Supplemental Materials

Overview. The following materials touch upon a number of auxiliary features to our study.

First (1), we describe two additional supplemental procedures to verify the robustness of our results and verify the boundary conditions of the effects reported in the main document. The first of these procedures describes using Amazon's Mechanical Turk to obtain normative ratings of the phrases and adjectives participants described their nominees as in the parent and friend salience measure. Such data were used to create relatively objective measures of relationship quality and test the robustness of the moderating effects of relationship quality observed in the main document. This procedure was employed for both samples of the main study. The other procedure describes an additional experimental task administered in Sample 2 (real reward sample) to determine whether the effects in the main study generalized to decisions that were characterized by certainty, rather than uncertainty. This experimental task was administered as part of the overall procedure for Sample 2 and shared the same, pre-registered hypotheses as the CCT task (they are not listed here to avoid redundancy but interested readers can view them at osf.io/4pvxb).

Second (2), these materials list the supplementary hypothesis related to family obligation that was briefly mentioned in the beginning of the methods section of the main document.

Third (3), the materials here contain results from the main analysis broken down by sample. That is, the same analyses run in the main study are repeated here separately for each of the two samples (the sample that received simulated rewards for parent/friend (Sample 1) and the sample that received real rewards for parent/friend (Sample 2)). There is also a breakdown of how the association between decision make and return, and decision making and risk differ as a function of reward type (e.g., when rewards to parent/friend were simulated vs real).

Fourth (4), because approximately 95% of our sample was comprised of individuals aged 18-24.99, we ran re-ran our final model to verify our results were not disproportionately influenced by the oldest participants (25+; Table S7).

Lastly (5), we disclose the entire list of self-reported measures that were collected in this study. Notably, no analyses were run with self-report measures other than those referenced in the main document. Thus, as of this submission, data from these additional measures have not been analyzed.

Supplemental Hypothesis

Supplemental Hypothesis 1. Participants who perceive greater obligation to their parent will be more likely to make decisions that benefit a parent at the expense of a friend (moderation). Similarly, participants who perceive greater obligation to their friend will be more likely to make decisions that benefit a friend at the expense of a parent (moderation). This was a post-hoc exploratory question in our first sample and a pre-registered hypothesis in the second sample.

Supplemental Methods for Data Collection with Amazon's Mechanical Turk

Participants. Participants were recruited through Amazon's Mechanical Turk by a study advertisement asking them to rate adjectives and phrases used to describe individuals. This was done separately by sample. For Sample 1 adjective/phrases, we constrained our participants to individuals who were of college-age, and thus only allowed individuals between the ages of 18-

22 to participate. We arbitrarily decided to collect data on 60 participants (19 Female, $M_{age} = 21.03$). For Sample 2 adjectives/phrases, we decided to collect a similar number of participants ($n = 50$; 21 Female, $M_{age} = 26.32$) while widening the eligible age range to be more consistent with the population sample recruited from the general West Los Angeles area.

  Procedure. Participants responded to a HIT request asking individuals to "rate traits and phrases commonly used to describe individuals on how positive or negative they are." Individuals then rated adjectives/phrases (Sample 1 $n = 412$; Sample 2 $n = 435$) according to the following prompt "These are words and phrases that have been used by individuals to describe close others. Please rate the following words/phrases on a scale of 1 to 7 based on what you think about the word/phrase." The anchors on the likert scale were 1 = extremely negative, 4 = neutral, 7 = extremely positive. All adjectives/phrases in both were presented in alphabetical order across many pages on a survey administered via Qualtrics. A very small number (less than 10) of items participants provided were either not rated or not included in final analyses because they were deemed to be inappropriate descriptors of others (e.g., "chocolate" or "glasses").

  In addition to rating these traits, MTurk participants for Sample 1 adjectives/phrases also completed two modified versions of the Respect for Family Subscale of the Family Obligation Scale (Fuligni & Tseng, 2008). Typically, participants are asked to rate how important they regard a set of behaviors that indicate obligation for one's family. For the first version, we modified the subscale by changing all items to ask about parents (as opposed to other family members) and subsequently omitting redundant items, yielding a five-item measure. A sample item includes "How important is it to you that you to make sacrifices for your parents?" The second version was identical to the first version except all items were changed to ask about friends (instead of parents) and one item was omitted ("Follow your parents' advice about choosing friends."), producing a four-item measure. A sample item is "How important is it to you that you treat your friends with great respect?" Thus, there were two separate scales, one tapping obligation to one's friends and the other measured obligation to one's parents. A single score for each scale was calculated by averaging items. Both versions are available with the rest of the study materials on the OSF. Due to experimenter error, one item of the friend obligation scale was worded incorrectly when collecting data via MTurk. Though the corrected version of the item is listed on OSF, all analyses with this measure reported here reflect scores calculated without this item. Both measures displayed adequate to good reliability (Parent $\alpha = 0.88$, Friend $\alpha = 0.65$).

  The rationale for choosing the Respect for Family Subscale instead of using the full measure or other subscales was because the other subscales (i) did not contain items that were easily adapted to ask about friends and (ii) tended to assess obligation in scenarios that one typically encounters with family but not friends, potentially biasing reports of obligation.

  The measure was not collected on the Sample 2 MTurk participants because it was instead administered to the main study participants with the intention of testing whether family/parent obligation scores moderated the trial-level association between Condition and decision making, thereby lending insight into potential motivational causes behind decision making behaviors.

Supplemental Self-Report Measures. The following measures were collected on main study participants (both samples) for the possibility of running additional, exploratory analyses or to test future research questions orthogonal to the ones presented in the main study. The health and social subscales of the adolescent version of the Domain Specific Risk Taking Scale

(DOSPERT; Blais & Weber, 2006; Figner & Weber, 2011) and the 8-item Brief Sensation Seeking Scale (BSSS-8; Hoyle et al., 2002).

Supplemental Methods for Other-Oriented Decision Making Under Conditions of Certainty.

As noted in the main document, an additional, less imminent aim of our study was to also characterize how young adults prioritized parents and peers in trade-offs that were certain in nature (as opposed to uncertain). To this end, Sample 2 participants also completed an adapted version of a family assistance task (Telzer, Masten, Berkman, Lieberman, & Fuligni, 2010; Moll et al., 2006).

In our version of the task (referred to as the Donations Task), individuals were instructed to make choices about point allocation proposals that had conflicting outcomes for their nominated parent and friend. Specifically, on each trial, one individual (parent or friend) would stand to gain a given number of points while the other would be poised to lose a number of points. Individuals were instructed to either reject or accept each proposal. The gain amounts for each proposal could vary between +70, +60, +50, +40, while the loss amounts could vary between -70, -60, -50, -40, -30, -20, -10. Each gain value was paired with loss values whose absolute values were at most equivalent and at least no lower than 30 points less e.g., +70 was always paired with either -70, -60, -50, -40. This configuration is in line with previous versions of the task (Telzer et al., 2010; Telzer, Fuligni, Lieberman, & Galvan, 2014), and yielded 16 distinct trial types, each of which were repeated 8 times for a total task length of 128 trials. Participants were told their decisions during the task would also affect the initial $5 endowment their parent and friend received at the start of the study.

We opted to analyze the task in the same fashion as the CCT. The following HLM models were used to analyze the Donations Task in manner that was analogous to the CCT analyses.

Level 1 (within-participant):
(1) $\qquad \text{Logit}(\text{Decision}_{it}) = \pi_{0i} + \pi_{1i}(\text{Condition}) + \pi_{2i}(\text{Gain Amt}) + \pi_{3i}(\text{Loss Amt}) + \varepsilon_{it}$

Level 2 (between-participants):
(2) $\qquad \pi_{0i}(\text{intercept}) = \gamma_{00} + \gamma_{01}(\text{Age}) + \gamma_{02}(\text{Sex}) \, \gamma_{03}(\text{PRQ}) + \gamma_{04}(\text{FRQ}) + u_{0i}$

(3) $\qquad \pi_{1i}(\text{Condition}) = \gamma_{10} + \gamma_{11}(\text{Age}) + \gamma_{12}(\text{Sex}) + \gamma_{13}(\text{PRQ}) + \gamma_{14}(\text{FRQ}) + u_{1i}$

(4) $\qquad \pi_{2i}(\text{Gain Amt}) = \gamma_{20} + \gamma_{21}(\text{Age}) + \gamma_{22}(\text{Sex}) + \gamma_{23}(\text{PRQ}) + \gamma_{24}(\text{FRQ}) + u_{2i}$

(5) $\qquad \pi_{3i}(\text{Loss Amt}) = \gamma_{30} + \gamma_{31}(\text{Age}) + \gamma_{32}(\text{Sex}) + \gamma_{33}(\text{PRQ}) + \gamma_{34}(\text{FRQ}) + u_{3i}$

In these equations, Decision refers to the tth decision for the ith individual during the Donations task (0 = reject proposal; 1 accept proposal). Condition still denotes whether a friend stood to gain at the expense of a parent (0) or if a parent stood to gain at the expense of the friend (1), but now does so for certain decisions. Thus, a positive association between Condition and logit(Decision) would mean that individuals were more likely to accept allocation proposals if a parent benefitted over a friend whereas a negative association would indicate the opposite. These models control for the amount a given target (parent/friend) was poised to receive on a given trial

(Gain Amt) and the absolute value that the other target stood to lose (Loss Amount). As was the case with the CCT data in the main document, we first ran only the Level 1 model. Afterward, we added age and sex as covariates to level 2. Finally, we added additional scores of self-reported parent and friend relationship. Reward Type was not a covariate in this analysis since this task was only collected on the sample who could earn real rewards for parents and friends. All aforementioned analyses were pre-registered prior to collection of data for Sample 2 and are available on the OSF.

Supplemental Results

Independent ratings of parent and friend traits replicate findings with relationship quality. After obtaining the MTurk ratings for each adjective/phrase, we averaged the ratings for each participant's adjectives/phrases describing their parent and friend into separate single scores (e.g., 1 average rating of all parent descriptors, 1 average rating of all friend descriptors). Next, we entered these scores in our previous hierarchical linear model in place of the IPPA (relationship quality) scores. As shown in Table S1, Panel A, these analyses yielded results that replicated the prior finding with self-report scores of relationship quality in Sample 1, thereby providing converging evidence for our initial effect. Table S1, Panel B depicts results for Sample 2 that yielded highly similar parameter estimates of the moderation effect that trended towards significance.

Family obligation as a motivator. After obtaining our results, we suspected they may be due to the fact that our participants may have relied on their parents for critical types of support that they do not receive from their friends (e.g., financial support). Thus, they may have felt more indebted towards their parents and felt obligated to prioritize them while completing the task. Since we did not collect measures of parent or friend obligation on sample in Sample 1 (i.e., subject pool), we opted to collect it as part of our follow-up MTurk study for Sample 1 to determine whether college-aged individuals evince self-reported differences in perceived obligation to parents or friends. A paired samples t-test revealed no significant differences between levels of perceived obligation towards parents and friends ($M_{Parent\ Obligation}$ = 3.37, $M_{Friend\ Obligation}$ = 3.42; $t(59)$ = -0.54, p > .250). Consequently, although results to this follow-up analysis do not entirely rule out the possibility that differences obligation are driving our primary findings, they are ultimately inconclusive. Neither parent obligation nor friend obligation were significantly correlated with age (rs = .05, .17 respectively), though both were highly correlated with each other (r = .71, p < .001).

The relationship between Condition and decision making for certain choices. As shown in Table S2, there were also no significant associations between Condition and decision making during instances of certain decision making. This suggests that the prioritization of individuals' parents vs friends when making decisions that have conflicting outcomes for each is invariant to certainty/uncertainty. Curiously, we observed a marginally significant moderating effect of age on the association between Condition and decision making in the anticipated direction (e.g., older individuals tend to favor parents over friends). This could suggest the presence of an age x decision setting (certain/uncertain) x Condition interaction such that older individuals (i.e., young adults) only favor their parents as the decision making setting becomes increasingly certain. With that said, this was the only model that showed an effect of age in the expected direction out of several similar analyses and therefore significant caution is required

when interpreting these results. Lastly, we replicated the main document's findings with respect to the relationship quality. Though not depicted in the table, similar results (both in terms of parameter estimates and statistical significance) are obtained when swapping self-reported relationship quality with self-reported perceived obligation scores. These results further underscore the notion that individual differences in relationship quality with ones parents and friends may be the greatest determinant in how one chooses prioritize said social agents.

      Results Split by Sample. Table S3 depicts the results of the unconstrainted (Level 1 only) model for Sample 1. Table S4 shows results for testing Hypothesis 2 and Hypothesis 3 (Panels A and B, respectively). Table S5 depicts the results of the unconstrained model for sample 2. Table S6 shows results for testing Hypothesis 2 and Hypothesis 3 (Panels A and B, respectively). The fixed effect for Condition is positive and significant for the Sample 1 (simulated) but not for Sample 2 (real).

      Additionally, splitting the results up by sample served as a way to follow-up on the significant interaction between Reward Type and Return and Risk (respectively, reported in the main document). Although the interaction term was significant, the effect of Return on decision making was identical in the two samples (.055 for sample 1 (simulated), .055 for sample 2 (real)). There was a similar trend for the effect of Risk (-.052 for sample 1 (simulated), -.066 for sample 2 (real)). Thus, although there was a statistically significant interaction between Reward Type and Return in addition to Reward Type and Risk, follow-up analyses reveal that reward type appeared to have a negligible impact on Return and Risk sensitivities during the performance on the CCT.

Table S1. Trial-by-trial association between risky decision making and Condition, Return and Risk with supplemental level two moderators. Panel A depicts results for Sample 1 adjectives/phrases; Panel B depicts results for Sample 2.

Predictor	A			B		
	γ	SE	p	γ	SE	p
Intercept						
Intercept	2.579	.123	<.001	2.420	.134	<.001
Sex	-0.043	.136	.752	0.350	.168	.040
Age	0.014	.028	.609	-0.018	.028	.520
Parent TR	-0.096	.063	.132	-0.104	.085	.225
Friend TR	0.283	.084	.001	0.191	.126	.132
Condition						
Intercept	0.239	.082	.005	0.010	.094	.918
Sex	-0.037	.089	.680	0.000	.116	.997
Age	-0.007	.017	.690	0.002	.016	.915
Parent TR	0.126	.047	.009	0.112	.079	.160
Friend TR	-0.202	.054	.001	-0.138	.087	.116
Return						
Intercept	0.053	.005	<.001	0.086	.009	<.001
Sex	-0.025	.006	<.001	-0.039	.011	.001
Age	-0.002	.001	.069	-0.004	.002	.049
Parent TR	0.000	.003	.861	-0.015	.005	.002
Friend TR	-0.010	.005	.048	0.002	.007	.801
Risk						
Intercept	-0.052	.004	<.001	-0.063	.005	<.001
Sex	0.003	.005	.483	0.002	.007	.813
Age	0.001	.001	.361	0.000	.001	.760
Parent TR	0.001	.003	.765	0.005	.003	.121
Friend TR	-0.002	.003	.545	-0.006	.005	.298

Note. Sex was coded Male=0, Female = 1. Condition was coded such that a 0 = friend gain/parent lose, 1 = parent gain/friend lose. Return (EV) ranged from -60 to 16.88 and SD ranged from 9.68 to 40. TR = trait ratings. γ-s are fixed effects and represent expected changes in log odds. Robust standard errors are reported from a population-average model.

Table S2. Trial-by-trial association between risky decision making and Condition, Gain Amt and Loss Amt. Panel A depicts the unconstrained model, Panel B includes sex and age as level 2 moderators and Panel C expands to also include self-reported parent and friend relationship quality.

Predictor	A			B			C		
	γ	SE	p	γ	SE	p	γ	SE	p
Intercept									
Intercept	-0.342	.176	.055	-0.295	.320	.359	-2.029	1.051	.057
Sex	-	-	-	-0.076	.388	.846	-0.251	.381	.511
Age	-	-	-	0.072	.051	.164	0.086	.046	.063
Parent RQ	-	-	-	-	-	-	-0.690	.255	.009
Friend RQ	-	-	-	-	-	-	0.947	.359	.010
Condition									
Intercept	0.011	.128	.930	-0.201	.240	.406	-1.751	.906	.056
Sex	-	-	-	0.339	.306	.272	0.467	.254	.069
Age	-	-	-	0.081	.040	.046	0.068	.039	.081
Parent RQ	-	-	-	-	-	-	0.571	.183	.003
Friend RQ	-	-	-	-	-	-	-0.735	.244	.004
Gain Amt									
Intercept	0.053	.005	<.001	0.055	.007	.000	0.140	.029	<.001
Sex	-	-	-	-0.003	.009	.727	-0.003	.010	.742
Age	-	-	-	-0.004	.001	.002	-0.004	.001	.002
Parent RQ	-	-	-	-	-	-	0.008	.007	.232
Friend RQ	-	-	-	-	-	-	-0.005	.009	.584
Loss Amt									
Intercept	-0.079	.004	<.001	-0.075	.007	<.001	-0.104	.026	<.001
Sex	-	-	-	-0.006	.009	.483	-0.004	.009	.686
Age	-	-	-	0.001	.001	.284	0.001	.001	.248
Parent RQ	-	-	-	-	-	-	-0.002	.006	.695
Friend RQ	-	-	-	-	-	-	-0.007	.008	.398

Note. Sex was coded Male=0, Female = 1. Condition was coded such that a 0 = friend gain/parent lose, 1 = parent gain/friend lose. Gain Amt ranged from 40-70, increasing in increments of 10. Loss Amt ranged from 10 to 70 (absolute value), increasing in increments of 10. RQ=relationship quality. γ-s are fixed effects and represent expected changes in log odds. Robust standard errors are reported from a population-average model. These findings only reflect data from Sample 2 (the realreward sample), as the donations task was only administered to that sample.

Table S3. Trial-by-trial association between risky decision making and Condition, Return and Risk (Sample 1)

Predictor	γ	SE	p
Intercept	2.546	.053	<.001
Condition	0.219	.035	<.001
Return	0.034	.003	<.001
Risk	-0.049	.002	<.001

Note. Condition was coded such that a 0 = friend gain/parent lose, 1 = parent gain/friend lose. Return (EV) ranged from -60 to 16.88 and SD ranged from 9.68 to 40. Bs represent log odds. Robust standard errors are reported from a population-average model. γ-s are fixed effects and represent expected changes in log odds. Robust standard errors are reported from a population-average model.

Table S4. Trial-by-trial association between risky decision making and Condition, Return and Risk with level two moderators. Panel A lists the results of HLM models to test Hypothesis 2 (Sample 1). Panel B lists analyses of additional HLM models to test hypothesis 3 (Sample 1).

Predictor	A			B		
	b	SE	p	b	SE	p
Intercept						
Intercept	2.600	.130	<.001	2.586	.135	<.001
Sex	-0.071	.143	.617	-0.054	.147	.712
Age	0.020	.031	.523	0.022	.028	.427
Parent RQ	-	-	-	-0.205	.087	.021
Friend RQ	-	-	-	0.082	.082	.321
Condition						
Intercept	0.230	.087	.010	0.258	.084	.003
Sex	-0.015	.095	.878	-0.016	.093	.862
Age	-0.016	.017	.354	-0.013	.017	.432
Parent RQ	-	-	-	0.153	.062	.016
Friend RQ	-	-	-	-0.321	.082	<.001
Return						
Intercept	0.052	.005	<.001	0.055	.005	<.001
Sex	-0.023	.006	<.001	-0.024	.006	<.001
Age	-0.003	.001	.053	-0.003	.001	.030
Parent RQ	-	-	-	0.010	.004	.008
Friend RQ	-	-	-	-0.020	.005	.001
Risk						
Intercept	-0.052	.004	<.001	-0.052	.005	<.001
Sex	0.004	.005	.445	0.003	.005	.508
Age	0.001	.001	.405	0.001	.001	.391
Parent RQ	-	-	-	0.004	.003	.158
Friend RQ	-	-	-	-0.001	.005	.920

Note. Sex was coded Male=0, Female = 1. Condition was coded such that a 0 = friend gain/parent lose, 1 = parent gain/friend lose. Return (EV) ranged from -60 to 16.88 and SD ranged from 9.68 to 40. RQ stands for 'relationship quality'. γ-s are fixed effects and represent expected changes in log odds. Robust standard errors are reported from a population-average model.

Table S5. Trial-by-trial association between risky decision making and Condition, Return and Risk (Sample 2)

Predictor	γ	SE	p
Intercept	2.620	.068	<.001
Condition	0.019	.041	.640
Return	0.059	.004	<.001
Risk	-0.061	.003	<.001

Note. Condition was coded such that a 0 = friend gain/parent lose, 1 = parent gain/friend lose. Return (EV) ranged from -60 to 16.88 and SD ranged from 9.68 to 40. Bs represent log odds. Robust standard errors are reported from a population-average model. γ-s are fixed effects and represent expected changes in log odds. Robust standard errors are reported from a population-average model.

Table S6. Trial-by-trial association between risky decision making and Condition, Return and Risk with level two moderators. Panel A lists the results of HLM models to test Hypothesis 2 (Sample 2). Panel B lists analyses of additional HLM models to test hypothesis 3 (Sample 2).

Predictor	A			B		
	b	SE	p	b	SE	p
Intercept						
Intercept	2.423	.135	<.001	2.563	.131	<.001
Sex	0.337	.166	.045	0.223	.166	.183
Age	-0.016	.026	.548	-0.014	.028	.614
Parent RQ	-	-	-	-0.343	.071	<.001
Friend RQ	-	-	-	0.547	.142	<.001
Condition						
Intercept	0.005	.095	.955	-0.085	.092	.361
Sex	0.020	.112	.862	0.092	.114	.421
Age	0.001	.015	.924	0.001	.016	.941
Parent RQ	-	-	-	0.223	.064	.001
Friend RQ	-	-	-	-0.296	.098	.004
Return						
Intercept	0.087	.009	<.001	0.055	.009	<.001
Sex	-0.043	.011	<.001	-0.024	.011	<.001
Age	-0.005	.002	.019	-0.003	.002	.025
Parent RQ	-	-	-	0.010	.005	.057
Friend RQ	-	-	-	-0.020	.009	.893
Risk						
Intercept	-0.062	.005	<.001	-0.066	.006	<.001
Sex	0.002	.007	.748	0.003	.007	.640
Age	0.000	.001	.762	0.000	.001	.760
Parent RQ	-	-	-	0.006	.003	.084
Friend RQ	-	-	-	-0.007	.007	.342

Note. Sex was coded Male=0, Female = 1. Condition was coded such that a 0 = friend gain/parent lose, 1 = parent gain/friend lose. Return (EV) ranged from -60 to 16.88 and SD ranged from 9.68 to 40. RQ stands for 'relationship quality'. γ-s are fixed effects and represent expected changes in log odds. Robust standard errors are reported from a population-average model.

Table S7. Results of our final model in individuals aged 18-24.99

| | B | | |
Predictor	γ	SE	p
Intercept			
Intercept	2.439	.107	<.001
Sex	0.114	.111	.303
Reward Type	0.202	.087	.022
Parent RQ	-0.311	.059	<.001
Friend RQ	0.346	.082	<.001
Condition			
Intercept	0.214	.066	.002
Sex	0.046	.070	.518
Reward Type	-0.288	.055	<.001
Parent RQ	0.189	.045	<.001
Friend RQ	-0.290	.064	<.001
Return			
Intercept	0.056	.005	<.001
Sex	-0.028	.006	<.001
Reward Type	0.021	.005	<.001
Parent RQ	-0.001	.003	.697
Friend RQ	-0.011	.005	.027
Risk			
Intercept	-0.051	.004	<.001
Sex	0.002	.004	.583
Reward Type	-0.012	.003	<.001
Parent RQ	0.005	.002	.018
Friend RQ	-0.004	.004	.344

Note. Age is no longer included in the model after truncating its range. Sex was coded Male=0, Female = 1. Condition was coded such that a 0 = friend gain/parent lose, 1 = parent gain/friend lose. Return (EV) ranged from -60 to 16.88 and SD ranged from 9.68 to 40. RQ stands for 'relationship quality'. Reward Type was coded 0 = simulated, 1 = real. γ-s represent expected change in log odds. Robust standard errors are reported from a population-average model.