

# Tough Love, Intergenerational Altruism, and Worldviews

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## Abstract

This paper discusses the tough love model of intergenerational altruism we developed and some of on-going empirical research on tough love behavior in survey data collected in Japan and United States. The tough love model modifies the Barro-Becker standard altruism model in two ways. First, the child's discount factor is endogenously determined, so that low consumption at young age leads to a higher discount factor later in her life. Second, the parent evaluates the child's lifetime utility with a constant high discount factor. The tough love model predicts that transfers from the parent will fall when the child's discount factor falls. This is in contrast with the predictions of the standard altruism model that transfers from parents are independent of exogenous changes in the child's discount factor. In the empirical work, the hypothesis that parents' tough love behavior is affected by their worldviews is investigated.

## 1 Introduction

This paper discusses the tough love model of intergenerational altruism we developed in Bhatt and Ogaki (2008) and some of on-going empirical research on tough love behavior by Horioka, Kamesaka, Ogaki, and Ohtake (2008).<sup>3</sup> In the empirical work, the hypothesis that parents' tough love behavior is affected by their worldviews is investigated.

How different generations are connected is an important economic issue with implications for individual economic behavior like savings, investment in human and physical capital and bequests which in turn affect aggregate savings and growth. It also has nontrivial policy implications as in Barro (1974), who has found that there will be no net wealth effect of a change in government debt in the standard altruism model. Infinite horizon dynamic macro models are typically based on the standard altruism model proposed

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by Barro (1974) and Becker (1974) in which the current generation derives utility from its own consumption and the utility level attainable by its descendant.

A striking implication of the standard altruism model is that when the child becomes impatient, transfers from the parent to the child do not change when the child is borrowing constrained as we will show in Section III. This implication of the model is not consistent with recent empirical evidence on pecuniary and non-pecuniary parental punishments (see Weinberg (2001), Hao, Hotz, and Jin (2008), and Bhatt (2008) for empirical evidence). For example, imagine that a child befriends a group of impatient children and suddenly becomes impatient because of their influence. As a result the child starts to spend more time playing with the new friends and less time studying. In worse cases, the child starts to smoke, drink, or consume illegal drugs (see Ida and Goto (2009) for empirical evidence that shows association of low discount factor and smoking). At least some parents are likely to respond by pecuniary punishments such as lowering allowances or non-pecuniary punishments such as grounding.

In Bhatt and Ogaki (2008), we modified the standard model so that it implies that the parent lowers transfers to the child when the child exogenously becomes impatient under a wide range of reasonable parameters. For this purpose, we developed and studied a *tough love* model of intergenerational altruism, in which the parent is purely altruistic to the child, but exhibits tough love: he allows the child to suffer in the short run with the intent of helping the child in the long run.

We modeled parental tough love by combining the two ideas that have been studied in the literature in various contexts. First, the child's discount factor is endogenously determined, so that low consumption at young age leads to a higher discount factor later in her life. This is based on the endogenous discount factor models of Uzawa (1968) except that the change in the discount factor is immediate in Uzawa's formulation whereas a spoiled child with high consumption progressively grows to become impatient in our formulation. Recent theoretical models that adopt the Uzawa-type formulation include Schmitt-Grohé and Uribe (2003) and Choi, Mark, and Sul (2008). Second, the parent evaluates the child's lifetime utility function with a constant discount factor that is higher than that of the child. Since the parent is the social planner in our simple model, this feature is related to recent models (see Caplin and Leahy (2004); Sleet and Yeltekin (2005), (2007); Phelan (2006), and Farhi and Werning (2007)) in which the discount factor

of the social planner is higher than that of the agents. We reviewed empirical evidence of these two ideas in Section II of Bhatt and Ogaki (2008).

We focused on the role of the parent in molding the time preference of the child. Our model is closely related to Akabayashi's (2006) and Doepke and Zilibotti's (2008) model in that the parent takes actions in order to affect the child's discount factor in these models. The main difference from our model is that these authors adopt a Becker-Mulligan (1997) type formulation of endogenous discounting so that the child becomes more patient when her human capital is higher. In contrast, we adopt an Uzawa-type formulation for our model. In Akabayashi's model, the child has endogenous discounting and the parent evaluates the child's lifetime utility with a fixed discount factor. Together with asymmetric information about the child's ability, Akabayashi's model can explain abusive repeated punishments by parents under certain parameter configurations. In Doepke and Zilibotti's model, the parent uses the child's discount factor to evaluate the child's lifetime utility. They use their model of occupational choice to account for a number of observations about the British Industrial Revolution.

In the future, it will be interesting to analyze the characteristics of parents who exhibit tough love in their children's upbringing. For this purpose, Horioka, Kamesaka, Ogaki, and Ohtake (2008) are analyzing Osaka University Center of Excellence (COE) Survey data for the United States and Japan as well as other survey data collected in Japan. Their preliminary empirical results suggest that more U.S. parents show tough love to young children than Japanese parents. They are investigating the hypothesis that parents' tough love behavior is affected by their worldviews.

## 2 Tough Love and Worldviews

Whether or not a parent exhibits tough love to his children may depend on his worldview, especially the worldview about how he views suffering. If the parent views suffering as meaningless, then it is harder for him to let his children suffer. This discourages the parent to exhibit tough love children's upbringing. For example, in the Naturalistic Worldview, things happen randomly without meaning, and suffering is often viewed as meaningless. On the other hand, if the parent views suffering as meaningful, then it is easier for him to let his children suffer. This encourages the parent to exhibit tough love. For example, if the parent has the Christian Worldview in which

loving God is in control, then suffering is often viewed as trials given by God for educational purposes. The hypothesis that worldviews of parents affect their tough love behavior is investigated by Horioka, Kamesaka, Ogaki, and Ohtake (2008).

### 3 Conclusion

The simulation results for the tough love model for a reasonable range of parameter values show that as the child becomes more impatient, the parent reacts by cutting down transfers in an attempt to inculcate a more patient consumption behavior. This is consistent with our intuition of tough love parenting. This is in contrast with the standard altruism model, in which the parent does not change transfers when the child becomes impatient.

Since exogenous changes in the child's discount factor to make him impatient are likely to cause behavior that calls for the parent's corrective actions, the tough love model is more consistent with empirical evidence on parental punishments than the standard altruism model.

In Bhatt and Ogaki (2008), we abstracted from Becker-Mulligan type human capital investment, which increases the discount factor for the child. It will be interesting to incorporate such an aspect into our tough love model. Another possible extension is to think of a dynasty of tough love altruists where the parent in each generation uses the discount factors he has attained to evaluate the child's life time utility function. In this multigenerational set up another useful generalization is to allow for heterogeneity in altruistic preferences of the parent. We can think of two types of parental altruistic preferences in the model : one with an endogenous altruism motive and the other with a tough love motive. The parent will act as in the endogenous discounting altruism model if he does not appreciate what the grandparent ( his own parent) with a tough love motive did in the sense of Section V and the parent who appreciates what the grandparent did will act as in the tough love altruism model. This can lead to a model with parents who have both tough love altruism and endogenous discounting altruism where some families will oscillate between the two types of altruism over generations.

In their preliminary empirical results, Horioka, Kamesaka, Ogaki, and Ohtake (2008) have found that more U.S. parents exhibit tough love than Japanese parents. One hypothesis under their investigation is that worldviews of the parents affect their tough love behavior.

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