocity as seen from the responder’s point of view, it suffers from a strategic confound when it comes to eliciting the genuine motives of the proposer. The act of kindness is strategic if the proposer shares money simply to *appear* generous in order to avoid rejection and blame, leaving both the proposer and recipient with no money.

In the dictator game, the *sender* (Person A) is endowed with \$10 and has to decide how much of this money to keep. The rest goes to an anonymous *recipient* (Person B). As Figure 2 shows, in contrast to the ultimatum game, the recipient of the money in the dictator game cannot reject or accept any offer made by the sender. He or she is a passive receiver who must accept whatever the sender does not keep ($x, 10-x$). The actual results of the dictator game differ greatly from these predictions. While the offers are certainly lower than in the ultimatum game, subjects still continue to allocate about 20–25% of their endowment to a random anonymous recipient (see Engel (2011) for a meta-study of dictator games).

Insights from Smith’s moral theory have also been applied to the dictator game. In particular, Paganelli’s (2009) interpretation of Smith leads her to argue that behaviour in this game emphasises that resentment does not come only from actual others, such as Person B, but the impartial “man within the breast” (*TMS*, III.3.24, 146). When actual spectators are absent (or present, but partial and in need of correcting), Person A becomes the impartial spectator of his or her own conduct and scrutinises actions and reactions according to impartial standards of moral

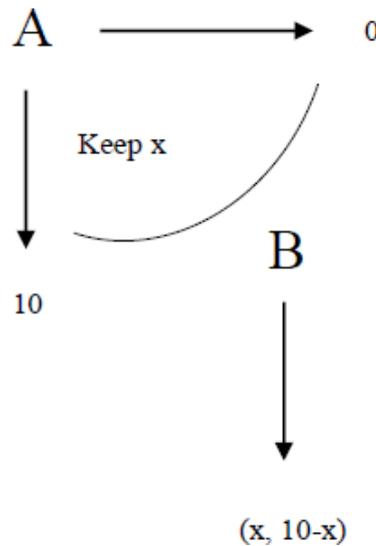


Figure 2: The Dictator Game

judgement. The spectator judges whether actions are proper (improper) to their circumstances and, after entering the situation of Person B, whether actions have merit (demerit)—whether gratitude or resentment is felt towards Person A.

Conceived this way, the behaviour of subjects in the dictator game could be explained by responding to the call of an imagined impartial spectator who “immediately calls to us, that we value ourselves too much and other people too little, and that, by doing so, we render ourselves the proper object of the contempt and indignation of our brethren” (*TMS*, III.3.5, 138). In finalising the discussion of how Smithian insights can be applied to the dictator game, Paganelli (2009) turns her attention to the importance of the moral conscience. She explains that the love of being worthy of praise and dread of being worthy of blame motivates the dictator to do the right thing, because he does not want to be rendered the proper object of hatred in the eyes of his conscience. Positing further that “the fairness observed in the experimental results may indeed have little to do with self-regarding preferences” (Paganelli 2009, 16). Hence, it is not our love of being praised that makes us behave in a praiseworthy manner, nor is it the dread of blame that motivates us to avoid it. Rather, we wish to be the proper object of praise and avoid being the proper object of blame.

III. THE RECEIVER GAME AND THE DICE-ROLLING GAME

I think that the strength and significance of Paganelli’s (2009) argument can be better illuminated by another class of games in which distri-

butional preferences (the allocation of payoffs between *self* and *other*) cannot explain the results. To encourage an entirely self-directed process of moral judgement and tease out the strength of the love of praiseworthiness and the dread of blameworthiness, one would ideally create a decision-situation resembling Smith's notion of a 'solitary place' in which experimental subjects must rely on their socially acquired conscience to make decisions with consequences affecting only themselves.

Taking this into account and stripping the dictator game of everyone except Person A, Tjøtta (2019) conducts a modified version of the dictator game in a series of anonymous receiver games, redirecting judgments of propriety (impropriety) and merit (demerit) even more towards one's conscience. By removing Person B, the decision-maker is *both* the acting agent and the agent acted upon. Thus, there is no other person present to either accept or reject an offer, as in the ultimatum game. Moreover, no one is affected by the actions of Person A, as in the dictator game.

In the receiver game, the decision-maker is asked to determine her own payoff by simply choosing how much to keep of the money that is received for partaking in the experiment, as Figure 3 illustrates. Person A can choose to keep between \$0 and \$10. Assuming that subjects are able to distinguish between situations in which reciprocity may be beneficial and situations in which there are no external benefits or costs for choosing more money over less, they should choose to keep the \$10.

Tjøtta (2019) starts by presenting the results of an experiment in which a substantial minority, 28.6% of 91 participants, decided to receive less money over more. In another experiment, even a majority chose to keep less money over more. In total, the results from seven receiver game experiments conducted with both student and representative samples corroborate this result: on average, one-third of a total of 3,503 individuals who participated in these experiments chose to keep less money instead of more.⁴

The dice-rolling game is a related yet slightly different game in which subjects also determine their own payoff. Person A is asked to roll a die and report a number they want to determine their payoff. In other words, one has the opportunity to misreport the true number and earn more money (Fischbacher and Föllmi-Heusi 2013). This is because the higher the number reported, the more money they choose to receive. Given that

⁴ In a follow-up study, Serdarevic and Tjøtta (2021) show that this finding is robust across five countries: France, Germany, United States, Croatia and the United Kingdom. Approximately 28% of subjects choose to receive less than the payoff-maximising option.

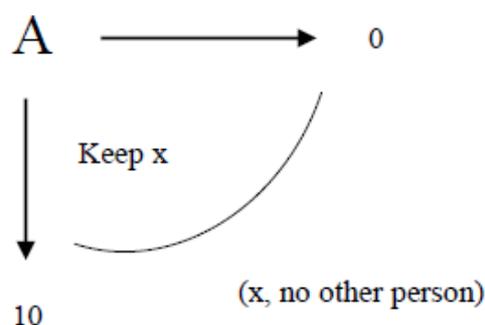


Figure 3: The Receiver Game

subjects in this game are completely anonymous to other subjects and to the experimenter, they are expected to report obtaining a higher number than they actually rolled as a way to maximise their payoff. Here too, there is no Person B, and misreporting cannot be identified at the individual level by the experimenter. Contrary to the economics prediction assuming that subjects will misreport when given the opportunity, a vast literature has shown that subjects do not take advantage of the opportunity to act in a fully self-interested fashion (Abeler, Nosenzo, and Raymond 2019; Gächter and Schulz 2016). In fact, subjects in the dice-rolling game forgo on average about three-quarters of the potential gains. Notably, there are also subjects who on average report numbers lower than they actually obtained, imposing a monetary disadvantage to themselves without improving the payoff of anyone else (Abeler, Becker, and Falk 2014; Utikal and Fischbacher 2013).

IV. THE LOVE OF PRAISEWORTHINESS AND THE DREAD OF BLAME-WORTHINESS

In so far as the experimenter's goal is to elicit subjects' genuine intrinsic motives, this is likely to be achieved by the receiver game and the dice-rolling games. However, to answer *what* this genuine motivation is comprised of and *what* encourages its existence, Smith would ask further leading questions: "What so great happiness as to be beloved, and to know that we deserve to be beloved? What so great misery as to be hated, and to know that we deserve to be hated?" (*TMS*, III.I.6.7, 113).

In asking these questions, Smith does two things. First, he reiterates that a central premise of this theory is that we want to share feelings with the people around us. He reminds us of the standards according to which we can satisfy the "original desire to please [...] our brethren" (*TMS*, III.2.6, 116) in order to be beloved and avoid being hated. Clearly, without the

natural love of praise and blame, we would risk failing to pass judgement on our own conduct as seen through the eyes of others.

Second, in the course of articulating these questions, Smith introduces another desire, expanding the definition of motivation for why we exercise self-command and dampen our self-regarding concerns: the love of praiseworthiness and dread of blameworthiness. Unlike propriety, which is generated by our sympathy and approval with and from others, the love of praiseworthiness exists independently from any actual acknowledgment of it. It provides us with the means to distinguish what is praised from what should be praised, as well as the genuine incentive to *want* to make this distinction in the first place.

In his own words:

Man naturally desires, not only praise, but praise-worthiness; or to be that thing which, though it should be praised by nobody, is, however, the natural and proper object of praise. He dreads, not only blame, but blame-worthiness; or to be that thing which, though it should be blamed by nobody, is, however, the natural and proper object of blame. (*TMS*, III.2.1, 113)

While praise and blame express the actual sentiments with regard to others' and our own conduct, praiseworthiness and blameworthiness express what these sentiments naturally *should* be (Griswold Jr 1999).⁵ Smith's empirical project of what impartial spectators (real or imaginary) will praise and blame is enriched with an additional layer of what should be praised and blamed if they were being better spectators. This love of praiseworthiness represents the natural desire of rendering ourselves the proper objects of praise and gratitude. Even if actual praise or blame is given, it provides, according to Smith, little pleasure if it is not accompanied by praiseworthiness. Unwarranted praise satisfies only "the weakest and most superficial of mankind" (*TMS*, III.ii.7, 117). The highest source of satisfaction comes from acting and reacting in ways we know to be praiseworthy. Tranquillity arises when we know ourselves to be worthy of praise, irrespective of whether it is actually being given:

⁵ Forman-Barzilai (2010, 18) suggests that one of the objectives of Smith's constant revisions of *The Theory of Moral Sentiments* was "to assert the independence of conscience" of external influences; the independence of the impartial spectator secures that there are no biases in his or her moral judgment. Müller (1993, 100) agrees and argues that Smith presents a "a theory of the development of conscience through internalization of social norms, as well as a theory of how the morally developed individual is able to ascend from moral conformity to moral autonomy".

The jurisdiction of the man without, is founded altogether in the desire of actual praise, and in the aversion to actual blame. The jurisdiction of the man within, is founded altogether in the desire of praiseworthiness, and in the aversion to blame-worthiness; in the desire of possessing those qualities, and performing those actions, which we love and admire in other people; and in the dread of possessing those qualities. (*TMS*, III.2.32, 130)

As this quote illustrates, Smith not only refines the definition of intrinsic motivation, but he also offers insights how this motivation evolves, reminding us that the love of praiseworthiness is the love of warranted praise—there is and always will be an ‘extrinsic’ element present. That we wish to conduct ourselves to satisfy the love of praiseworthiness does not mean we have built-in knowledge about what is deemed worthy of praise and what is worthy of blame in different situations. Smith explains that this natural incentive, the voice of conscience, is perfected and cultivated through “slow, gradual and progressive work” (*TMS*, VI.iii.25, 247) and our experiences with the ‘man without’. He continues to assert that “virtue is not said to be amiable, or to be meritorious, because it is the object of its own love, or of its own gratitude; but because it excites those sentiments in other men” (*TMS*, III.I.7, 113). By this reasoning, depending less and less on the praise and blame with reference to actual others and more on the deservingness of praise and blame of the ‘man within’ allows us to become more autonomous in our moral judgments (Evensky 2005) and to learn to recognise deserved praise and how to mitigate the excess of undeserved praise (Hanley 2009).⁶

But what is the natural and proper object of praise and blame in one-player games? In the dice-rolling game, subjects who are misreporting in order to receive more money are violating a relatively clearly defined norm; the shared perception that honesty is the most appropriate action (Lois and Wessa 2021; Serdarevic 2021). By eliciting norms in the receiver game, however, Tjøtta (2019) reveals that only a minority of actual spectators deemed keeping the entire endowment as very socially inappropriate. Hence, even if subjects had chosen to keep more money, this would not necessarily have resulted in more disapproval from others. To

⁶ Sivertsen (2017) offers an interesting discussion on how the love of praiseworthiness may have evolved and contrasts his view with Hanley (2009), claiming that the love of praiseworthiness is a love redirected in the sense that our desire to be approved by others teaches us to view ourselves as others see us, how they *would* judge us had they been better informed, and how they *should* judge us as impartial spectators. A similar argument is offered by Uyl and Griswold Jr (1996).

understand what judgements could be at play in the receiver game, it is useful to consider Smith's criteria of how we judge the 'sentiments of mankind, with regard to the merit or demerit of actions':

Whatever praise or blame can be due to any action, must belong either, first, to the intention or affection of the heart, from which it proceeds; or, secondly, to the external action or movement of the body, which this affection gives occasion to; or, lastly, to the good or bad consequences, which actually, and in fact, proceed from it. These three different things constitute the whole nature and circumstances of the action, and must be the foundation of whatever quality can belong to it. (*TMS*, II.iii.intro.1, 92)

Firstly, as Smith asserts, what qualities must belong to an action, what is praiseworthy and what is blameworthy, can indeed be judged according to the outcomes that action produces. If we understand the love of praiseworthiness as the incentive to make a sacrifice or, as Hanley (2009) puts it, letting go of familiar pleasures, then choosing less money could certainly satisfy this criterion. When subjects are placed in a decision situation constructed to resemble "some solitary place, without any communication with his species" (*TMS*, III.1.3, 110), they bring with them the acquired "habit of conceiving" the approbation that should come from praiseworthy conduct, even if "admirers may neither be very numerous nor very loud in their applauses" (*TMS*, VI.iii.31, 253). This habit comes to represent a higher tribunal that makes up the motivation to exercise self-command, restraining them from doing something that might tamper with how they view their own character. Being spectators of themselves as acting agents, a substantial minority of subjects in the receiver game (22.6%) indeed seem to be able to let go of familiar pleasures, such as money, that are a driving force in many lives.

But monetary outcomes are not the end of the story in judging the praiseworthy and blameworthy qualities of an action. Moving forward, Smith emphasises the importance of intentions, arguing that:

The two last of these three circumstances [external action and consequences] cannot be the foundation of any praise and blame, is abundantly evident [...] the only consequences for which he can be answerable, or by which he can deserve either approbation or disapprobation of any kind, are those which are somewhat intended. (*TMS*, II.iii.intro.3, 93)

In the continuation of his argument, Smith thus carefully reminds us that intentions are what is truly laudable or blameable. Clearly, actual consequences which happen to proceed from any action have a very great effect upon our sentiments, but actions and outcomes must be judged in relation to intentions. Notably, we do not only reveal our intentions to others, like in two-person games, in the hope of recompense and acclamation, but also to ourselves, in the hope of self-applause because “no action can properly be called virtuous, which is not accompanied with the sentiment of self-approbation” (*TMS*, III.6.13, 177). By seeing ourselves from without, we are able to predict the judgements of others in our imagination. We moderate our self-interest because we know that we would be loved by others and, indirectly, by ourselves. If we follow Smith and Wilson (2019) in viewing intentions in experimental games as the alternative cost of the action taken, subjects choosing less money over more are paying a higher monetary cost, revealing less self-interested motives than those who choose more. An additional way to reveal subjects’ intentions is to ask *what* motivated their choice.⁷

IV.1. Analysis of the Receiver Game

Tjøtta (2019) analyses subjects’ answers in the receiver game, showing that many mention reasons consistent with non-distributive norms as an explanation for receiving less money (see his Table B1 page 75 for transcripts). I obtained the experimental data from Tjøtta for the purpose of analysing the qualitative data, paying particular attention to whether subjects mention reasons that pertain to moral character and how they judge deservingness in the receiver game setting.⁸ The centrality of these concepts flows from the idea that praiseworthiness is encouraged and supported by the habit of self-evaluation and self-approbation. Praiseworthiness supposes the human ability to imagine what deserves approval,

⁷ Many, myself included, have tended to ask subjects to explain their choices once their behaviour deviates from how we commonly think about motivation: more money being more desirable than less. But from Smith’s theory it becomes clear that the *why* question transcends outcomes, highlighting the importance of intentions, something to which scholars are increasingly paying attention. In addition to Tjøtta (2019), see, for instance, Capizzani et al. (2017) and Aguiar, Branäs-Garza, and Miller (2008), who incorporate qualitative data to analyse behaviour in the ultimatum game and moral motivations for subjects’ giving behaviour in the dictator game, respectively.

⁸ To avoid biasing my interpretation, a research assistant categorised the answers from Tjøtta’s (2019) Experiment 6, in which a representative sample of the Norwegian population chose whether to receive more or less money before answering what motivated their choice. The coder only saw the text answers, not the choices made by subjects. This was done to minimise attribution bias whereby the coder assigns intentions to the subjects’ answers based on knowledge about their monetary choice.

without regard for what would actually be approved by someone. Furthermore, evaluating the deservingness of what is bestowed upon us—humbling down the elevation of mind when brought about from groundless acclamation or reproach—is what motivates us to continue seeking worthiness itself. Of course, the text analysis will not reveal whether the subjects' behaviour was grounded in the love of praiseworthiness or fear of blameworthiness. Still, one can examine whether they use reasons related to their character, esteem, or deservingness when asked to explain their behaviour.

A total of 1019 subjects were informed that:⁹

As a participant in the Norwegian Citizen Panel, you are being included in a drawing for an extra monetary prize. If you win, you can choose to receive 1000 kroner or 1800 kroner. Which would you choose? Please tick one of the options:

Yes, please, I would like to receive 1000 kroner

Yes, please, I would like to receive 1800 kroner

Table 1 in Panel A shows that among those who chose less, three predominant categories stand out: reasoning about one's character (9%), deservingness (21%), and other-regarding concerns (21%).¹⁰ The first group was concerned about whether they view themselves as morally upright people, mentioning reasons such as virtue, humility, and modesty for receiving less money. The second group reasons whether the amount chosen (forgone) was deserved given the particular game-setting, arguing that they had not done enough work to deserve more money. The latter group reported that they intended to give the money to charity and that the remaining amount could go to someone who was struggling.

Turning the focus to subjects choosing more in Table 1, Panel B reveals an interesting pattern: subjects choosing more money also offer reasons that are consistent with concerns for character, deservingness, and others, albeit with a somewhat different image according to which they

⁹ See page 74 in Tjøtta (2019) for experimental instructions. Note that 1000 Norwegian kroner corresponded to 115 USD at the time of the experiment.

¹⁰ Some subjects' answers were removed from the data for anonymity reasons, leaving a text-analysis sample of 927 answers. Following Tjøtta (2019), I use 214 (93.0%) answers of those who chose less and 713 (90.4%) of those who chose more. Subjects whose answers could not be classified or consisted of multiple motivations were categorised as 'combination'. Twenty percent among those who chose less fell within this category, while this was the case for 7% of those choosing more. For simplicity, these categories are not depicted in Table 1.

A. MOTIVATION	N	LESS MONEY EXAMPLES
Character	19/214	I am modest. I am not greedy. I don't like to be greedy. I like to view myself as unique. Humility. I do not like greed-culture. Showing moderation. Modesty. Virtue. I am showing virtue. I do not want to be demanding. I am not motivated by money. Defiant.
Deservingness	46/214	The amount is large enough for this kind of participation. One should do this without getting paid. I do this voluntarily and do not need to get paid. My participation is not worth that much. A lot of money for such little effort. 1800 is too much money for 20 minutes. I do not deserve more for this.
Other	44/214	I will give to charity. Buy something nice for my wife. There are other people who need it more than me. The remaining 800 could be given to someone who is struggling. Can be used for good causes. I want to give the money to a charity, i.e., help to Syria. Give to charity. Others need it much more than me. Let the rest go to charity. The rest can go to Doctors without Borders.
Experimenter	7/214	Research is expensive. Perhaps you can use the remaining money for a 'research pot'. So that the Norwegian Citizen Panel can use the money for something else. More money for future research. Less costs of research. Money can be used for some research.
Value of money	29/214	Money is not everything in this world. Other things than money matter too. I have enough money. Money is not everything although we do depend on money. One does not always need to have the most. I do not need more money.
Misunderstand	25/214	Higher probability of winning. I thought the chances were higher. Possibility of winning is higher. More people can get 1000, chances to receive increase. Maybe more people can be drawn if I choose less. So that more people can win. I don't want it all. Maybe more people can win if I don't take it all.
B. MOTIVATION	N	MORE MONEY EXAMPLES
Character	39/713	Not a saint, need the money. Mostly greed. I am just being sincere. I do not want to pretend to be modest. Being modest is not a virtue here. Pure selfishness. Because of my greed. I just want to be honest. Honesty. I do not want to be falsely modest. The more you have, the more you will want.
Deservingness	39/713	I deserve this. My effort is worth that much. Deservingness. It takes time to answer these questions. I assume that others would do it, but I really think this should be done for free. Because of my willingness to contribute. This is the price for my work. My time costs that much. I am a student with no income so I feel I deserve it.
Other	65/713	Will donate part of it. Will give to Amnesty. Useful in the family budget. To share it with my grandkids. Buying shoes for my kid. Could benefit my family. I will give my children extra money for their education. Will share it with the missus. Can be paid forward to Doctors without Borders. Give to cancer research. Give to the local football club.
Experimenter	1/713	I am a student with a loan, I do not think the extra 800 would harm the finances of Norwegian Citizen Panel much.
Value of money	509/713	I really need the money. Cash is king. 1800 is 80% more than 1000. Money is good and more money is better. The size of the sum. More is more useful. Higher sum. Because it is more money. It was a better offer and 1800 is more valuable to me. The more money the merrier. Simple: 1800 is more worth than 1000. Money is freedom.
Misunderstand	10/713	I do not get the question. Because people think they have a higher chance of winning. Probably a trick question with respect to taxation.

Table 1: Classification of randomly chosen open-ended answers in the receiver game

view themselves and the context of the receiver game.¹¹ Answers related to subjects' character (5%) emphasise that being modest is not necessarily a virtue in this setting, but that they indeed view themselves as honest. Choosing more is the sincere action and they do not want to be falsely modest. In terms of deservingness, subjects argue that this is the price for their attendance and that they therefore deserve the highest payment (5%). Approximately 9% of those who choose more state that they intend to share the money with others such as charities, grandchildren, friends, and family members.

Clearly, subjects could have preferences towards the experimenter: choosing less money means more money left for the experimenter. The reality is that in any experiment, there is at least one person conducting the experiment, making this person a spectator to take into account. Consider the ultimatum game in which a receiver chooses to reject the proposer's offer. This results in neither party receiving any money. In practice, this would mean that the entire endowment is left to the experimenter. As with the receiver game, there is no information where the remaining money goes. If subjects are systematically affected by whether their choices earn them the approval of the experimenter, then this could compromise the interpretation of many experiments. Three percent of subjects who chose less money mentioned research. One percent choosing more did the same. In economics, concerns for the experimenter are interpreted as a challenge, as all researchers ideally want to reveal the true preferences of their subjects and not what they think the researcher(s) wants (Zizzo 2010).¹² Finally, the receiver game is about receiving money. Subjects choosing less seem to reason about the value of

¹¹ Most situations that involve communication enable people to engage in cheap talk whereby they make unverifiable statements about private information and future action out of concern for appearances (Crawford and Sobel 1982). While this may be a challenge in general when it comes to interpreting text-answers, one could be particularly worried that those who choose more money and say that they intend to share it with others, do this to rationalise their choices to appear other-regarding or, in Smith's words, "appear to be fit for society" (*TMS*, III.2.7, 117). Still, even this would reveal that subjects are aware of some general rule of conduct that governs this particular situation and their need to maintain conformity between their action and the seeking of praise and praiseworthiness. Recall that Smith is open about the fact that we are not making judgements based on principles a "perfect being would approve of" (*TMS*, II.i.5.10, 77) and that moral judgements will never be perfectly impartial beyond any doubt. We gradually learn how to turn the lens inward and become better and more impartial in our self-evaluation.

¹² Frank (1998) shows that burning money in front of the subjects instead of letting the experimenter keep it makes no difference to the subjects' behaviour. Chlaß and Moffatt (2017) find that, if anything, concerns for the experimenter are negatively related to generosity, meaning that that subjects would choose more money if the experimenter's role was influencing their behaviour.

money differently than those who choose more: whereas 14% of subjects who choose less argue that more money is not necessarily always better and that other things in life also matter (see category ‘Value of money’ in Table 1), 71% of those who choose more simply argue that more money is more useful, revealing no further motivation.

It is also worth mentioning that the simplicity of the receiver game may make it easy to misunderstand its rules. Typically, in economic experiments, subject comprehension is about identifying the selfish best response and the social welfare-maximizing strategies (Bartke et al. 2019). Of those who chose more, 1% were classified as misunderstandings; 12% of those who chose less gave answers that could be consistent with misunderstanding (i) the probability of being drawn to receive the money, and (ii) that choosing less did not increase the probability of someone else receiving it. Some subjects believe that taking less increases their own chances of being drawn for the money, while others think that choosing less would increase the chances of someone else in the experiment. Notably, this latter reason of misunderstanding is related, yet different from the ‘Others’ category reported in Table 1. The main difference being that subjects who are classified as having other-regarding concerns state that they intend to personally give the money to others or that the remaining money should go to someone who needs it more. They do not use the probability of being drawn as a reason for choosing less—which is independent of subject’s choices in the receiver game.

V. CONCLUDING REMARKS

Simple questions like ‘Do you want more or less money?’ are not always accompanied by simple answers. While I agree with the economics literature that choosing less over more may be consistent with intrinsic motivations, this explanation invites deeper questions: What is this intrinsic motivation comprised of? Why act on what you think is right even when it does not get you praise from other people? Why avoid acting on what you think is blameworthy even when no one is watching? Is the love of praiseworthiness and fear of blameworthiness in experimental games only determined by monetary outcomes? Presented in these terms, I have argued that there is still need for a theoretical account that can explain the process through which we learn to seek worthiness and act consistent with it.

Smith offers such a theoretical account. To know what is praised and blamed is a first step on the road toward virtue, but to be virtuous we

need something more that motivates us to enforce these standards upon ourselves in different contexts. My reading of Smith prompts me to believe that this ‘something’ is the love of praiseworthiness and dread of blameworthiness. This additional component Smith adds to his analysis is important in order to understand the development and role of the moral conscience. Having an interest in others and fearing their resentment cannot alone explain the evolution of other-regarding behaviour. Rather, the evolution of moral agency depends on another incentive, an inner strength to do what one perceives to be right.

In this paper, I have argued that this inner strength is likely to be highlighted in the receiver game. Having established that a substantial minority of subjects in one-player games choose less money, I proceeded to show that, for the most part, the motivations provided by those who chose less differs from those who chose more. The majority of those who chose less offered reasons related to some sense of self-satisfaction and inward tranquillity—feelings associated with the knowledge that they have acted in a worthy manner even in the absence of actual spectators. The majority of those who chose more simply argued that more reward is better and less is worse. Still, the analysis challenges common dichotomous perceptions of what motivates behaviour in economics experiments, where those who choose less are often portrayed as altruistic or motivated by genuine moral concerns. Those who choose more as non-cooperative or having selfish motivations. Applications of Smith’s theory to understand subjects’ open-ended answers in a one-player game refines and nuances these perceptions—those who choose more also engage in the same self-approbation process as those who choose less. In fact, a substantial minority evaluate their own character and deservingness, and reveal intentions that take into account others’ well-being in addition to their own.

Notably, and as already indicated in the introduction, the relevance of an inner strength to do what one perceives is right is not new to economics (Bénabou and Tirole 2003; Bénabou and Tirole 2006; Fehr and Schmidt 1999). Borrowing from social psychology, economists have defined extrinsic motivations as pure externally motivated rewards such as money and praise, at one extreme. For instance, we wish to avoid rejection by responders in the ultimatum game; we do not want to lose money and the praise from the responder. However, this type of motivation does not make us pursue an action for its own sake or value. At the other extreme, intrinsic incentives have been introduced as a residual motivation, giving

enjoyment and utility for its own sake, and often viewed independent (negatively correlated) of financial incentives (Remic 2021). Still, this interpretation only seemingly delineates the underlying process that drives this impulse.

Smith's moral theory, as I read it, deepens and compliments such intrinsic motivation explanations, but is grounded in a rich theoretical system that focuses on the *social process*, on the evolvment of "the excellent and praise-worthy character, the character which is the natural object of esteem, honour, and approbation" (*TMS*, VII.I.2, 265). My argument echoes Bénabou and Tirole (2006) who similarly look to Smith and self-image concerns to shed light on the channels and mechanisms involved in sustaining and inhibiting intrinsic motivations, emphasising the role of deservingness and self-evaluation through the eyes of other fair and impartial spectators. I think Smith's theory of motivation is a source of insightful alternative interpretations and explanations; what experimentalists have to date termed 'intrinsic costs,' 'guilt aversion,' 'greed aversion' and 'intrinsic honesty' as explanations to forgone money in one-player games could be related to what Smith refers to as the self-directed remorse that arises when we know ourselves to be blameworthy. Similarly, self-directed gratitude arises when we know ourselves to be praiseworthy.

As mentioned by Paganelli (2009) in the opening paragraph, Smith can indeed contribute to illuminating yet another experimental puzzle.

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