



# The Thought That Counts: Towards a Rational Theory of Gift-Giving

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## Introduction

From an economic perspective, gift-giving in social relationships makes little sense due to the inefficiencies that arise from commonly mismatched gifts and preferences. The simplest theory of consumer choice says that the welfare-maximizing strategy is to give cash rather than attempt to guess the recipient's preferences.

With the average American spending nearly \$900 every holiday season on Christmas gifts alone, economist Joel Waldfogel estimates that a tenth to a third of this spending is destroyed due to poorly chosen gifts. But if non-monetary gifts were so inefficient, then why are they still so frequent? In fact, cash accounts for less than 15% of all gifts to college-aged recipients.

The common rationale put forth for gift giving is that "it's the thought that counts," reminding us that people do in fact value gifts above their price tag because of the added sentimental value. But how exactly does one quantify "sentimental value," and does it really trump the benefits of giving cash?

**Problem** How can one quantify sentimental value?

## Hypothesis

The purpose of my research is to use effort as a measure of sentimental value in order to explain why traditional tenets of efficient exchange poorly predict patterns of gift-giving. The motivation here is that gifts are rarely ever given as a purely economic transfer of wealth, but rather as a signal of one's commitment to maintaining a relationship. Everyone can agree that gift-giving is not an easy task, involving time, effort, and imagination. While cash is economically more efficient, it is too impersonal and unlikely to endear you to your recipient.

I suggest a theory in which individuals give gifts in order to demonstrate to their recipient that they exerted effort in choosing a gift. My hypothesis is that if individuals care about being perceived as a thoughtful friend, then they will choose to give non-monetary gifts, either by actually exerting effort or by guessing.

## Model

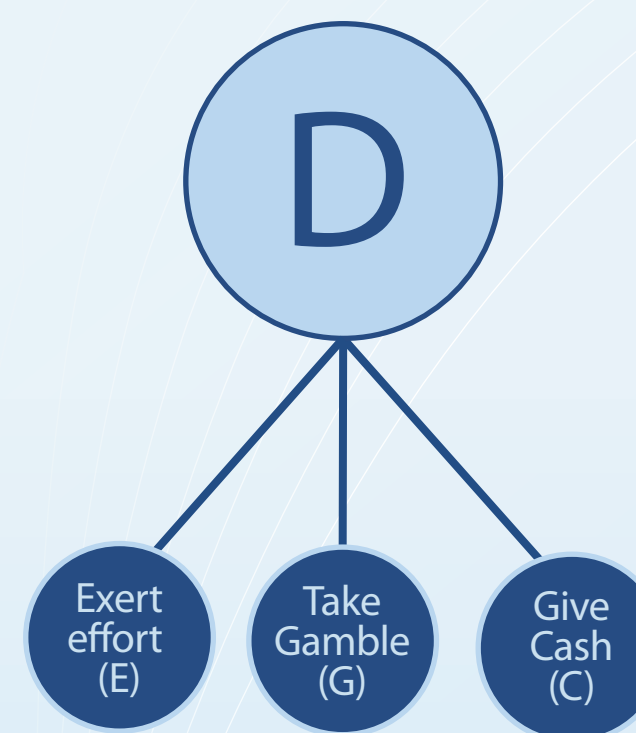
Consider the simple gift-giving scenario: the donor (D) wants to give a gift to a friend, the recipient (R). The donor can choose between two equally-priced gifts, A and B, where nature determines whether recipient likes either A or B, but not both. The donor also has the option of giving a cash amount equivalent to the cost of the gift. The recipient derives a utility of 1 from receiving the correct gift or the cash amount, and no utility from the wrong gift.

The donor has the option of exerting effort to determine the exact preferences of the recipient, in which case we assume he will surely discover which gift the recipient prefers and select the correct gift. The recipient can make a conjecture,  $\hat{e}$ , about the donor's effort based on the gift he observes.

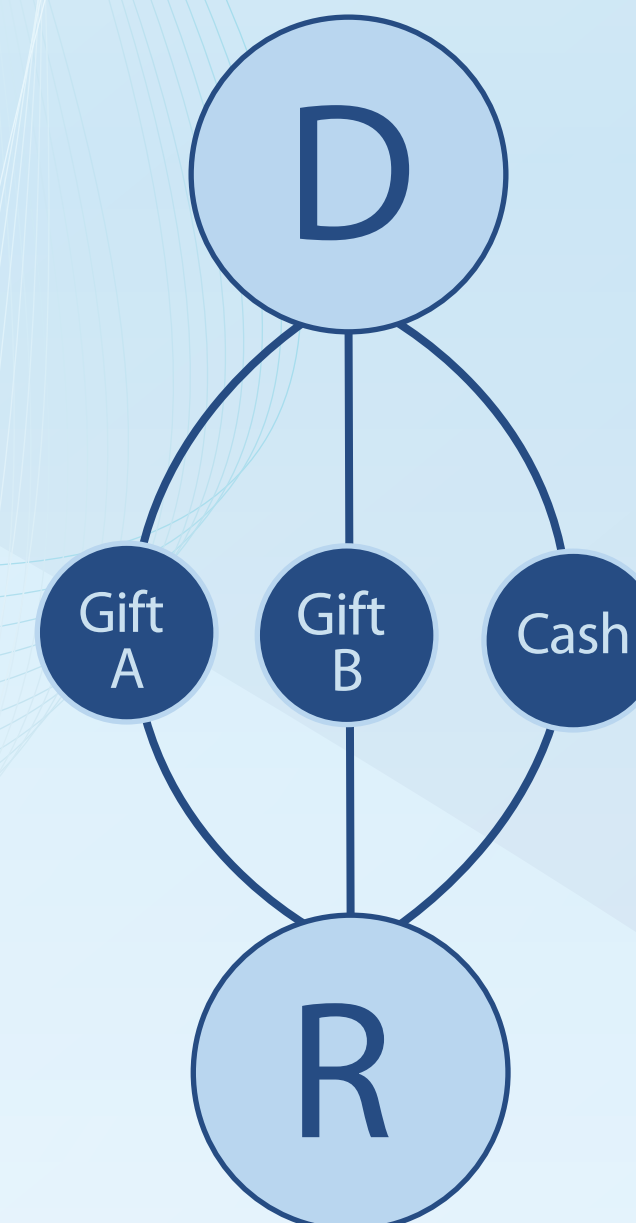
Effort can be in the form of anything that incurs an opportunity cost: spending time to get to know the recipient better, being perceptive about what he might enjoy, contacting friends or relatives, or even just taking the time to think about what would please him or her.

Outcome	Conjecture
Cash gift	No effort
Incorrect gift	
Correct gift	Maybe effort

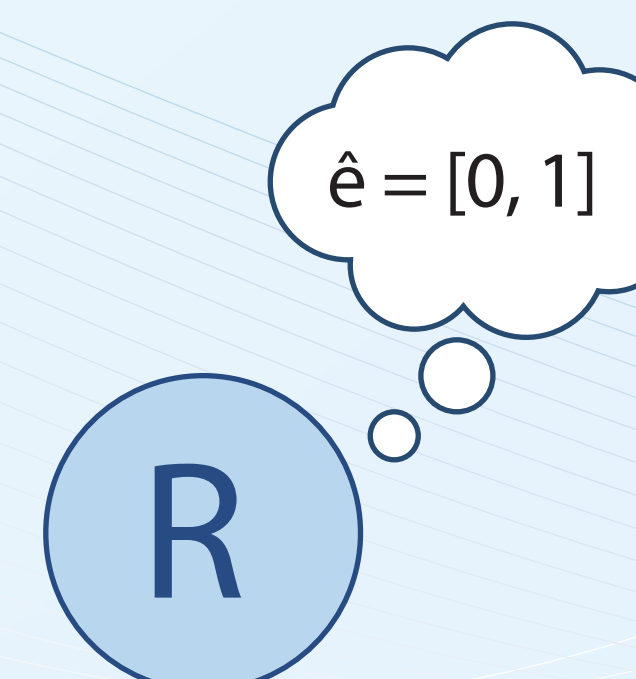
1. Donor selects action



2. Recipient observes gift



3. Recipient makes conjecture about donor's effort



## Model, continued

The donor's utility can be expressed as the following additively separable function:  $U^D = \alpha W + \sigma \hat{e} - c$ , where the key variables are defined as the following:

$\lambda$  in  $[0, 1]$  = probability that the donor correctly guesses the recipient's preferences

$W$  in  $\{0, 1\}$  = recipient's valuation of the gift (1 if correct gift or cash, 0 if wrong gift)

$e$  in  $\{0, 1\}$  = whether or not the donor exerts effort to determine the exact preferences of the recipient

$\hat{e}$  in  $[0, 1]$  = the recipient's belief about the donor's effort conditional on the observed outcome

$c$  in  $[0, 1]$  = cost of effort

$\alpha > 0$  = donor's altruism (i.e. how much they value the recipient's  $W$  relative to their own time and effort)

$\sigma > 0$  = donor's self-consciousness (i.e. how much they value  $\hat{e}$  relative to their own time and effort)

There are three actions,  $a$  in  $\{C, G, E\}$  that the donor can take:

1. No effort, cash (C): Donor gives cash without exerting effort, and  $U_C^D = \alpha$ .

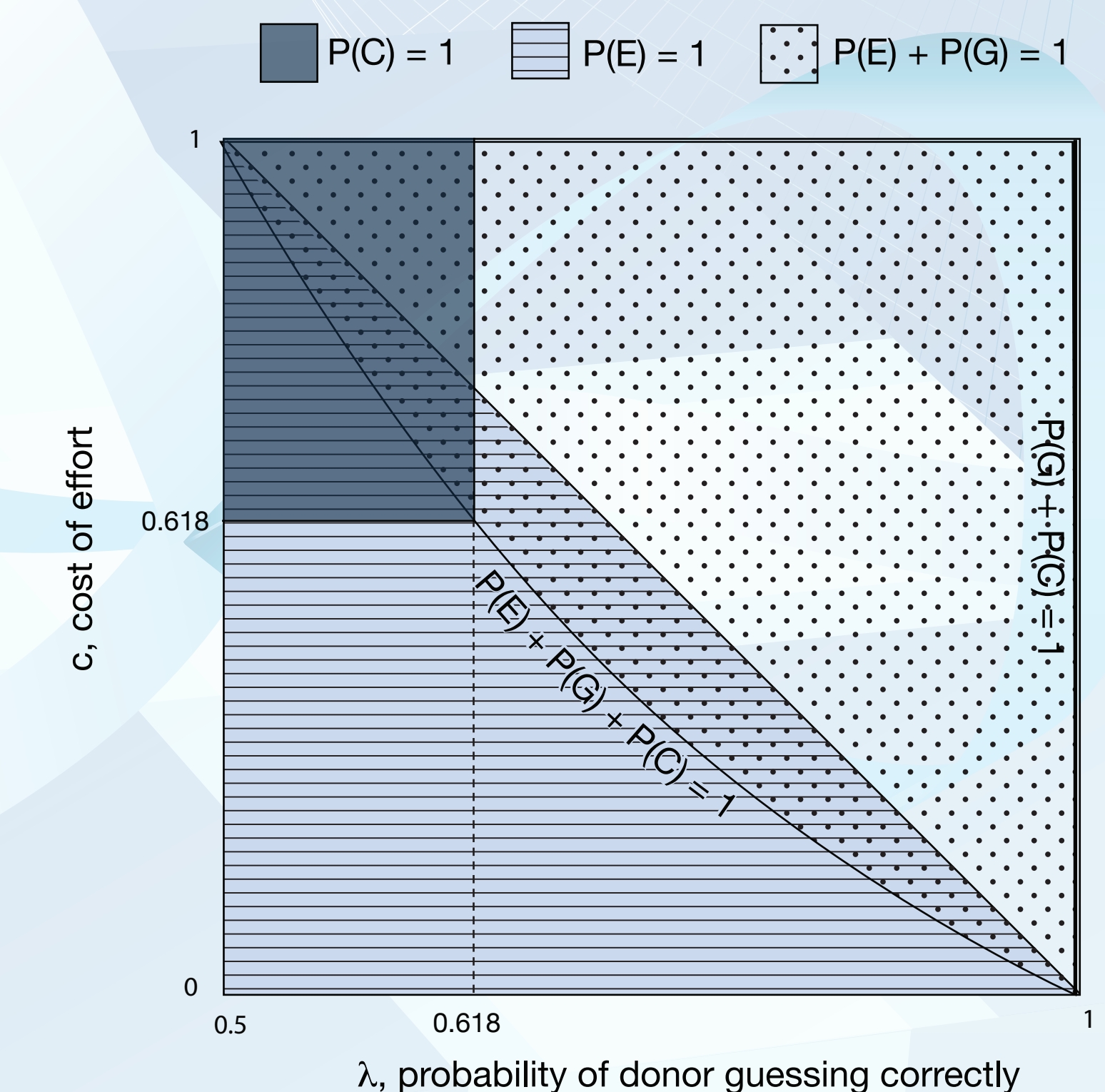
2. No effort, gamble (G): Donor does not exert effort and chooses his best guess, and  $U_G^D = \lambda(\alpha + \sigma \hat{e})$ .

3. Effort (E): Donor exerts effort at a cost  $c$  and correctly determines the preferred gift, and  $U_E^D = \alpha + \sigma \hat{e} - c$ .

After observing the donor's gift choice, the recipient makes Bayesian updates about his level of effort. For example, if he receives cash or the wrong gift, then he will believe that the donor did not exert effort. Our goal is to determine the combinations of  $\lambda$  and  $c$  that give rise to equilibria in this model.

## Results

The figure on the right illustrates the various equilibria for  $\alpha = \sigma = 1$  and different values of  $\lambda$  and  $c$ .



My results indicate that all three outcomes (correct gift, incorrect gift, and cash gift) are possible in equilibrium. The correct gift can arise if the recipient either exerted effort or guessed. Exerting effort is an equilibrium for all combinations of  $\lambda$  and  $c$ , but for higher values of  $\lambda$  and  $c$ , the donor will find it equally attractive to guess at the recipient's preferences. If the donor chooses to gamble, he may select with probability  $(1 - \lambda)$  the wrong gift. The donor may choose to give a pure-cash gift if he is unaware of which gift the recipient likes and exerting effort is very costly. Lastly, for certain combinations of  $\lambda$  and  $c$ , the donor can also mix between pure-cash and non-cash gifts. These results are also dependent on how much the donor cares about being perceived as having exerted effort (self-consciousness) and picking the right gift (altruism) versus his or her own disutility from exerting effort. Altruistic donors are more likely to give cash and exert effort, while self-conscious donors are more likely to exert effort.

These results illustrate that non-monetary gifts are actually in some cases more efficient than cash. If the donor cares about how he is perceived by the recipient, then he would rather not select a cash gift, since doing so would indicate that he exerted no effort. This explains why under a wide range of circumstances, rational individuals would give non-monetary gifts over cash.

## Literature Cited

Camerer, C. (1988). Gifts as Economic Signals and Social Symbols. *The American Journal of Sociology*; 94, Supplement.  
Carmichael, H. L., W. B. MacLeod (1997). Gift Giving and the Evolution of Cooperation. *International Economic Review*; 38.  
Mauss, M. 1967 (1925). *The gift: forms and functions of exchange in archaic societies*. New York: W.W. Norton.  
Prendergast, C. and L. Stole (2001). The non-monetary nature of gifts. *European Economic Review*; 45.  
Ruffle, B.J. (1999). Gift giving with emotions. *Journal of Economic Behavior and Organization*; 39.  
Waldfogel, J. (1993). The deadweight loss of Christmas. *The American Economic Review*; 83, 5.

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