Values we learn from our parents influence our trust in others with money and business

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Daily life often entails assessing the trustworthiness of others and deciding whom to trust, a fact not lost on economists. Nobel laureate Ken Arrow (1972) famously asserted that trust is a prerequisite for most economic activity. A subsequent large and lively literature in economics documents strong relationships between nations' general levels of trust and everything from GDP growth to cross-country trade patterns (Knack and Zak, 2001; Knack and Keefer, 1996; Guiso et al., 2004; Tabellini, 2008; Algan and Cahuc, 2010; Guiso et al., 2009).

Despite the undeniable importance of trust individually and societally, surprisingly little is known about the determinants of trusting behaviour. For example, while common sense dictates one determinant of trusting behaviour must be our assessments of others' trustworthiness — "trust beliefs"— little is known about what shapes trust beliefs or even whether they in fact do substantially drive trusting behaviour.

Furthermore, a moment's introspection reveals that trusting behaviour depends on pecuniary considerations, monetary risk and reward, but that this cannot be the entire story. In line with this intuition, previous research suggests that both pecuniary and non-pecuniary factors ("betrayal" or "control") play some role.

However, it remains unclear which non-pecuniary factors are particularly important or persistent and precisely how these factors affect trust (Bohnet and Zeckhauser, 2004; Cox, 2004; Ashraf, Bohnet and Piankov, 2006; Bohnet, Greig and Zeckhauser, 2008; Butler and Miller, 2015; Bolton, Feldhaus and Ockenfels, 2016).

As part of an ongoing research agenda, in a new paper we seek to shed light on the determinants of trust and trust beliefs using experimental evidence from the so-called **trust game**. In this game, one person (the sender) sends money over to someone else (the receiver). The amount is automatically increased upon arriving with the receiver, who in turn can return all, some or none to the sender.

Because receivers are unconstrained in their decisions, senders' choices can plausibly be interpreted as trusting behaviour.

To allow us to investigate precisely how and to what extent moral concerns drive trust, we focus on a particularly relevant (im)moral phenomenon, cheating, and elicit participants' own subjective notions of what constitutes cheating in the trust game. Relating these personal cheating notions to behaviour on both sides of the trust exchange allows us to investigate the role of moral concerns in trusting behaviour.

Our results show that, as expected, expected monetary returns play a large role in senders' trust decisions.

However, we also find that moral concerns play a surprisingly large direct role in determining trusting behaviour: controlling for pecuniary factors (expected monetary returns) we estimate that the likelihood of ending up feeling cheated exerts a direct influence on how much senders trust. That is comparable in magnitude to the influence of risk aversion, a more traditionally recognised determinant of trust.

Alongside this direct relationship, we also uncover indirect channels through which moral concerns affect trusting behaviour. One such indirect channel operates through senders' trust beliefs. Starting from receiver behaviour, we find that receivers try to not leave their anonymous co-players feeling cheated. Since there is no consensus on what cheating entails — more on patterns in cheating notions below — this requires receivers to guess about what senders will consider cheating.

Our evidence suggests receivers' guesses are strongly correlated with receivers' own personal cheating notions, a pattern consistent with the psychological phenomenon of "false consensus" (Ross, Greene and House, 1977*) in which individuals tend to think others are similar to themselves.

Returning to senders' trust beliefs, astoundingly we find that senders apparently anticipate receivers' thought processes: there is a strong positive relationship between senders' own cheating definitions and how much money senders believe receivers will return to them. This chain of findings suggests that cheating notions may play an indirect role in trusting behaviour by affecting senders' beliefs about the expected monetary returns from trusting.

Where do our definitions of cheating come from?

Since moral considerations, as manifested by subjective cheating definitions, play a strong direct and indirect role in trusting behaviour, the obvious question arises: where do these definitions come from?

Our study provides suggestive evidence for one source: parentally instilled values. We survey participants about the particular values their parents taught them during their upbringing and classify the list of values into two categories: **pro-social values**, such as altruism and cooperation; and **pro-competitive values** like striving to be better than others.

We find that pro-competitive values are strongly associated with higher cheating definitions, i.e., needing higher monetary returns in order to not feel cheated, while pro-social values substantially relax, or lower, cheating definitions.

Two types of definition for cheating

Moreover, we find that cheating definitions themselves tend to fall into one of two categories. While the vast majority of participants would feel cheated by a negative return on their trust/investment (rule 1), a substantial fraction of senders demand fully half of their receiver's entire earnings in order to not feel cheated (rule 2).

Rule 1 is the rule most previous trust research has implicitly assumed defines trustworthy behaviour (*cf.* Bohnet and Zeckhauser, 2004). Rule 2, on the other hand, is a novel finding and is surprisingly stringent.

In our experiment senders *start out* ahead, receiving a substantial positive initial endowment while receivers begin with nothing. Consequently, the second cheating notion may be rationalised as a rule that preserves the senders' initial advantage—which seems to comport well with a values system emphasising competitiveness.

Beyond satisfying our intellectual curiosity, what does our study tell us about the real world? In previous research, we make the argument that if trust beliefs drive trust behaviour, which in turn affects economic success, then *persistently* mistaken trust beliefs may entail substantial economic losses (Butler, Giuliano and Guiso, 2016b). There, we document that lost income attributable to mistaken trust beliefs is of the same order of magnitude as the income lost by forgoing college. We provide complementary evidence in Butler, Giuliano and Guiso (2015) and, moreover, link trust beliefs to parentally-instilled values.

Values induce persistence in mistaken trust beliefs

Our current study digs deeper into the relationship between instilled values and trust beliefs to reveal channels, both direct and indirect, through which values might induce *persistence* in mistaken trust beliefs.

Through subconscious and universal processes like false consensus our own personal notions of what constitutes cheating colour our trust beliefs. Since cheating notions themselves are likely to be persistent, being driven by parentally-instilled values, the errors they introduce into trust beliefs may also persist.

To summarise, economists have singled out trust as an important phenomenon for understanding both individual and societal outcomes. However, surprisingly little is currently known about the determinants of trust. Building on previous research documenting a role for both pecuniary and non-pecuniary factors, in the current study we show that moral considerations play an intriguingly substantial and varied role.

Parentally-instilled values shape individuals' notions of what constitutes cheating so that variation in these values may ultimately persistently colour trusting behaviour. Understanding more fully the complex interplay between trust beliefs, instilled values and automatic psychological process such as false consensus may enhance our understanding of the individual, cultural and societal and determinants of trust.

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- *The post gives the views of the author, not the position of LSE Business Review or the London School of Economics.*
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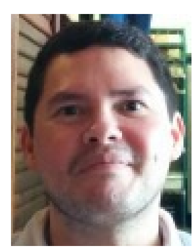

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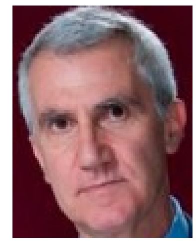

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