## Corrected Tables for "Embedded Altruism: Blood Collection Regimes and the European Union's Donor Population"

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## 1 Introduction

A re-analysis of the data and models discussed in Healy (2000), undertaken for a book chapter based in part on that article, uncovered a coding error introduced in the data cleaning process. A significant number of observations of the "Education" variable were incorrectly coded as missing. As a consequence, the results reported in Healy (2000) are incorrect. Tables 1 and 2, below, provide corrected versions of Tables 4 and 5 in the article, re-fitting the model to the new data. The new results do not invalidate the main point of the original paper (i.e., that blood collection regimes significantly affect the size and composition of the blood donor populations they are responsible for), but the new results do entail important differences in emphasis and interpretation for some variables. Here I summarize, but do not discuss, the substantive differences in the model. I am currently completing a book manuscript which will contain a new analysis and full discussion of the survey.

## 2 Summary

The corrected results mean that the individual- and institutional-level effects must be re-interpreted. In the individual-level model (where the dependent variable is "Given in the past year"), the main difference is that the "Attend" variable is significant in only two of the Red Cross countries, not all four.

<sup>\*</sup>I thank Ettore Dal Farra for drawing my attention to the issues addressed in this memo. Direct correspondence to Kieran Healy, SPT Program, RSSS, Australian National University, ACT 0200, Australia. Email at kjhealy@arizona.edu.

In the mixed-effects model (where the dependent variable is "Ever given blood"), the main points of difference from the published analysis are as follows:

- The main effects of age and network are now significant, whereas before they were not.
- The main effects for "Red Cross" and "Blood bank" regimes are now significant.
- The additional effect of Red Cross regimes on female, is now significant at the 0.1 rather than the 0.05 level. Conversely, the additional effect of Blood Banking regimes on this variable retains its significance and is somewhat stronger than before.
- The additional negative effect of Blood Banking regimes on education remains significant. The Red Cross effect on education does not.
- The additional effect of a Red Cross regime on income is now significant, whereas before it was not.
- There are no significant institutional-level effects on the attend variable, whereas before there was a significant effect for the Red Cross regime.
- The effects of the Donor Group variable on the individual predictors is generally stronger, with an additional effect on the network variable (significant at 0.05) and the income variable (significant at 0.1) respectively. The effect of a Donor Group on the "Female" variable is no longer significant.

This summary is simply a catalog of the differences between the models in Healy (2000) and the corrected version. A full reanalysis and discussion will be presented in my forthcoming book.

## References

Healy, Kieran. 2000. "Embedded Altruism: Blood collection regimes and the European Union's donor population." *American Journal of Sociology* 105:1633–57.

Table 1: Logistic regression on donor variable: Individual-level effects by country

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Country	(1)	(2)	(3)	(4)	(5)	(9)	(7)	N
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	National Syst	ems							
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Britain	-1.833***	-0.43	-0.041***	0.037	0.013	-0.218	-0.002	969
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ŗ	(-6.57)	(-1.4)	(-3.85)	(0.91)	(0.28)	(-0.91)	(-0.02)	Ğ
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	France	$-1.633^{***}$	-0.149	-0.024***	$0.134^{***}$	0.034	0.055	0.075	831
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Ireland	(-7.54) -1.912***	(-0.05)	(-2.88) -0.032**	(4.25) -0.004	$(0.97) \\ 0.055$	(0.54)	(0.04) $-0.031$	543
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(-3.81)	(-2.09)	(-2.57)	(-0.05)	(0.92)	(0.39)	(-0.22)	}
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Red Cross Sy	stems							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Belgium	-2.9***	0.097	-0.005	0.024	0.115*	0.128	0.103	529
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	)	(-6.01)	(0.22)	(-0.37)	(0.86)	(1.68)	(0.42)	(0.55)	
lands $\begin{array}{cccccccccccccccccccccccccccccccccccc$	Luxembourg	-3.119***	-1.389**	$-0.01\hat{3}$	-0.067	$0.10\hat{5}$	-0.209	0.498**	379
rlands $-2.427***$ $-0.289$ $-0.021**$ $-0.001$ $0.06*$ $0.312*$ $-0.64$ $-0.493**$ $-0.286$ $-0.03$ $-0.03$ $-0.04$ $0.52***$ any $-2.771***$ $-0.493**$ $-0.028***$ $0.017$ $0.004$ $0.502***$ $-0.493**$ $-0.028***$ $0.017$ $0.017$ $0.004$ $0.502***$ $-0.43.5$ $-0.038**$ $-0.008**$ $0.077**$ $0.11$ $0.338$ $0.144$ ark $-1.923***$ $-0.368$ $-0.018**$ $-0.003$ $0.077**$ $0.144$ ark $-1.923***$ $-0.143$ $-0.011$ $0.039**$ $0.125**$ $0.124$ $0.54$ $0.270***$ $0.144$ $0.039**$ $0.025**$ $0.124$ $0.043$ $0.024$ $0.024$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.275**$ $0.055$ $0.0$		(-5.42)	(-2.42)	(-0.85)	(-0.91)	(1.35)	(-0.64)	(2.29)	
any $(-9.64)$ $(-1.15)$ $(-2.36)$ $(-0.03)$ $(1.69)$ $(1.7)$ any $(-1.15)$ $(-2.32)$ $(-4)$ $(0.17)$ $(0.017)$ $(0.04)$ $(0.502^{***}$ $(-13.15)$ $(-2.32)$ $(-4)$ $(0.73)$ $(0.11)$ $(3.38)$ $(1.7)$ ark $(-1.923^{***}$ $-0.088 $ $(-0.018^{**}$ $-0.003$ $(0.77^{**}$ $0.144$ ark $(-8.66)$ $(-1.58)$ $(-1.58)$ $(-2.39)$ $(-0.1)$ $(2.33)$ $(0.87)$ $(-8.43)$ $(-0.43)$ $(-1.04)$ $(2.02)$ $(2.33)$ $(0.54)$ $(-1.24)$ $(-2.754^{***}$ $(-0.43)$ $(-1.04)$ $(2.02)$ $(2.38)$ $(0.54)$ $(-0.134)$ $(-5.7)$ $(-3)$ $(-1.96)$ $(-0.17)$ $(-0.24)$ $(-0.46)$ $(-0.17)$ $(-0.24)$ $(-0.46)$ $(-5.7)$ $(-3)$ $(-1.96)$ $(-0.17)$ $(-0.24)$ $(-0.24)$ $(-0.46)$ $(-5.7)$ $(-3.59)$ $(-5.44)$ $(-1.96)$ $(-0.17)$ $(0.98^{**}$ $(0.02)$ $(0.25)$ $(-2.852^{***}$ $(-0.193)$ $(-0.017)$ $(0.99)$ $(0.36)$ $(0.11)$ $(0.36)$ $(-1.11)$ $(-6.28)$ $(-1.42)$ $(-0.28)$ $(-0.29)$ $(-0.297)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.28)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.29)$ $(-0.28)$ $(-0.29)$ $(-$	Netherlands	-2.427***	-0.289	-0.021**	-0.001	0.06*	0.312*	0.22**	857
any $-2.771^{***}$ $-0.493^{**}$ $-0.028^{***}$ $0.017$ $0.004$ $0.502^{***}$ $0.13.15$ $(-2.32)$ $(-4)$ $(0.73)$ $(0.73)$ $(0.11)$ $(3.38)$ ark $-1.923^{***}$ $-0.368$ $-0.018^{**}$ $-0.003$ $0.077^{**}$ $0.144$ $0.860$ $0.1.58$ $0.014$ $0.039^{**}$ $0.077^{**}$ $0.144$ $0.87$ $0.143$ $0.014$ $0.039^{**}$ $0.125^{**}$ $0.124$ $0.124$ $0.043$ $0.043$ $0.025$ $0.053$ $0.054$ $0.054$ $0.054$ $0.055$ $0.055$ $0.057$ $0.0$		(-9.64)	(-1.15)	(-2.36)	(-0.03)	(1.69)	(1.7)	(2.27)	
ing Systems $(-13.15)$ $(-2.32)$ $(-4)$ $(0.73)$ $(0.11)$ $(3.38)$ ark $-1.923^{***}$ $-0.368$ $-0.018^{**}$ $-0.003$ $0.077^{**}$ $0.144$ ark $-1.923^{***}$ $-0.143$ $-0.011$ $0.039^{**}$ $0.077^{**}$ $0.144$ $(-8.66)$ $(-1.58)$ $(-2.39)$ $(-0.1)$ $(-0.33)$ $(0.87)$ $(-8.43)$ $(-0.43)$ $(-1.04)$ $(-0.02)$ $(0.125^{**})$ $(0.124)$ $(-2.74)$ $(-0.43)$ $(-1.04)$ $(-0.07)$ $(-0.015)$ $(-0.134)$ $(-5.7)$ $(-3)$ $(-1.96)$ $(-0.17)$ $(-0.24)$ $(-0.46)$ $(-5.7)$ $(-3)$ $(-1.96)$ $(-0.17)$ $(-0.24)$ $(-0.46)$ $(-5.7)$ $(-5.44)$ $(-0.03^{**})$ $(-0.17)$ $(-0.24)$ $(-0.46)$ $(-5.2)$ $(-5.44)$ $(-0.03^{**})$ $(0.048)$ $(0.02)$ $(-7.2)$ $(-0.193)$ $(-0.017)$ $(0.9)$ $(0.36)$ $(1.11)$ $(-7.2)$ $(-0.56)$ $(-1.42)$ $(-0.04)$ $(0.9)$ $(0.36)$ $(1.11)$ $(-6.28)$ $(-0.28)$ $(-0.28)$ $(-0.9)$ $(-0.9)$ $(1.53)$ $(1.65)$	Germany	$-2.771^{***}$	$-0.493^{**}$	-0.028***	0.017	0.004	0.502***	0.095	1714
ing Systems $ \begin{array}{ccccccccccccccccccccccccccccccccccc$		(-13.15)	(-2.32)	(-4)	(0.73)	(0.11)	(3.38)	(0.92)	
ark $-1.923***$ $-0.368$ $-0.018**$ $-0.003$ $0.077**$ $0.144$ $-8.66$ $-1.58$ $-2.39$ $-0.11$ $0.039**$ $0.125**$ $0.124$ $0.2.709***$ $-0.143$ $-0.011$ $0.039**$ $0.125**$ $0.125*$ $0.124$ $0.124$ $-2.754***$ $-1.207***$ $-0.021*$ $-0.007$ $-0.015$ $-0.015$ $-0.134$ $-2.754***$ $-1.207***$ $-0.021*$ $-0.007$ $-0.015$ $-0.015$ $-0.134$ $-1.476***$ $-1.863***$ $-0.03***$ $0.068**$ $0.024$ $0.025$ $0.005$ $0.259$ $0.25$	Banking Syst	ems							
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Denmark	-1.923***	-0.368	-0.018**	-0.003	0.077**	0.144	0.074	868
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(-8.66)	(-1.58)	(-2.39)	(-0.1)	(2.33)	(0.87)	(0.57)	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Norway	-2.709***	-0.143	-0.011	0.039**	0.125**	0.124	0.039	098
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(-8.43)	(-0.43)	(-1.04)	(2.02)	(2.38)	(0.54)	(0.22)	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Italy	-2.754***	-1.207***	$-0.021^{*}$	700.0	-0.015	-0.134	0.214	710
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(	(-5.7)	(-3)	(-1.96)	(-0.17)	(-0.24)	(-0.46)	$(1.33) \\ \widehat{}_{\widehat{}\widehat{}\widehat{}\widehat{}\widehat{}\widehat{}\widehat{}$	0
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Greece	$-1.476^{***}$	$-1.863^{***}$	-0.03***	0.08**	0.024	0.005	0.202	763
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(-3.59)	(-5.44)	(-3.61)	(2.19)	(0.48)	(0.02)	(1.19)	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$_{ m Spain}$	-2.852***	-0.193	-0.017	0.038	0.02	0.297	0.117	689
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		(-7.2)	(-0.56)	(-1.42)	(0.0)	(0.36)	(1.11)	(0.87)	
(-3.32) $(-0.28)$ $(-0.9)$ $(1.53)$ $(1.65)$	$\operatorname{Portugal}$	-3.742***	$-1.631^{***}$	-0.004	-0.049	0.12	$0.614^*$	0.154	908
		(-6.28)	(-3.32)	(-0.28)	(-0.9)	(1.53)	(1.65)	(0.78)	

<sup>(1)</sup> Intercept, (2) Female, (3) Age, (4) Education, (5) Income, (6) Network, (7) Attend.

 $\Gamma\text{-}\mathrm{values}$  are given in parentheses below coefficients.

<sup>\*</sup> P < 0.1. \*\* P < 0.05. \*\*\* P < 0.01.

Table 2: Mixed-effects model of individual- and institutional-level variables

	Collection Regimes and Donation Rates  Interaction effects					
Variables	Main Effect	Red Cross	Blood Banks	Donor Groups		
Intercept	$-0.388^*$ $(-1.74)$					
Female	$-0.430^{***}$ $(-4.05)$	$-0.222^*$ $(-1.66)$	$-0.419^{***}$ $(-3.36)$	-0.175 $(-0.16)$		
Age	0.013*** (3.75)	$-0.011^{***}$ $(-2.68)$	0.004 $(0.95)$	-0.006 $(-1.61)$		
Education	0.062*** (3.61)	-0.029 $(-1.52)$	-0.039** (-2.25)	$0.024^*$ (1.81)		
Income	0.098*** (5.74)	$-0.059^{***}$ $(-2.82)$	-0.001 $(-0.06)$	$-0.039^{**}$ $(-1.98)$		
Network	0.159** (2.02)	0.258*** (2.66)	-0.089 $(-0.32)$	$0.045 \\ (0.62)$		
Attend	0.017 $(0.39)$	0.043 $(0.45)$	-0.031 $(-0.59)$	0.009 $(0.88)$		
Red Cross	$ \begin{array}{c c} -0.747^{**} \\ (2.65) \end{array} $					
Bl. Bank	$-0.842^{**}$ (-3.22)					
Donor Group	0.803*** (3.23)					

Note: Valid N = 10,394. Log likelihood: -23,783.

Country-level random effects fitted but not shown.

T-statistics are given in parentheses below coefficients.

<sup>\*</sup> P < 0.1.

<sup>\*\*</sup> P < 0.05.

<sup>\*\*\*</sup>P < 0.01.