Electronic Supplementary Material

Marius Mercier, Alexis Garsmeur, Hugo Mercier

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Contents

The Electronic Supplementary Material include more information on the Ethnographical Review (section 1), provide pre-registered analysis not presented in the paper for concision (section 2), and provide all the regression table of the analysis presented in the paper both with and without controls (section 3). We also include more information on exploratory analysis presented in the discussion (section 4). Materials not presented in the paper are available in section 5. This pdf file is generated using the RMarkdown file "All_analysis.Rmd". All scripts used for the data processing, the statistical analysis and for creating the figure can be found following this Github link: https://github.com/mariusmercier/paper_insight_culture. Simply copy the github and run the Rmd file. A permanent archive is also available at the following OSF project: https://osf.io/7qwt2/.

1. Ethnographic Review

Nowadays, riddles have lost their once prominent place in the playground to other more attractive cultural products. Nevertheless, we still have the trace of what the children's folklore looked like in the 1960s thanks to the work of the Opie couple. As it is possible that Opie & Opie has put forward an idiosyncratic cultural practice, we conducted a search in the Human Relations Area Files anthropological database (eHRAF: World Cultures database) to see if there were any traces of riddles outside of the Anglo-Saxon culture. We searched for the words "riddle", "enigma", "puzzle" and "conundrum" in July 2022. Unfortunately, it is common for researchers to refer to something they do not understand as a riddle, a puzzle or an enigma which makes it difficult to detect ethnographic reports on these cultural practices. Therefore, we restricted our search to the paragraphs already coded in the "Game" category. This research allowed us to identify 43 cultures where the practice of riddles is common.

The majority of the identified cultural groups are in Africa (N = 16) and in Asia (N = 13). For instance, the Maasai people have a riddle saying "I have two skins, one to lie on and the other to cover myself with. What are they?" (Hollis, 1905). The answer "the bare ground and the sky" showed a typical reconstruction of the mental representation of "skin" similar to what we can find in insight problems. Riddles were found in other continents and areas such as Europe (N = 2), Middle East (N = 1), Middle America & the Caribbean (N = 5), North America (N = 4), South America (N = 1) and Oceania (N = 1).

To control for the possibility that this cultural practice was culturally transmitted from one or several common sources, we make use of the Probability Sample Files (PSF). The PSF is a subset of 60 unrelated culture, largely preindustrial, that meet certain data quality controls. One culture is randomly chosen from each culture area.(For more information see: https://hraf.yale.edu/resources/reference/probability-sample-files-psf/). 18 out of 60 cultures had records of riddles.

Table 1: HRAF survey of ethnographics records of culture.

Continent	References	Culture	Example.of.Riddle	PSF
Africa	Levine, D. N. (1965). Wax & gold: tradition and innovation in Ethiopian culture. University of Chicago Press.	Amhara		1
	Hollis Sir, A. C., & Eliot. (1905). The Masai: their language and folklore. The Clarendon Press.	Maasai	I have two skins, one to lie on and the other to cover myself with. What are they? — The bare ground and the sky.	1

Table 1: HRAF survey of ethnographics records of culture. *(continued)*

Continent	References	Culture	Example.of.Riddle	PSF
	Maxwell, Kevin B. (Kevin Burns). 1983. "Bemba Myth and Ritual: The Impact of Literacy on an Oral Culture." In American University Studies, vol. 2:xxiii, 197. New York: P. Lang.	Bemba	A little basket which is never filled ? — The ear [Note: The ear represents the memory in the Bemba culture]	1
	Yankah, K. (1989). The proverb in the context of Akan rhetoric: a theory of proverb praxis. In Sprichwörterforschung (p. 313). P. Lang.	Akan		1
	Calame-Griaule, G. (1986). Words and the Dogon world. Institute for the Study of Human Issues.	Dogon		1
	Peshkin, A. (1972). Kanuri schoolchildren; education and social mobilization in Nigeria. In Case studies in education and culture (pp. xviii, 156). Holt, Rinehart and Winston, Inc.	Kanuri		1
	Akiga, East, R., & Cultures, I. I. O. A. L. A. (1939). Akiga's story: the Tiv tribe as seen by one of its members. Oxford University Press.	Tiv	The elephant fell on the rock, but they did not finish cutting up the meat. — 'Beniseed.' If grains of beniseed fall on rock or soil, can you ever pick them all up?	1
	Pagés, G., & Scholl, B. (1933). A Hamitic kingdom in the center of Africa: in Ruanda on the shores of Lake Kivu (Belgian Congo). In Mémoires: Vol. Vol. 1 (p. HRAF ms: v, 293 [original: iv, 704 , 29 plates]). Libraire Falk fils, Georges van Campenhout, Successeur.	Rwandans	What is the most improper thing, that causes the greatest embarrassment and constraint? — A fly drowned in milk or sitting on the king's forehead.	0
	Raum, O. F. (1940). Chaga childhood: a description of indigenous education in an East African tribe. Oxford University Press for the International Institute of African Languages and Cultures.	Chagga		0

Continent	References	Culture	Example.of.Riddle	PSF
	Huffman, R., & Westermann, D. (1931). Nuer customs and folklore. International Institute of African Language and Culture.	Nuer		0
	Smith, Edwin William, and Dale, Andrew Murray, d. 1919. 1920. The Ila-Speaking Peoples of Northern Rhodesia: Vol. 2. London: MacMillan and Co.	Ila	There is nobody who has not tasted the little bone of Ntite. — Ndukolo ("the breast.") [Note: There is a play on the words ka Ntite ("of a little bird") and Katiti ("the dugs").]	0
	Schultze, L. S., Knight, E. C., & Ziolkowski, T. (1907). In Namaland and the Kalahari. Gustav Fischer.	Khoi	What do you see (mũ), although (xabe) it may (ga, potential) be dark (!kxaë), it may be far (!nū) and it may be near (/gū). (tsĩna, neut. pl. summarizing all the cases once again). — Fire	0
	Gelfand, M. (1979). Growing up in Shona society: from birth to marriage. Mambo Press.	Shona	This thing is invisible, it cannot be heard or smelt, it is behind the stars and below the mountains, in the valleys and kills people — The Wind	0
	Junod, H. A. (1927). The life of a South African tribe: vol. 2. Macmillan and Co., Limited.	Tsonga	What is the thing up the trunk of which one cannot climb? — It is the juncus.	0
	Callaway, H. (1868). Nursery tales, traditions, and histories of the Zulus, in their own words, with a translation into English, and notes. John A. Blair ; Davis and Sons ; Trübner and Co.	Zulu		0

Table 1: HRAF survey of ethnographics records of culture. *(continued)*

Continent	References	Culture	Example.of.Riddle	PSF
	Gay, John, and Michael Cole. 1967. The New Mathematics and an Old Culture: A Study of Learning among the Kpelle of Liberia. Holt, Rinehart and Winston.	Kpelle	It is the story of a man with a leopard, a goat, and a bunch of cassava leaves, which he has to take across a river. Only two things can cross at the same time. How then is the man to get them across the river, without the leopard eating the goat while he is not watched, or the goat eating the cassava leaves?	0
Asia	Bogoraz-Tan, W., Vladimir Germanovich (Bogoras. (1910). Chukchee mythology: Chukchee texts [part 1], Chukchee tales [part 2]. In Memoirs: Vol. vol. XII (p. 197 [HRAF pagination – incomplete]). E. J. Brill, Ltd. ; G. E. Stechert and Co.	Chuckchee	I have four holes and only one road. — A wooden house	1
	Sieroszewski, W. (1993). The Yakut: an experiment in ethnographic research. Assotsiatsiia "Rossiiskaia polit. entsiklopediia."	Yakut	They say there is a grey bull over the yurt — the sun	1
	Sangma, V. S. B. (1995). Garo folk literature. In hill societies, their modernisation : a study of north east with special reference to garo hills (pp. 156–164). Omsons Publications.	Garo	It has only one head but hundreds of eyes.What is it? — A pineapple.	1
	Archer, W. G. (William George). 1974. The Hill of Flutes: Life, Love, and Poetry in Tribal India : A Portrait of the Santals. Pittsburgh: University of Pittsburgh Press.	Santal		1

Table 1: HRAF survey of ethnographics records of culture. *(continued)*

Continent	References	Culture	Example.of.Riddle	PSF
	Anderson, W. W. (1983). Children's play and games in rural Thailand: a study in enculturation and socialization. University Microfilms.	Central Thai	What is it? Black as a bear; the more it's beaten, the more it bites. Black as a tick; the more it bites, the more it is beaten. — A mosquito.	1
	Adriani, N., & Kruijt, A. C. (1951). The Bare'e-speaking Toradja of central Celebes (the East Toradja): third volume. In Verhandelingen (Issue no. 1, p. HRAF MS: vii, 651 [original: viii, 484]). Noord-Hollandsche Uitgevers Maatschappij.	Eastern Toraja		1
	Foning, A. R. (1987). Lepcha, my vanishing tribe. Sterling Publishers.	Lepcha		0
	Naik, T. B. T. B. (1956). The Bhils: a study. Bharatiya Adimjati Sevak Sangh.	Bhil		0
	Elwin, V. (1947). The Muria and their ghotul. Oxford University Press.	Gond		0
	Rivers, W. H. R. (William H. R. (1906). The Todas. Macmillan.	Toda		0
	Koentjaraningrat. (1985). Javanese culture. Oxford University Press.	Javanese		0
	Sather, C. (1975). Literary form in Bajau Laut riddles. Sarawak Museum Journal, Vol. 23(no. 44), 187–206.	Sama-Bajau	It looks the same but tastes different.	0
	Huard, P., & Durand, M. M. (ca. 1990). Viet-Nam, civilization and culture. Imprimerie Nationale ; Ecole francaise d'Extrême-Orient.	Vietnamese	White feet, black body, bearing a cap in the shape of a lotus flower, and asisting the Supreme Emperor. — An incense stick	0
Europe	Sokolov, I. M. (IUriǐ M., & Smith, C. R. (1950). Russian folklore. In American Council of Learned Societies. Russian Translation Project (pp. viii, 760). The MacMillan Company.	Russians	She is red [pretty], but she is not a maid; she is green, but she is not a grove of trees". — A carrot.	0

Table 1: HRAF survey of ethnographics records of culture. *(continued)*

Continent	References	Culture	Example.of.Riddle	PSF
	Itkonen, T. I., & Minn, E. K. (ca. 1948). The Lapps in Finland up to 1945. Vol. 1. Werner Söderström Osakeyhtiö.	Saami	Higher than the mountains, lower than the twigs. — The path.	1
Middle America & the Caribbean	Beckwith, M. W. (1929). Black roadways: a study of Jamaican folk life. The University of North Carolina Press.	Jamaicans	Send boy to fetch doctor, doctor come before boy [Note: this is explained as a boy, sent up a tree after a water cocoanut, who throws down the cocoanut before descending himself]	0
	Seda Bonilla, E. (1973). Social change and personality in a Puerto Rican agrarian reform community. Northwestern University Press.	Puerto Ricans		0
	Taylor, D. M. (1951). The Black Carib of British Honduras. In Publication in anthropology (p. 185). Wenner-Gren Foundation for Anthropological Research, Inc.	Garifuna	A child that commands its mother. — The rudder on a canoe	0
	Nordenskiöld, E., érez Kantule, R., & Wassén, H. (1938). An historical and ethnological survey of the Cuna Indians. In Comparative ethnographical studies: Vol. vol. 10 (pp. xxvii, 686 , plates). Göteborg Museum.	Kuna		1
	Burns, A. F. (Allan F. (1983). An epoch of miracles: oral literature of the Yucatec Maya. In The Texas Pan American series (pp. xiv, 266). University of Texas Press.	Maya	Goes in hungry, comes out full. — A bucket used to get water from a well	0
Middle East	Friedl, E. (1997). Children of Deh Koh: young life in an Iranian village. Syracuse University Press.	Lur	A smooth, flat plain full of round rocks. — Bread cloth with balls of dough.	0
North America	Kinietz, W. V. (William V. (1940). Huron. In The Indians of the western Great Lakes 1615-1760 (Issue no. 10, pp. iv – v, 1–160, 330–338). University of Michigan Press.	Huron/Wendat		0

Table 1: HRAF survey of ethnographics records of culture. *(continued)*

Continent	References	Culture	Example.of.Riddle	PSF
	Tooker, E. (1970). The Iroquois ceremonial of Midwinter. Syracuse University Press.	Iroquois		1
	Kan, S. (1989). Symbolic immortality: the Tlingit potlatch of the nineteenth century. In Smithsonian series in ethnographic inquiry (pp. xi, 390). Smithsonian Institution Press.	Tlingit	Where has this raven been last year and what did he eat? — This raven has been to Chilkat, where he ate lots of salmon skins.	1
	Johnson, G. B. (1930). Folk culture on St. Helena Island, South Carolina. University of North Carolina Press.	Sea Islanders		0
Oceania	Beckwith, M. W., & Loumala, K. (1970). Hawaiian mythology. University of Hawaii Press.	Hawaiians		0
South America	Price, R., & Price, S. (1991). Two evenings in Saramaka. University of Chicago Press.	Saramaka		1

2. Pre-registered analysis not presented

As pre-registered, we conducted a within participants analysis at the level of the problem to test the following hypothesis.

H1.3: Within each condition, participants will be more willing to share a problem for which they had a higher insight.

Study 1

```
S1_h13_1 = lmer(scale(sharing) ~ scale(insight) + factor(solved) + factor(ability_other)
            + log(time) + (1 + insight |ResponseId) + (1 |stumpers),
        data = data_High1, control = lmerControl(
          optimizer ="bobyqa"
        ))


S1_h13_2 = lmer(scale(sharing) ~ scale(insight) + factor(solved) + factor(ability_other)
            + log(time) + (1 + insight |ResponseId) + (1 |stumpers),
        data = data_Low1, control = lmerControl(
          optimizer ="bobyqa"
        ))
```

Table 2: Study 1: Willingness to share as a function of Insight within each condition

	Will. to Share High Insight Condition	Will. to Share Low Insight Condition
(Intercept)	-0.5693 *	-0.6025 **
	(0.2849)	(0.1869)
scale(insight)	0.5625 ***	0.4723 ***
	(0.0482)	(0.0651)
factor(solved)1	-0.0149	0.0331
	(0.0891)	(0.0993)
factor(ability_other)1	-0.2162 *	-0.0213
	(0.0982)	(0.1046)
factor(ability_other)2	-0.1396	-0.0506
	(0.1384)	(0.1714)
log(time)	0.1817 **	0.1443 **
	(0.0695)	(0.0418)
N	294	297
AIC	622.3971	663.8869
BIC	662.9164	704.5179

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Study 2

```
S2_h13_1 = lmer(scale(sharing) ~ scale(insight)
            + factor(solved) + factor(ability_other) + log(time)
            + (1 + insight |ResponseId) + (1 |stumpers),
        data = data_High2, control = lmerControl(
          optimizer ="bobyqa"
        ))


S2_h13_2 = lmer(scale(sharing) ~ scale(insight)
            + factor(solved) + factor(ability_other)
            + log(time) + (1 + insight |ResponseId) + (1 |stumpers),
        data = data_Low2, control = lmerControl(
          optimizer ="bobyqa"
        ))
```

Table 3: Study 2: Willingness to share as a function of Insight, within each condition

	Will. to Share High Insight Condition	Will. to Share Low Insight Condition
(Intercept)	-0.2007	-0.2786
	(0.3037)	(0.2361)
scale(insight)	0.3891 ***	0.5105 ***
	(0.0562)	(0.0543)
factor(solved)1	0.0683	-0.1198
	(0.0965)	(0.0749)
factor(ability_other)1	-0.0265	-0.0774
	(0.1093)	(0.0954)
factor(ability_other)2	-0.0267	-0.2522
	(0.1618)	(0.1325)
log(time)	0.0483	0.1133 *
	(0.0694)	(0.0572)
N	303	288
AIC	683.6952	525.9328
BIC	724.5463	566.2254

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Study 3

```
S3_h13_1 = lmer(scale(sharing) ~ scale(insight)
            + factor(solved) + factor(ability_other) + log(time)
            + (1 + insight |ResponseId) + (1 |stumpers),
        data = data_High3, control = lmerControl(
          optimizer ="bobyqa"
        ))


S3_h13_2 = lmer(scale(sharing) ~ scale(insight)
            + factor(solved) + factor(ability_other) + log(time)
            + (1 + insight |ResponseId) + (1 |stumpers),
        data = data_Low3, control = lmerControl(
          optimizer ="bobyqa"
        ))
```

Table 4: Study 3: Willingness to share as a function of insight, within each condition

	Will. to Share High Insight Condition	Will. to Share Low Insight Condition
(Intercept)	-0.9171 ***	-0.2035
	(0.2585)	(0.2297)
scale(insight)	0.6011 ***	0.6384 ***
	(0.0560)	(0.0472)
factor(solved)1	0.1608	-0.0130
	(0.0861)	(0.0669)
factor(ability_other)1	0.0143	0.0656
	(0.0954)	(0.0780)
factor(ability_other)2	-0.0331	-0.0814
	(0.1428)	(0.1084)
log(time)	0.2135 ***	0.0411
	(0.0564)	(0.0551)
N	294	288
AIC	581.3395	513.5159
BIC	621.8589	553.8085

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

In study 3, we also measured the willingness to consume with a question after each problem. We pre-registered that: **H3.3**: Within each condition, participants will be more willing to consume a problem for which they had a higher insight.

```
S3_h33_1 = lmer(scale(consume) ~ scale(insight)
              + factor(solved) + factor(ability_other) + log(time)
              + (1 + insight |ResponseId) + (1 |stumpers),
          data = data_High3, control = lmerControl(
            optimizer ="bobyqa"
          ))


S3_h33_2 = lmer(scale(consume) ~ scale(insight)
              + factor(solved) + factor(ability_other) + log(time)
              + (1 + insight |ResponseId) + (1 |stumpers),
          data = data_Low3, control = lmerControl(
            optimizer ="bobyqa"
          ))
```

Table 5: Study 3: Willingness to Consume as a function of insight, within each condition

	Will. to Consume High Insight Condition	Will. to Consume Low Insight Condition
(Intercept)	-0.6844 *	-1.0215 ***
	(0.3045)	(0.2429)
scale(insight)	0.3704 ***	0.4109 ***
	(0.0641)	(0.0622)
factor(solved)1	0.1789	0.1228
	(0.0997)	(0.0867)
factor(ability_other)1	0.0492	0.1499
	(0.1098)	(0.0969)
factor(ability_other)2	-0.1378	0.2044
	(0.1633)	(0.1497)
log(time)	0.1589 *	0.2248 ***
	(0.0683)	(0.0549)
N	294	288
AIC	682.9198	556.7499
BIC	723.4392	597.0425

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

3. Main Analysis

We now turn to the regression tables of all hypothesis. The code to computationally replicate all analysis (including descriptive statistics) can be found in the Rmd file. Additional descriptive statistics can be found in the code such as the mean insight, sharing, RT for each problem.

H1: Willingness to share

H1.1: Participants in the High Insight Condition, compared to the Low Insight Condition, have a higher willingness to share problems.

H1.2: Participants' mean insight positively predicts their mean willingness to share.

H2: Actual consumption

H2.1: Participants in the High Insight Condition, compared to the Low Insight Condition, are more likely to consume another problem.

H2.2: Participants' mean insight positively predicts their odds of consuming another problem.

H3: Willingness to consume

H3.1: Participants in the High Insight Condition, compared to the Low Insight Condition, are more willing to consume other problems.

H3.2: Participants' mean insight positively predicts their mean willingness to consume other problems.

Study 1

In the first study, we did not pre-register the control variable `not_understood`. We report here the result of our pre-registered analysis without this variable.

H1.1

```r
S1_h11_1 = lm(scale(sharing_mean) ~ factor(condition),
              data_1)

S1_h11_2 = lm(scale(sharing_mean) ~ factor(condition)
              + factor(ability) + scale(mean_RT),
              data_1)

S1_h11_3 = lm(scale(sharing_mean) ~ factor(condition)
              + factor(ability) + scale(mean_RT) + factor(not_understood),
              data_1)
```

Table 6: Study 1: Willingness to Share as a function of condition, with and without controls

	Will. to Share	Will. to share	Will. to share
(Intercept)	-0.2896 **	-0.3171 *	-0.0226
	(0.0916)	(0.1258)	(0.1676)
factor(condition)1	0.5822 ***	0.7193 ***	0.5634 ***
	(0.1367)	(0.1420)	(0.1499)
factor(ability)1		0.0658	-0.0424
		(0.1620)	(0.1675)
factor(ability)2		-0.0474	-0.2076
		(0.1887)	(0.2019)
factor(ability)3		-0.5191 *	-0.7130 **
		(0.2402)	(0.2596)
scale(mean_RT)		0.1845 *	0.1592 *
		(0.0757)	(0.0759)
factor(not_understood)1			-0.3628 *
			(0.1757)
factor(not_understood)2			-0.5964 *
			(0.2315)
factor(not_understood)3			-1.3873 ***
			(0.1776)
adj.r.squared	0.0805	0.1210	0.1418

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

H1.2

```
S1_h12_1 = lm(scale(sharing_mean) ~ scale(insight_mean),
              data_1)

S1_h12_2 = lm(scale(sharing_mean) ~ scale(insight_mean)
              + factor(ability) + scale(mean_RT),
              data_1)

S1_h12_3 = lm(scale(sharing_mean) ~ scale(insight_mean)
              + factor(ability) + scale(mean_RT) + factor(not_understood),
              data_1)
```

Table 7: Study 1: Willingness to Share as a function of insight, with and without controls

	Will. to Share	Will. to share	Will. to share
(Intercept)	0.0000	-0.0177	0.1037
	(0.0544)	(0.0849)	(0.1307)
scale(insight_mean)	0.6474 ***	0.6400 ***	0.6104 ***
	(0.0559)	(0.0564)	(0.0662)
factor(ability)1		0.0348	-0.0196
		(0.1293)	(0.1374)
factor(ability)2		0.1237	0.0204
		(0.1571)	(0.1769)
factor(ability)3		-0.2008	-0.3292
		(0.1843)	(0.2174)
scale(mean_RT)		0.0879	0.0883
		(0.0528)	(0.0533)
factor(not_understood)1			-0.2363
			(0.1541)
factor(not_understood)2			-0.2085
			(0.2034)
factor(not_understood)3			-0.5592 **
			(0.2077)
adj.r.squared	0.4161	0.4207	0.4208

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

H2.1

```r
S1_h21_1 = glm(actual_consumption ~ factor(condition),
               family = binomial(link = "probit"), data_1)

S1_h21_2 = glm(actual_consumption ~ factor(condition)
               + factor(ability) + scale(mean_RT),
               family = binomial(link = "probit"), data_1)

S1_h21_3 = glm(actual_consumption ~ factor(condition)
               + factor(ability) + scale(mean_RT) + factor(not_understood),
               family = binomial(link = "probit"), data_1)
```

Table 8: Study 1: Actual Consumption as a function of condition, with and without controls

	Actual Consumption	Actual Consumption	Actual Consumption
(Intercept)	-0.6985 ***	-1.0911 ***	-1.2610 ***
	(0.1385)	(0.1982)	(0.2662)
factor(condition)1	0.5960 **	0.6620 **	0.7498 ***
	(0.1882)	(0.2127)	(0.2245)
factor(ability)1		0.3782	0.4292
		(0.2450)	(0.2608)
factor(ability)2		0.7311 **	0.8222 **
		(0.2765)	(0.3011)
factor(ability)3		0.4096	0.5221
		(0.3518)	(0.3796)
scale(mean_RT)		0.2329 *	0.2410 *
		(0.0976)	(0.0972)
factor(not_understood)1			0.2656
			(0.2753)
factor(not_understood)2			0.2945
			(0.4617)
factor(not_understood)3			-3.5988 ***
			(0.3433)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.2

```
S1_h22_1 = glm(actual_consumption ~ scale(insight_mean),
               family = binomial(link = "probit"), data_1)

S1_h22_2 = glm(actual_consumption ~ scale(insight_mean)
               + factor(ability) + scale(mean_RT),
               family = binomial(link = "probit"), data_1)

S1_h22_3 = glm(actual_consumption ~ scale(insight_mean)
               + factor(ability) + scale(mean_RT) + factor(not_understood),
               family = binomial(link = "probit"), data_1)
```

Table 9: Study 1: Actual Consumption as a function of insight, with and without controls

	Actual Consumption	Actual Consumption	Actual Consumption
(Intercept)	-0.3868 ***	-0.8110 ***	-0.8131 ***
	(0.0925)	(0.1747)	(0.2277)
scale(insight_mean)	0.1107	0.1119	0.1095
	(0.0942)	(0.1022)	(0.1086)
factor(ability)1		0.4276	0.4244
		(0.2385)	(0.2529)
factor(ability)2		0.9075 ***	0.9081 **
		(0.2668)	(0.2978)
factor(ability)3		0.5861	0.5875
		(0.3366)	(0.3696)
scale(mean_RT)		0.1088	0.1070
		(0.0885)	(0.0889)
factor(not_understood)1			0.0259
			(0.2661)
factor(not_understood)2			0.0049
			(0.4344)
factor(not_understood)3			-3.9554 ***
			(0.3672)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Study 2

H1.1

```
S2_h11_1 = lm(scale(sharing_mean) ~ factor(condition),
              data_2)

S2_h11_2 = lm(scale(sharing_mean) ~ factor(condition)
              + factor(ability) + scale(mean_RT) + factor(not_understood),
              data_2)
```

Table 10: Study 2: Willingness to share as a function of condition, with and without controls

	Will. to Share	Will. to share
(Intercept)	-0.3392 ***	-0.0716
	(0.0951)	(0.1881)
factor(condition)1	0.6616 ***	0.5856 ***
	(0.1347)	(0.1440)
factor(ability)1		-0.2096
		(0.2033)
factor(ability)2		-0.2622
		(0.1988)
factor(ability)3		-0.4674 *
		(0.2187)
scale(mean_RT)		0.0714
		(0.0751)
factor(not_understood)1		0.0035
		(0.1952)
adj.r.squared	0.1054	0.1098

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

H1.2

```
S2_h12_1 = lm(scale(sharing_mean) ~ scale(insight_mean),
              data_2)
```

```
S2_h12_2 = lm(scale(sharing_mean) ~ scale(insight_mean)
          + factor(ability) + scale(mean_RT) + factor(not_understood),
          data_2)
```

Table 11: Study 2: Willingness to share as a function of insight, with and without controls

	Will. to Share	Will. to share
(Intercept)	0.0000	-0.0530
	(0.0539)	(0.1257)
scale(insight_mean)	0.6568 ***	0.6593 ***
	(0.0565)	(0.0630)
factor(ability)1		0.0700
		(0.1742)
factor(ability)2		-0.0196
		(0.1513)
factor(ability)3		0.0308
		(0.1895)
scale(mean_RT)		0.1138 *
		(0.0520)
factor(not_understood)1		0.2325
		(0.1391)
adj.r.squared	0.4284	0.4348

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.1

```
S2_h21_1 = glm(actual_consumption ~ factor(condition),
          family = binomial(link = "probit"), data_2)

S2_h21_2 = glm(actual_consumption ~ factor(condition)
          + factor(ability) + scale(mean_RT) + factor(not_understood),
          family = binomial(link = "probit"), data_2)
```

Table 12: Study 2: Actual consumption as a function of condition, with and without controls

	Actual Consumption	Actual Consumption
(Intercept)	-0.6103 ***	-1.0202 **
	(0.1377)	(0.3153)
factor(condition)1	0.4231 *	0.4138 *
	(0.1867)	(0.2088)
factor(ability)1		0.2836
		(0.3203)
factor(ability)2		0.4872
		(0.3033)
factor(ability)3		0.8238 *
		(0.3414)
scale(mean_RT)		0.2468 *
		(0.0989)
factor(not_understood)1		0.0459
		(0.3255)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.2

```
S2_h22_1 = glm(actual_consumption ~ scale(insight_mean),
              family = binomial(link = "probit"), data_2)

S2_h22_2 = glm(actual_consumption ~ scale(insight_mean)
              + factor(ability) + scale(mean_RT) + factor(not_understood),
              family = binomial(link = "probit"), data_2)
```

Table 13: Study 2: Actual consumption as a function of insight, with and without controls

	Actual Consumption	Actual Consumption
(Intercept)	-0.3858 ***	-0.8324 **
	(0.0923)	(0.2569)
scale(insight_mean)	0.0779	0.1446
	(0.0907)	(0.1060)
factor(ability)1		0.3343
		(0.3071)
factor(ability)2		0.4900
		(0.2944)
factor(ability)3		0.8728 *
		(0.3501)
scale(mean_RT)		0.2835 **
		(0.1019)
factor(not_understood)1		0.0551
		(0.3178)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Study 3

H1.1

```
S3_h11_1 = lm(scale(sharing_mean) ~ factor(condition),
             data_3)

S3_h11_2 = lm(scale(sharing_mean) ~ factor(condition)
             + factor(ability) + scale(mean_RT) + factor(not_understood),
             data_3)
```

Table 14: Study 3: Willingness to share as a function of condition, with and without controls

	Will. to Share	Will. to share
(Intercept)	-0.3279 **	-0.0925
	(0.0987)	(0.1825)
factor(condition)1	0.6491 ***	0.6197 ***
	(0.1362)	(0.1401)
factor(ability)1		-0.1198
		(0.1872)
factor(ability)2		-0.1439
		(0.1945)
factor(ability)3		-0.3909
		(0.2448)
scale(mean_RT)		0.0923
		(0.0774)
factor(not_understood)1		-0.4568 *
		(0.1865)
factor(not_understood)2		-1.1248 ***
		(0.1352)
factor(not_understood)3		-0.8361 **
		(0.2631)
adj.r.squared	0.1012	0.1196

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

H1.2

```
S3_h12_1 = lm(scale(sharing_mean) ~ scale(insight_mean),
             data_3)

S3_h12_2 = lm(scale(sharing_mean) ~ scale(insight_mean)
             + factor(ability) + scale(mean_RT) + factor(not_understood),
             data_3)
```

Table 15: Study 3: Willingness to share as a function of insight, with and without controls

	Will. to Share	Will. to share
(Intercept)	0.0000	0.0082
	(0.0480)	(0.0971)
scale(insight_mean)	0.7451 ***	0.7373 ***
	(0.0470)	(0.0480)
factor(ability)1		-0.0007
		(0.1202)
factor(ability)2		0.0840
		(0.1344)
factor(ability)3		-0.0279
		(0.1755)
scale(mean_RT)		0.1155 **
		(0.0421)
factor(not_understood)1		-0.1227
		(0.1240)
factor(not_understood)2		-0.1972 *
		(0.0875)
factor(not_understood)3		-0.7013 ***
		(0.1409)
adj.r.squared	0.5529	0.5586

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.1

```r
S3_h21_1 = glm(actual_consumption ~ factor(condition),
          family = binomial(link = "probit"), data_3)

S3_h21_2 = glm(actual_consumption ~ factor(condition)
          + factor(ability) + scale(mean_RT) + factor(not_understood),
          family = binomial(link = "probit"), data_3)
```

Table 16: Study 3: Actual consumption as a function of condition, with and without controls

	Actual Consumption	Actual Consumption
(Intercept)	-0.3741 **	-0.5009 *
	(0.1319)	(0.2226)
factor(condition)1	0.2459	0.1861
	(0.1836)	(0.1915)
factor(ability)1		0.2599
		(0.2564)
factor(ability)2		0.1709
		(0.2955)
factor(ability)3		0.1685
		(0.3097)
scale(mean_RT)		0.2230 *
		(0.0999)
factor(not_understood)1		-0.1295
		(0.3062)
factor(not_understood)2		-4.6961 ***
		(0.2717)
factor(not_understood)3		-4.1575 ***
		(0.4000)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.2

```
S3_h22_1 = glm(actual_consumption ~ scale(insight_mean),
               family = binomial(link = "probit"), data_3)

S3_h22_2 = glm(actual_consumption ~ scale(insight_mean)
               + factor(ability) + scale(mean_RT) + factor(not_understood),
               family = binomial(link = "probit"), data_3)
```

Table 17: Study 3: Actual consumption as a function of insight, with and without controls

	Actual Consumption	Actual Consumption
(Intercept)	-0.2629 **	-0.5342 **
	(0.0934)	(0.2064)
scale(insight_mean)	0.3341 ***	0.3434 ***
	(0.0963)	(0.0992)
factor(ability)1		0.3378
		(0.2512)
factor(ability)2		0.2959
		(0.2920)
factor(ability)3		0.3568
		(0.3140)
scale(mean_RT)		0.2236 *
		(0.1029)
factor(not_understood)1		0.0333
		(0.3206)
factor(not_understood)2		-4.2100 ***
		(0.3177)
factor(not_understood)3		-4.1421 ***
		(0.3845)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H3.1

```
S3_h31_1 = lm(scale(consume_mean) ~ factor(condition),
               data_3)

S3_h31_2 = lm(scale(consume_mean) ~ factor(condition)
               + factor(ability) + scale(mean_RT) + factor(not_understood),
               data_3)
```

Table 18: Study 3: Willingness to consume as a function of condition, with and without controls

	Will. to Consume	Will. to Consume
(Intercept)	-0.1838	-0.1026
	(0.1105)	(0.1936)
factor(condition)1	0.3638 *	0.3111 *
	(0.1419)	(0.1412)
factor(ability)1		0.0695
		(0.1965)
factor(ability)2		0.0697
		(0.2077)
factor(ability)3		-0.0338
		(0.2515)
scale(mean_RT)		0.1318
		(0.0767)
factor(not_understood)1		-0.5784 *
		(0.2287)
factor(not_understood)2		-1.9630 ***
		(0.1458)
factor(not_understood)3		-0.6769 *
		(0.2698)
adj.r.squared	0.0282	0.0765

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

H3.2

```
S3_h32_1 = lm(scale(consume_mean) ~ scale(insight_mean),
            data_3)

S3_h32_2 = lm(scale(consume_mean) ~ scale(insight_mean)
            + factor(ability) + scale(mean_RT) + factor(not_understood),
            data_3)
```

Table 19: Study 3: Willingness to consume as a function of insight, with and without controls

	Will. to Consume	Will. to Consume
(Intercept)	0.0000	-0.1049
	(0.0588)	(0.1240)
scale(insight_mean)	0.5771 ***	0.5618 ***
	(0.0634)	(0.0663)
factor(ability)1		0.1560
		(0.1472)
factor(ability)2		0.2464
		(0.1783)
factor(ability)3		0.2372
		(0.1794)
scale(mean_RT)		0.1365 *
		(0.0610)
factor(not_understood)1		-0.3251
		(0.2136)
factor(not_understood)2		-1.1777 ***
		(0.1759)
factor(not_understood)3		-0.6882 ***
		(0.1893)
adj.r.squared	0.3295	0.3632

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Study 4

H1.1

```
S4_h11_1 = lm(scale(sharing) ~ factor(condition),
              data_4)

S4_h11_2 = lm(scale(sharing) ~ factor(condition)
              + scale(RT) + scale(convince),
              data_4)
```

Table 20: Study 4: Willingness to share as a function of condition, with and without controls

	Will. to Share	Will. to share
(Intercept)	-0.1648 *	-0.1464 *
	(0.0809)	(0.0721)
factor(condition)1	0.3319 **	0.2949 **
	(0.1181)	(0.1002)
scale(RT)		-0.0845
		(0.0538)
scale(convince)		0.5393 ***
		(0.0510)
adj.r.squared	0.0241	0.3024

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H1.2

```
S4_h12_1 = lmer(scale(sharing) ~ scale(insight)
              + (1|story),
              data_High4)

S4_h12_2 = lmer(scale(sharing) ~ scale(insight)
              + scale(RT) + scale(convince)
              + (1|story),
              data_High4)
```

Table 21: Study 4: Willingness to share as a function of insight, with and without controls, within the High Insight Condition

	Will. to Share (HI Condition)	Will. to share (HI Condition)
(Intercept)	-0.0057	-0.0006
	(0.1097)	(0.0683)
scale(insight)	0.5925 ***	0.3506 ***
	(0.0692)	(0.0813)
scale(RT)		-0.1130
		(0.0676)
scale(convince)		0.4010 ***
		(0.0832)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

```
S4_h12_3 = lmer(scale(sharing) ~ scale(insight)
            + (1|story),
            data_Low4)

S4_h12_4 = lmer(scale(sharing) ~ scale(insight)
            + scale(RT) + scale(convince)
            + (1|story),
            data_Low4)
```

Table 22: Study 4: Willingness to share as a function of insight, with and without controls, within the Low Insight Condition

	Will. to Share (LI Condition)	Will. to share (LI Condition)
(Intercept)	0.0000	0.0000
	(0.0720)	(0.0688)
scale(insight)	0.5247 ***	0.3873 ***
	(0.0722)	(0.0776)
scale(RT)		-0.0262
		(0.0695)
scale(convince)		0.3025 ***
		(0.0781)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.1

```
S4_h21_1 = glm(actual_consumption ~ factor(condition),
          family = binomial(link = "probit"), data_4)

S4_h21_2 = glm(actual_consumption ~ factor(condition)
          + scale(RT) + scale(convince),
          family = binomial(link = "probit"), data_4)
```

Table 23: Study 4: Actual consumption as a function of condition, with and without controls

	Actual Consumption	Actual Consumption
(Intercept)	-0.0979	-0.0983
	(0.1061)	(0.1070)
factor(condition)1	-0.0377	-0.0383
	(0.1507)	(0.1515)
scale(RT)		0.0740
		(0.0763)
scale(convince)		0.0220
		(0.0767)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.2

```
S4_h22_1 = glmer(actual_consumption ~ scale(insight)
                + (1|story),
                family = binomial(link = "probit"), data_High4)

S4_h22_2 = glmer(actual_consumption ~ scale(insight)
                + scale(RT) + scale(convince)
                + (1|story),
                family = binomial(link = "probit"), data_High4)
```

```
S4_h22_3 = glmer(actual_consumption ~ scale(insight)
                + (1|story),
                family = binomial(link = "probit"), data_Low4)

S4_h22_4 = glmer(actual_consumption ~ scale(insight)
                + scale(RT) + scale(convince)
                + (1|story),
                family = binomial(link = "probit"), data_Low4)
```

Table 24: Study 4: Actual consumption as a function of insight, with and without controls, within the High Insight Condition

	Actual Consumption (HI Condition)	Actual Consumption (HI Condition)
(Intercept)	-0.1360	-0.1414
	(0.1068)	(0.1080)
scale(insight)	0.0742	-0.0992
	(0.1073)	(0.1365)
scale(RT)		0.0500
		(0.1139)
scale(convince)		0.2819 *
		(0.1414)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Table 25: Study 4: Actual consumption as a function of insight, with and without controls, within the Low Insight Condition

	Actual Consumption (LI Condition)	Actual Consumption (LI Condition)
(Intercept)	-0.1194	-0.1350
	(0.1945)	(0.2587)
scale(insight)	-0.0969	-0.0298
	(0.1091)	(0.1238)
scale(RT)		0.2472
		(0.1338)
scale(convince)		-0.1387
		(0.1254)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Study 5

H1.1

```
S5_h11_1 = lm(scale(sharing) ~ factor(condition),
              data_5)

S5_h11_2 = lm(scale(sharing) ~ factor(condition)
              + scale(RT) + scale(convince),
              data_5)
```

Table 26: Study 5: Willingness to share as a function of condition, with and without controls

	Will. to Share	Will. to share
(Intercept)	-0.1440	-0.1289
	(0.0828)	(0.0688)
factor(condition)1	0.2891 *	0.2587 **
	(0.1183)	(0.0994)
scale(RT)		-0.0968 *
		(0.0442)
scale(convince)		0.5579 ***
		(0.0523)
adj.r.squared	0.0175	0.3202

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H1.2

```
S5_h12_1 = lmer(scale(sharing) ~ scale(insight)
              + (1|story),
              data_High5)

S5_h12_2 = lmer(scale(sharing) ~ scale(insight)
              + scale(RT) + scale(convince)
              + (1|story),
              data_High5)
```

Table 27: Study 5: Willingness to share as a function of insight, with and without controls, within the High Insight Condition

	Will. to Share (HI Condition)	Will. to share (HI Condition)
(Intercept)	0.0000	-0.0066
	(0.0691)	(0.0814)
scale(insight)	0.5806 ***	0.3878 ***
	(0.0693)	(0.0780)
scale(RT)		0.0088
		(0.0682)
scale(convince)		0.3449 ***
		(0.0782)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

```
S5_h12_3 = lmer(scale(sharing) ~ scale(insight)
              + (1|story),
              data_Low5)

S5_h12_4 = lmer(scale(sharing) ~ scale(insight)
              + scale(RT) + scale(convince)
              + (1|story),
              data_Low5)
```

Table 28: Study 5: Willingness to share as a function of insight, with and without controls, within the Low Insight Condition

	Will. to Share (LI Condition)	Will. to share (LI Condition)
(Intercept)	0.0000	0.0000
	(0.0658)	(0.0602)
scale(insight)	0.6272 ***	0.4633 ***
	(0.0661)	(0.0677)
scale(RT)		-0.1237 *
		(0.0617)
scale(convince)		0.3616 ***
		(0.0684)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.1

```
S5_h21_1 = glm(actual_consumption ~ factor(condition),
          family = binomial(link = "probit"), data_5)

S5_h21_2 = glm(actual_consumption ~ factor(condition)
          + scale(RT) + scale(convince),
          family = binomial(link = "probit"), data_5)
```

Table 29: Study 5: Actual consumption as a function of condition, with and without controls

	Actual Consumption	Actual Consumption
(Intercept)	-0.3729 ***	-0.3702 ***
	(0.1086)	(0.1095)
factor(condition)1	0.0637	0.0561
	(0.1533)	(0.1540)
scale(RT)		0.0344
		(0.0767)
scale(convince)		0.0705
		(0.0786)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

H2.2

```
S5_h22_1 = glmer(actual_consumption ~ scale(insight)
            + (1|story),
            family = binomial(link = "probit"), data_High5)

S5_h22_2 = glmer(actual_consumption ~ scale(insight)
            + scale(RT) + scale(convince)
            + (1|story),
            family = binomial(link = "probit"), data_High5)
```

Table 30: Study 5: Actual consumption as a function of insight, with and without controls, within the High Insight Condition

	Actual Consumption (HI Condition)	Actual Consumption (HI Condition)
(Intercept)	-0.3092 **	-0.3223 *
	(0.1078)	(0.1252)
scale(insight)	0.0029	-0.0734
	(0.1078)	(0.1290)
scale(RT)		0.1537
		(0.1385)
scale(convince)		0.1306
		(0.1321)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

```
S5_h22_3 = glmer(actual_consumption ~ scale(insight)
            + (1|story),
            family = binomial(link = "probit"), data_Low5)

S5_h22_4 = glmer(actual_consumption ~ scale(insight)
            + scale(RT) + scale(convince)
            + (1|story),
            family = binomial(link = "probit"), data_Low5)
```

H3.1

```
S5_h31_1 = lm(scale(consume) ~ factor(condition),
            data_5)
S5_h31_2 = lm(scale(consume) ~ factor(condition)
            + scale(RT) + scale(convince) + scale(as.numeric(pre_test)),
            data_5)
```

H3.2

```
S5_h32_1 = lmer(scale(consume) ~ scale(insight)
            + (1|story),
            data_High5)
S5_h32_2 = lmer(scale(consume) ~ scale(insight)
            + scale(RT) + scale(convince) + scale(as.numeric(pre_test))
            + (1|story),
            data_High5)
```

Table 31: Study 5: Actual consumption as a function of insight, with and without controls, within the Low Insight Condition

	Actual Consumption (LI Condition)	Actual Consumption (LI Condition)
(Intercept)	-0.3749 **	-0.3751 **
	(0.1406)	(0.1404)
scale(insight)	0.1650	0.1740
	(0.1097)	(0.1232)
scale(RT)		-0.0359
		(0.1141)
scale(convince)		-0.0258
		(0.1249)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Table 32: Study 5: Willingness to consume as a function of condition, with and without controls

	Will. to Consume	Will. to Consume
(Intercept)	-0.1266	-0.1219
	(0.0871)	(0.0764)
factor(condition)1	0.2542 *	0.2446 *
	(0.1185)	(0.1033)
scale(RT)		-0.0184
		(0.0455)
scale(convince)		0.3404 ***
		(0.0629)
scale(as.numeric(pre_test))		0.3112 ***
		(0.0579)
adj.r.squared	0.0127	0.2620

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Table 33: Study 5: Willingness to consume as a function of insight, with and without controls, within the High Insight Condition

	Will. to Consume (HI Condition)	Will. to Consume (HI Condition)
(Intercept)	0.0000	-0.0063
	(0.0790)	(0.0860)
scale(insight)	0.3648 ***	0.1166
	(0.0793)	(0.0861)
scale(RT)		0.1020
		(0.0743)
scale(convince)		0.3178 ***
		(0.0872)
scale(as.numeric(pre_test))		0.2647 ***
		(0.0752)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

```
S5_h32_3 = lmer(scale(consume) ~ scale(insight)
             + (1|story),
             data_Low5)
S5_h32_4 = lmer(scale(consume) ~ scale(insight)
             + scale(RT) + scale(convince) + scale(as.numeric(pre_test))
             + (1|story),
             data_Low5)
```

Table 34: Study 5: Willingness to consume as a function of insight, with and without controls, within the Low Insight Condition

	Will. to Consume (LI Condition)	Will. to Consume (LI Condition)
(Intercept)	-0.0030	-0.0004
	(0.1177)	(0.1003)
scale(insight)	0.3367 ***	0.1774 *
	(0.0798)	(0.0820)
scale(RT)		-0.0659
		(0.0770)
scale(convince)		0.2498 **
		(0.0825)
scale(as.numeric(pre_test))		0.3229 ***
		(0.0741)

Standard errors are heteroskedasticity robust. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

4. Exploratory Analysis

RQ1: Is the declarative measure of consumption ("willingness to consume") a predictor of the behavioral measure of consumption ("Actual Consumption") ?

```
S3_rq1 = glm(factor(actual_consumption) ~ scale(consume_mean),
          family = binomial(link = "probit"), data = data_3)
S5_rq1 = glm(factor(actual_consumption) ~ scale(consume),
          family = binomial(link = "probit"), data = data_5)
```

Table 35: Actual Consumption as a function of willingness to consume

	Actual Consumption S3	Actual Consumption S5
(Intercept)	-0.3335 **	-0.4000 ***
	(0.1032)	(0.0824)
scale(consume_mean)	0.7090 ***	
	(0.1189)	
scale(consume)		0.5369 ***
		(0.0923)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

RQ2: Does finding the solution by oneself has an influence on the intensity of insight?

```
S1_rq2_1 = lmer(scale(insight) ~ factor(solved) + (1| stumpers) + (1 + factor(solved) | ResponseId), da
S1_rq2_2 = lmer(scale(insight) ~ factor(solved) + (1| stumpers) + (1 + factor(solved) | ResponseId), da

S2_rq2_1 = lmer(scale(insight) ~ factor(solved) + (1| stumpers) + (1 + factor(solved) | ResponseId), da
S2_rq2_2 = lmer(scale(insight) ~ factor(solved) + (1| stumpers) + (1 + factor(solved) | ResponseId), da

S3_rq2_1 = lmer(scale(insight) ~ factor(solved) + (1| stumpers) + (1 + factor(solved) | ResponseId), da
S3_rq2_2 = lmer(scale(insight) ~ factor(solved) + (1| stumpers) + (1 + factor(solved) | ResponseId), da
```

Table 36: Study 1: Insight as a function of finding the solution by oneself

	Insight (HI Condition) S1	Insight (LI Condition) S1
(Intercept)	0.2242 *	-0.0605
	(0.0899)	(0.1603)
factor(solved)1	-0.5346 ***	0.2402
	(0.1311)	(0.1309)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Table 37: Study 2: Insight as a function of finding the solution by oneself

	Insight (HI Condition) S2	Insight (LI Condition) S2
(Intercept)	0.1847	-0.0415
	(0.0976)	(0.1296)
factor(solved)1	-0.3982 **	0.0817
	(0.1315)	(0.1052)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Table 38: Study 3: Insight as a function of finding the solution by oneself

	Insight (HI Condition) S3	Insight (LI Condition) S3
(Intercept)	0.1643	0.0582
	(0.1020)	(0.1038)
factor(solved)1	-0.3496 **	-0.1141
	(0.1082)	(0.1100)

Standard errors are heteroskedasticity robust. *** p < 0.001; ** p < 0.01; * p < 0.05.

Table 39: Meta-analysis of RQ2

hypothesis	estimate	std_error	Z	p	LowerCI	UpperCI
Insight ~ Solved, HI Condition	-0.4169699	0.0704469	-5.9189249	0.0000000	-0.5550432	-0.2788965
Insight ~ Solved, LI Condition	0.0604354	0.0989772	0.6105994	0.5414648	-0.1335564	0.2544272

5. Materials for whodunits studies

5.1 - Chocolate

Sir William, a wealthy middle-aged man in the midst of a bitter divorce, receives at his club a box of chocolates, delivered by an anonymous courier. He has no idea where the chocolates came from, and is all the more surprised that he really doesn't like chocolate. As he looks for someone to give the chocolates to, he turns to his chubby friend at the club, Mr. Beresford. Sir William tells him:

You mentioned that you were looking for a small gift for your wife, so I'd happily give you those, are you interested?

Mr. Beresford replies:

if you'd asked me that last week, I would have said, absolutely not, as my wife was until then on a strict no sugar diet. Fortunately, she's done with that, and we can enjoy delicacies together again. So if you absolutely don't want the chocolate box, I'd happily take it off you!

As a result, Sir Williams gives Mr. Beresford the chocolate box.

Mr. Beresford goes home and, after dinner, he gives his wife the chocolates, and they enjoy a few together while watching a movie. During the night, they both feel sick, and Mr. Beresford manages to call an

ambulance. Tragically, Mrs. Beresford dies on the way to the hospital, while Mr. Beresford is severely sick but survives after days of treatment.

The police establish that the death of Mrs. Beresford, and the sickness of her husband, is due to the chocolates, which had been poisoned with nitrobenzene. Given the average dose of nitrobenzene in a chocolate, six chocolates would have been enough to kill an adult. Mrs. Beresford ate a dozen chocolates, while her husband ate only two, which saved his life. Police traced the chocolates back to the small, luxury Maison Fauchon chocolate company that made them. It turns out that Sir William's box of chocolates was part of a special request from an unknown customer. The delivery man from the Maison Fauchon remembered the order, because he had been specifically instructed to leave the chocolate box in a park bench, which he thought was weird, given that these are expensive chocolates.

The police weren't able to prove anyone's guilt at first, when Mr. Beresford started making some strong accusations. He said that after his wife's death, he found proof that she had been having a passionate affair with Sir William. Looking at the evidence, the police confirmed that this was the case, and they also found, in secret texts that no one had access to, that she had put a stop to the affair two weeks before her death, and that she and Sir William had had no contact since. Mr. Beresford then accused Sir Willam of poisoning his wife, so the affair wouldn't come out, as the latter would then be sure to lose most of his fortune in the divorce proceedings. According to Mr. Beresford, Sir William ordered the chocolates, poisoned them, and then paid a henchman to deliver them to the club. He then found an excuse to give them to someone else, making it look like he was the intended victim.

In spite of these accusations, the police end up arresting Mr. Beresford. Here's the reasoning of the detective behind the arrest:

Insight:

"Mr. Beresford was already aware of the affair, and he thought of a plan to get rid of both his wife and her lover, while making it very unlikely he would be suspected. He ordered the chocolates, poisoned them, and paid a henchman to deliver them to the club. Knowing that Sir William doesn't like chocolate, he mentioned that he had to find a small gift for his wife, making it natural for Sir William to offer him the chocolates. He was then careful to only eat a few chocolates–even though he would usually have eaten most of the box. If his plan worked well, his wife would die, and Sir William would go to jail for a long time.

Even though both Mr. Beresford and Sir William had a motive, we can tell that Mr. Beresford is the culprit because he was the only one to know that his wife had stopped her diet, and so would eat the chocolates. Since Mrs. Beresford had put an end to this diet a week after she put an end to the affair with Sir William, and they had had no contact since, there was no way for him to know, and thus he would never have planned to poison her with chocolates.

Therefore, Mr. Beresford is the one who killed his wife."

No insight:

"Sir William had to go on an unexpected business trip abroad, and he had just come back on the day of the death. They also found no way for him to have communicated with someone who could have acted for him. That means that he had no opportunity to get the chocolates and poison them.

As we interrogated Mr. Beresford, we found that his behavior during the questioning was suspicious. As a result, we pushed him harder, trying to catch him being inconsistent. After several hours of questioning, he ended up admitting that he was the culprit. He ordered the chocolates to kill his unfaithful wife and have her lover accused and sent to jail. He also told us where to find in his house the bill for the chocolates. We also discovered that Mr. Beresford had accumulated a lot of debt and that his wife's life insurance allowed him to pay it off.

Therefore, Mr. Beresford is the one who killed his wife."

5.2 - Nightmare

The old billionaire Edward Conway has invited the famous detective Richard Burton to his home. Mr. Conway lives in an isolated mansion. When he arrives, Burton sees three workers moving rubble in front of the house. On the steps, the butler, Murray, opens the door and explains that the house is being renovated. He apologizes for the inconvenience, and Burton shows him the invitation he received from Mr. Conway.

Murray informs Burton that it is standard procedure to introduce visitors first to the office of the secretary who notifies Mr. Conway of their visit, and he brings Burton to the secretary's office. Burton knocks on the door and an authoritative voice tells him to enter. Once inside, a tall, austere, bespectacled man greets the detective, coldly. It is not the secretary who is there, but Mr. Conway. He explains to Burton that he is using his secretary's office because there is currently work going on in his own office, and asks him to sit. Burton does so, facing a large window, where a strong sun is setting.

For several weeks he has been having the same dream, Mr. Conway says. In this nightmare, he is killing himself in front of his office window with the gun he keeps in his drawer. Not being suicidal, Mr. Conway asks Burton if he has ever encountered cases of murder by suggestion. Mr. Conway wonders if someone could use hypnosis to drive him to suicide by making him dream of ending his life, although he does not remember being hypnotized. He mentions a number of business rivals whom he ruined, and who might want to seek revenge in this perverted manner.

Burton is taken aback because he has never encountered such a case and admits that he's not sure whether he can help Mr. Conway. Mr. Conway then dismisses the detective, and asks him to give back the invitation, as he wants to keep this meeting discreet. However, once Burton is in the hallway, he realizes that he has actually given another letter, addressed to a colleague. Therefore, he goes back to the office, gives the right letter to Mr. Conway, apologizes and goes home.

A week later, Mr. Conway is found dead by apparent suicide. On the same day, the police called Burton to the scene because his letter of invitation had been found on Mr. Conway's table. Once he gets there, he notices that the work is finished, and that the workers have done a good job cleaning up, except for a few pieces of glass on the landing of the house that his experienced eye can't help but notice. Mr. Conway used to water the plants on his windowsill at 1 p.m. sharp every day, and the plants had been watered. Therefore, Mr. Conway's time of death is most likely after 1 p.m. In the house, in addition to the police, are Mr. Conway's widow, and his daughter from a previous marriage, as well as the butler Murray, the cleaning lady Miss Hurtigan and his secretary Mr. Fisher.

Burton first tells the police the contents of his conversation with Mr. Conway. Mr. Conway's widow confirms that her husband had been preoccupied in recent weeks by recurring dreams of suicide. The detective is then introduced to Mr. Conway's office, which is next to his secretary's, entering through a large carved door. Mr. Conway's body is lying in front of his open window, holding a revolver in his hand, dead from a bullet to the head. The body was discovered by Mr. Fisher, who had come to bring him a briefcase of documents, followed a few seconds later by Murray, who was alerted by Mr. Fisher's cry. The body is not wearing glasses, which is strange because Mr. Conway, being extremely short-sighted, rarely took off his glasses. This absence of glasses is all the more puzzling because Mr. Conway had a spare pair in case he lost the first one.

None of the workers heard the shot, which is probably due to them wearing noise-canceling headphones, the noise of the work, and the heavy door of Mr. Conway office. Despite the back and forth of the workers in front of Conway's office, no one saw anyone enter Mr. Conway's office–except Mr. Conway himself earlier in the morning. For most of the day of the shooting, Betsy Conway and Miss. Conway said they were either in another aisle, as the work near Mr. Conway's office was quite noisy. Mr. Conway has kept working there, thanks to the heavy insulation of his office. Fisher, Murray and Hurtigan, to be able to keep working, had borrowed noise-canceling headphones from the workers and continued their tasks as usual. As a result, no one seems to have heard the gunshot.

Mr. Conway's daughter and widow each inherit half of the deceased's considerable fortune. They do not seem particularly distraught, possibly because Mr. Conway was notorious for his bad temper.

A few days later, Burton contacted the police and told them the following:

High Insight

"The individual I met a week ago was not Mr. Conway, but his secretary Mr. Fisher, disguised and wearing makeup. It couldn't have been Murray, since he was the one who brought me into the office. Moreover, who else could have used Mr. Fisher's office, knowing that he works there every day. I could not notice the deception because I was partially blinded by the light of the setting sun.

Mr. Fisher dressed up as Edward Conway, welcomed me into the secretary's office, knowing that the real Mr. Conway would probably be in his own office. Mr. Conway could not hear our conversation because his office is so well insulated. Moreover, Mr. Fisher, having put on Mr. Conway's second pair of glasses, which were unsuitable for his eyesight, did not realize that I had handed him the wrong letter at the end of our interview.

Speaking of this letter, Mr. Fisher has asked me to give it to him before I left, so that the police would find it in Mr. Conway's belongings, interview me, and I would tell this made up story of premonitory dreams, confirming the apparent suicide. The real Mr. Conway would not have kept the letter on his desk for a week, he would have destroyed the letter so that people would not know about our appointment. Mr. Fisher then shot Mr. Conway from his office window, as Mr. Conway was watering the plants.

Mr. Conway's glasses fell outside on the landing of the house and shattered there. Later in the day, Mr. Fisher retrieved the frames, but did not diligently clean up the broken glass. Before Murray arrived, Mr. Fisher put the gun hidden in his briefcase into Mr. Conway's hands. I suspect that Mr. Fisher set it up with the help of Mrs. Conway, the only one to have heard of this whimsical story of dreams. Unable to disguise herself as Mr. Conway to deceive me, Mrs. Conway had to offer Mr. Fisher part of the inheritance in exchange for his help in killing her husband.

Therefore, I accuse Harry Fisher and Betsy Conway of killing Mr. Conway."

Low Insight

"I have scrupulously checked the alibi of each of the protagonists. On the day of the murder Murray was working in the basement, he could not tell us at first, but he was accompanied but Miss Hurtigan. The two have a secret relationship that could have gotten them fired if the Conway family found out, since such relationships are prohibited in their employment contracts. Faced with my pressing questions, they finally confessed the truth.

With the help of my partners, I tailed the three remaining suspects for several days. I noticed several meetings between Mr. Fisher and Betsy Conway, the widow. I was even able to take pictures of the two of them kissing furtively at a coffee shop. Not only that, but I also spoke with relatives of Mr. Fisher, who testified that he had told them to be that "he was about to hit it big" and that "his life wouldn't be the same". Furthermore, I was subsequently contacted by Miss Conway, the daughter of the deceased, who gave me audio recordings she had made of Mr. Fisher and Mrs. Conway explicitly planning the murder of Mr. Conway.

The forensic analysis did not find any gunshot residue on Mr. Conway's temple consistent, which is inconsistent with a suicide. Finally, the scientific department thought of gathering the fingerprints on the revolver found at the crime scene, but not on the bullets loaded into it. I therefore suggested to the detectives that they also gather fingerprints on the bullets. It turns out that Mr. Fisher had wiped his fingerprints off the revolver, but had forgotten to do the same with the bullets he put in the cylinder.

Therefore, I accuse Mr. Fisher and Betsy Conway of killing Mr. Conway."