



Free Will Beliefs Research Question

March 2023



I developed a research question based off previous findings, collected participants, ran analyses, and wrote up my findings.

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Preface

The Social Cognitive Development Lab runs miniature research questions based on findings from various papers on developmental psychology. I decided to spearhead a question of my own, based on paradigms in developmental psychology on the topic of children's development in the belief of free will. I collected data from our adult lab participants (N= 13) and ran analyses in R. This was in a timeframe of one week!

Question

Would the majority of members of the Child Studies Lab at UCSB make the same predictions for a motive, given a statement that either implied restricted will or free will?

Question developed after reading a paper by Tamar Kushnir et al. about developmental psychology and free will beliefs.

Kushnir, T., Gopnik, A., Chernyak, N., Seiver, E., & Wellman, H. M. (2015). Developing intuitions about free will between ages four and six. *Cognition*, 138, 79-101.

Planning and Development of Question

At first, I developed a question similar to Kushnir's original question looking at origins and open ended explanations as to why children would rationalize a restricted action or an unrestricted one.

I wanted to explore the content of responses from our participants, coding the responses for internal vs external, looking at endogenous actions (caused by an individual's personal, subjective mental states) vs exogenous causes.

Question Design

1. Taken from one of my first emails developing the questions:

"I believe adults will pick the "choose to" reasoning over "have to". My prediction is that adults in the lab will attribute responses to endogenous causes more than exogenous, even though there could be variability there, since the U.S is known for valuing independent, autonomous thinking as opposed to other countries. And yes, I do think research assistants would be more likely to cite internal reasons for Action and external reasons for inhibition!"

Preliminary consideration of factors influencing my question, from stated email:

"I think there are numerous factors that could influence someone's belief in free will, and that maybe that could differ if they were thinking about a situation where they had / did not have free will too (primed to think they didn't have free will).

Some categories I know that have been explored are levels of spirituality (how much do you meditate?), and yes, I think personal self control could work as well, maybe if they are often attributing personal troubles to external factors or attributing it to internal! Also, I'm asking about the relationship between food and free will, so some factors influencing it could be food insecurity or what relationship people have with food. Also could consider the cultural background, and the wording of the question may be odd for what I'm asking."

2. Later, I rewrote my question to a simplified format based on the following feedback from a mentor:

"... a better question for the scope of this project would be something like, Triangle had to go to the beach. Circle chose to go to the beach. Who enjoyed the beach more? Why?"

3. The third iteration:

"Person A has to go to the beach. Person B chooses to go to the beach.

Why did A go to the beach?

Why did B go to the beach?"

I decided to revise it here to depict motives of people, which we can assume do have a conception of what free will is, or lack thereof. I also decided to not include enjoyment, as that is a different factor than what I wanted to ask, which is more about assumed external/internal motivation based on a willing desire or unwilling desire. It is not about whether a restricted choice may impact enjoyment, which is a different inquiry.

4. The final version developed into this:

This is Person A. This is Person B.

(illustration)

Person A has to go to the beach.

Person B chooses to go to the beach.

Both people go to the beach on the weekend (not together).

Why did Person A go, Option 1 or 2? Is there another reason they would go?

Why did Person B go, Option 1 or 2? Is there another reason they would go?

1: They like to see tidepools. [internal - like/want/desire]

2: They work at the beach as a lifeguard. [external - social]

Recruitment and Coding

The question was posed on our lab whiteboard and participants (N=13) submitted anonymous responses to Questions 1 and 2, with the last question "Is there another reason they would go?" as an optional response.

Data was inputted into a Google Spreadsheet and coded by 2 research assistants for inter rater reliability.

Responses were coded by 0s and 1s.

0 = They like to see tidepools

1 = They work at the beach as a lifeguard.

Analysis was conducted in R and graph was created using package ggplot.

Raw Data Table

member	has.to		choose.to		coder1	coder2
member	0 = tidepools, 1 = lifeguard	free response	0 = tidepools, 1 = lifeguard	free response	coder1	coder2
1	1	"if they are a child and their family wants to go, but they don't want to (so they have to tag along)."	0	"or they work there, and they like their job"	MN	AT
2	1	NA	0	NA	MN	AT
3	1	NA	0	NA	MN	AT
4	1	"maybe invited to go with someone else"	0	"want-based reason"	MN	AT
5	1	"(maybe Person A had to go because their parents brought them there - not really a choice)"	0	NA	MN	AT
6	1	NA	0	NA	MN	AT
7	1	"there could be other reasons: a date, a party, etc."	0	"they could also be going to surf, or read, etc."	MN	AT
8	1	NA	0	NA	MN	AT
9	1	"could be doing required community service (picking up litter)"	0	"to go surfing (for funsies)"	MN	AT
10	1	NA	0	NA	MN	AT

11	1	NA	0	NA	MN	AT
12	1	"Maybe they have work that requires something @ the beach"	0	"Just may wanna hang out at the beach. maybe a date haha"	MN	AT
13	1	"Their parents or another authority figure may make them go"	0	"They may enjoy other beach activities (surfing, making sand castles, simply laying in the sand)"	MN	AT

See Media below.

Official Writeup

I posed a question to the members of the Child Studies Lab based on literature from Kushnir et. al (2015) based on her studies of free will with children and their open ended responses. Deriving inspiration from her exploration on children's perceived internal and external constraints, in one of her studies Kushnir asks children two stories, the content of which being an action and inhibition story, and then asks "did [the person in the story] have to do it, or did they choose to do it?" Children responded choose to more often when the motivation was an internal desire, not an external constraint.

Their open ended responses inspired me to implement reasoning about external and internal constraints to my own question to the lab, which I then was curious about adult reasoning of free will when provided with an internal or external motivation. Do we have to complete an action when presented with an internal or external desire, or do we choose to? In what situations would we distinguish between a forced choice and a desired one? These are larger questions that I pondered as I designed my question, which is a 2-part forced choice method.

I predicted that the majority of the research assistants would be more likely to cite internal reasons for Action and external reasons for inhibition.

The results of the question yielded that unanimously, all participants attributed internal motivation (likes tidepools) with the "choose to" condition, and attributed external motivation (had to go to work) or factor with "has to" (Fig. 2). Examining the open-ended responses, 7 of which responded for the additional external motivation, and 6 of which responded for the additional internal motivation. 6 of the 13 participants declined to respond to the additional question.

Themes of the free response can be grouped as external, which refers to an influence outside of individual action ie. "a party", "required community service" "maybe they have work", internal, which is a state of mind or internal desire ie. "want-based reason" "they like their job", "they may enjoy other beach activities". No reference to autonomy was mentioned as a reason for either scenario although in Kushnir's study this was a common theme of response.

Interestingly, a theme of social obligation was used as both a want based reason as well as an external motivation. This demonstrates perhaps the complexity of social ties that are more prevalent in adulthood.

Limitations

The wording of the question, along with the forced choice, may have influenced the responses to get the hypothesized results. Additionally, the factor of work as an external motivation/constraint is open to interpretation from the participant since work is both an external constraint but can also represent an internal desire as seen in the response "or they work there, and they like their job".

Media

Figure 1. Picture of the Question on our lab whiteboard:

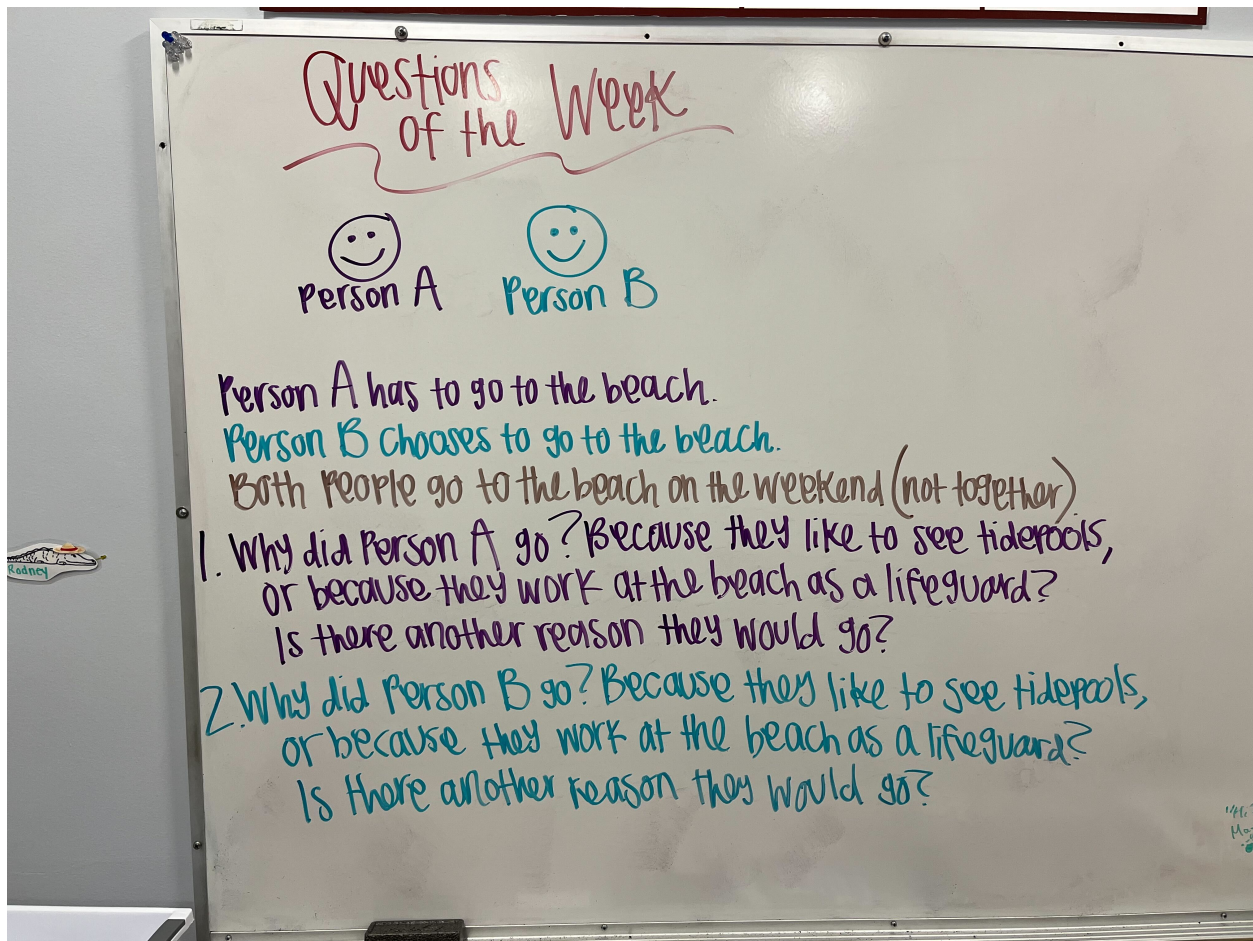
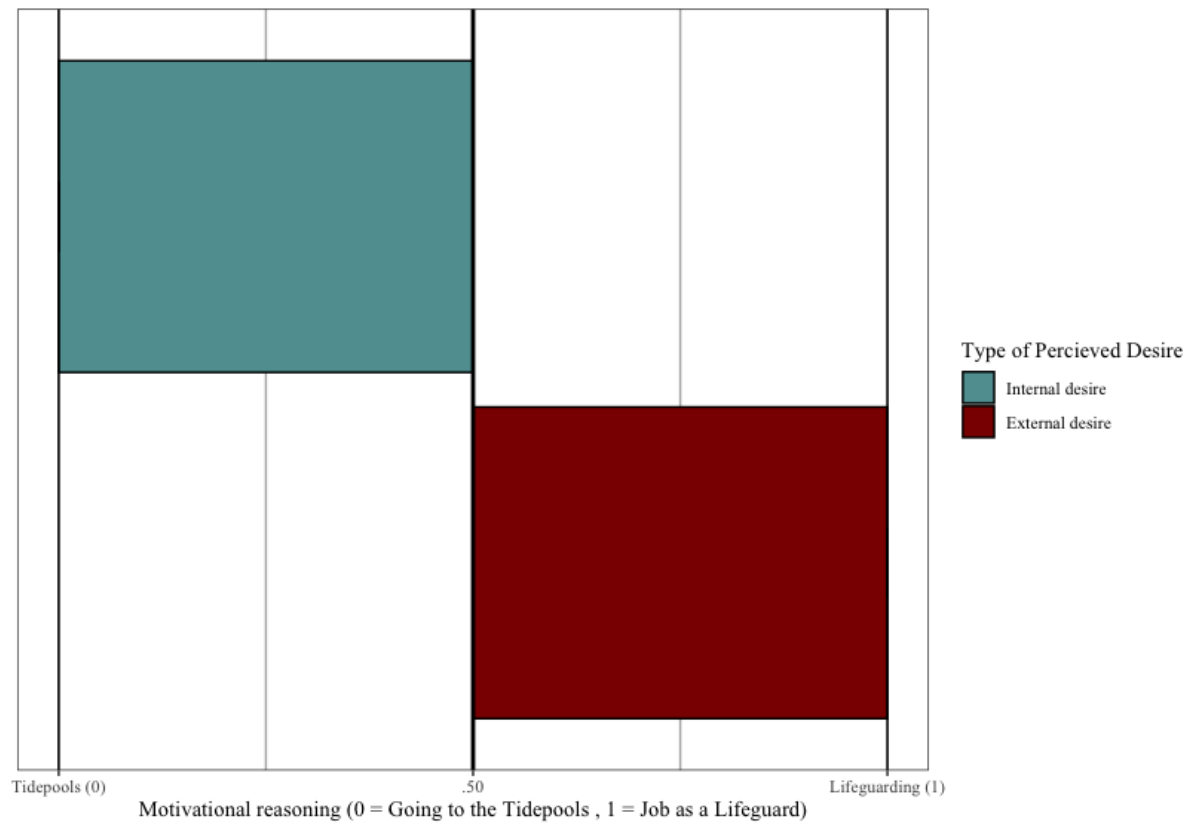


Figure 2. Graph depicting results of perceived desire to attributed motivational reasoning



The graph was created in R using package ggplot, N=13.