

Supplementary Materials

Study 1

Table 1. Spearman correlation analysis of self-report measures scores and proportion of response types.

	Positive	Negative	Neutral	FHS	QIDS-SR	SLIPS
Positive	1.00					
Negative	-0.64**	1.00				
Neutral	-0.74**	0.08	1.00			
FHS	-0.31**	0.40**	0.04	1.00		
QIDS-SR	-0.29**	0.35**	0.07	0.40**	1.00	
SLIPS	-0.28*	0.38**	0.00	0.30**	0.53**	1.00

**p<0.01, *p<0.05

Study 1: Valence Selection Task

You are walking to the office. You only have about five minutes left of your walk. You are debating whether or not to stop and buy a coffee when...

- you see a \$10 bill on the sidewalk.
- you trip on the sidewalk.
- you see a coffee shop.

You are working on a paper for class. You sit in your office chair and think about how to write the next paragraph. As you begin to type you...

- think of a great opening sentence.
- get a case of writer's block.
- start your first sentence with the word "the".

Your backpack is in your room. You go down the hallway to go and get your backpack. When you go into your room you...

- find your backpack on your bed.
- don't see your backpack.
- step on the carpet.

You are browsing a news website you have never used before. When you click on an article, you see...

- that the article is very interesting
- a pop-up that says you have a virus on your computer.
- your computer screen.

You are biking to the park. You stop at a red light. When the light turns green you begin to pedal and...

- see the park in the distance.
- your bike chain brakes.
- grip the handlebars.

You want to buy a computer. When you go to check how much money is in your bank account you find that...

- you have a negative balance.
- you have twenty more dollars than you anticipated.
- your bank logo is green.

You wake up for class. You get ready, head out the door, and...

- make it to class on time.
- make it to class 30 minutes late.
- go to class.

You are on a skiing trip. You are skiing down the hill when...

- you break your ski poles.
- you land a new trick for the first time.
- you adjust your ski goggles.

You take an exam for class. When you go to check your grade you...

- see you got an A.
- realize you failed the exam.
- click on the course website.

You audition for a play. When the cast list comes out you...

- celebrate getting the lead role.
- see you have not made the cast list.
- read the list.

You are editing footage for your film class. When you close out of the editing software ...

- you forget to hit save and lose all of your footage.
- you think it is your best film project yet.
- you shut your laptop.

You want to go indoor rock climbing. You drive to the climbing gym and...

- have a fun time climbing with friends.
- realize you forgot your climbing shoes.

- climb one of the walls.

You book a flight to Portland, Maine. Your flight lands and...

- you head straight to the beach.
- you realize you are in Portland, Oregon.
- you leave the airport.

You go to a coffee shop to buy a latte. You get your drink and...

- it is delicious.
- accidentally burn your tongue.
- walk out of the coffee shop.

You go to the store to purchase an iPad. When you get to the store you realize ...

- that the iPad is on sale.
- that the iPad is sold out.
- that the iPad has a camera.

You purchase a Lego set. You plan to build it when you get home. When you open the box, the Lego set...

- looks like it will be a lot of fun to assemble.
- is missing a lot of pieces.
- is in a plastic bag.

You buy a plant at the store. When you begin to repot the plant you see...

- that it is infested with insects.
- that it is going to look great in the new pot.
- that it has four leaves.

You have tickets to a concert. You get to the concert venue and...

- find out the concert is canceled.
- end up meeting the band.
- find your seat.

You are preparing for an in-class debate. The night before the debate you...

- lose your voice.
- feel that you are really prepared.
- look over your notes.

You and your baseball team are at your game. During the game you...

- hit a home run.
- strike out.
- wear a baseball glove.

You make crafts to sell at the craft fair. After the craft fair has ended, you realize...

- you sold all of your products
- you have only sold a few items.
- it is time to pack up.

You sign up to run a marathon. On the day of the marathon you...

- place in the top 10 runners.
- decide to drop out of the race.
- drink a lot of water.

You go to the grocery store to get food for a BBQ. When you get home you...

- realize all the hamburger buns you bought are moldy.
- make delicious hamburgers.
- defrost the hamburger patties.

You are at work and have a meeting with your supervisor. During the meeting, the supervisor tells you that...

- you are about to get a promotion.
- the company has to let you go.
- you are on the schedule next week.

You decide you are going to read ten books in one month. By the end of the month...

- you have read twelve books.
- you have only read one book.
- you have finished your task.

You are in the lab when you make progress on your experiment. When you go to show your coworkers...

- they celebrate your work.
- they end up taking credit for your work.
- they listen to you talk about your work.

You decide to do laps in the pool. When you are on your final lap...

- you have just enough energy to finish.
- you have to give up halfway through.
- you do a butterfly stroke.

You are waiting in line to order food. When you get up to the cash register...

- the cashier offers you a coupon for a free meal.
- you find out that the restaurant is completely out of your favorite meal.
- you pay for your meal.

You order a new water bottle. When you check your phone, you get a notification that your package has been delivered. When you open your front door...

- your package is sitting there waiting for you.

- there is no package outside.
- you look outside.

You are finishing up a shift at work. As you are about to leave, your manager approaches you and...

- asks you to work a couple more hours, off the clock.
- tells you that you are getting a promotion.
- tells you about a new shipment of product that is coming in.

Study 2

Exploratory Item Analyses Across Studies

In the present study, we conducted an item analysis to examine the relationship between the QIDS-SR scores and positively valenced responses, as well as their comparison with FHS scores. Contrary to our initial thoughts, we found that correlations between the QIDS-SR scores and the positively valenced responses were more strongly, and negatively correlated when compared to the FHS scores. This contradicted our previous assumption, that because the FHS was the most applicable self-report measure when assessing reward devaluation, there would be a stronger negative correlation.

To delve deeper into the discrepancy, we employed Spearman's Rho correlation analysis to perform item analyses for each self-report measure. Our analysis revealed that all items of the FHS exhibited significant negative correlations with the proportion of positive responses (See Table 2b). In contrast, of the 15 items of the QIDS-SR, only 7 showed significant negative correlations with the proportion of positive answers (See Table 2a). Notably, the QIDS-SR encompasses a broad assessment of depressive symptoms, incorporating items referencing weight loss/gain and sleeping through the night. It makes sense that because the QIDS-SR is so broad, only the items that may be related back to reward devaluation are significantly negatively correlated. The FHS comprises only 5 items that directly address symptoms related to the avoidance of positivity. Here we maintain that the FHS remains the most applicable measure for evaluating the presence of reward devaluation.

Table 2a. Item analysis of the QID-SR across both studies.

QIDS-SR	Study 1	Study 2: Self and Other
Overall QIDS-SR Score	- 0.26	-0.41
1. Falling Asleep	-0.16	- 0.30
2. Sleeping During the Night	0.06	0.04
3. Waking Up Too Early	-0.12	-0.08
4. Sleeping Too Much	0.13	-0.13
5. Feeling Sad	-0.18	- 0.36
6. Decreased Appetite	-0.01	- 0.23
7. Increased Appetite	0.01	- 0.25
8. Decreased Weight	0.05	-0.11
9. Increased Weight	0.00	-0.15
10. Concentration and Decision Making	- 0.43	- 0.37
11. View of Myself	- 0.29	-0.35
12. General Interest	-0.06	- 0.34
13. Energy Level	- 0.28	-0.28
14. Feeling Slowed Down	-0.08	-0.21
15. Feeling Restless	-0.17	-0.19

Table 2b. Item Analysis of the FHS across both studies.

FHS	Study 1	Study 2: Self and Other
Overall FHS Score	-0.31	-0.37
1. I prefer not to be too joyful because usually joy is followed by sadness.	-0.25	-0.37

2. I believe the more cheerful and happy I am, the more I should expect bad things to occur in my life.	-0.28	-0.35
3. Disasters often follow good fortune.	-0.12	-0.31
4. Having lots of joy and fun causes bad things to happen.	-0.34	-0.30
5. Excessive joy has some bad consequences.	-0.33	-0.29

Study 2: Main Effects of Referential Group

Negative. There was no significant main effect of the self/other-referential condition on the proportion of negative responses.

Positive. There was a significant main effect of the self/other-referential condition on the proportion of positive responses selected ($t = 2.53$, $p = .012$). A posthoc pairwise comparison revealed that participants reading self-referential prompts were less inclined to select positively-valenced responses ($M = .240$, $SE = .007$) compared to when they read other-referential prompts ($M = .255$, $SE = .007$), with a mean difference of $.015$ ($SE = .006$, $t = 2.53$, $p = .012$).

Neutral. There was a significant main effect of the self/other-referential condition on the proportion of neutral responses selected ($t = -3.84$, $p < .001$). Pairwise comparisons suggest that self-referential prompts were associated with selecting more neutral responses ($M = .187$, $SE = .006$) compared to other-referential prompts ($M = .165$, $SE = .006$), with a mean difference of $-.023$ ($SE = .006$, $t = -3.85$, $p < .001$).

Study 2: Valence Selection Task

Self Condition

You are walking to the office. You only have about five minutes left of your walk. You are debating whether or not to stop and buy a coffee when...

- you see a \$10 bill on the sidewalk.
- you trip on the sidewalk.
- you see a coffee shop.

You are working on a paper for class. You sit in your office chair and think about how to write the next paragraph. As you begin to type you...

- think of a great opening sentence.
- get a case of writer's block.
- start your first sentence with the word "the".

Your bag is in your room. You go down the hallway to go and get your bag. When you go into your room you...

- find your bag on your bed.
- don't see your bag.
- step on the carpet.

You are browsing a news website you have never used before. When you click on an article, you see...

- that the article is very interesting.
- a pop-up that says you have a virus on your computer.
- your computer screen.

You are biking to the park. You stop at a red light. When the light turns green you begin to pedal and...

- see the park in the distance.
- your bike chain brakes.
- grip the handlebars.

You want to buy a computer. When you go to check how much money is in your bank account you find that...

- you have a negative balance.
- you have twenty more dollars than you anticipated.
- your bank logo is green.

You wake up for class. You get ready, head out the door, and...

- make it to class on time.
- make it to class 30 minutes late.
- go to class.

You are on a skiing trip. You are skiing down the hill when...

- you break your ski poles.

- you land a new trick for the first time.
- you adjust your ski goggles.

You take an exam for class. When you go to check your grade you...

- see you got an A.
- realize you failed the exam.
- click on the course website.

You audition for a play. When the cast list comes out you...

- celebrate getting the lead role.
- see you have not made the cast list.
- read the list.

You are editing footage for your film class. When you close out of the editing software ...

- you forget to hit save and lose all of your footage.
- you think it is your best film project yet.
- you shut your laptop.

You want to go indoor rock climbing. You drive to the climbing gym and...

- have a fun time climbing with friends.
- realize you forgot your climbing shoes.
- climb one of the walls.

You book a flight to Portland, Maine. Your flight lands and...

- you head straight to the beach.
- you realize you are in Portland, Oregon.
- you leave the airport.

You go to a coffee shop to buy a latte. You get your drink and...

- it is delicious.
- accidentally burn your tongue.
- walk out of the coffee shop.

You go to the store to purchase an iPad. When you get to the store you realize ...

- that the iPad is on sale.
- that the iPad is sold out.
- that the iPad has a camera.

You purchase a Lego set. You plan to build it when you get home. When you open the box, the Lego set...

- looks like it will be a lot of fun to assemble.
- is missing a lot of pieces.
- is in a plastic bag.

You buy a plant at the store. When you begin to repot the plant you see...

- that it is infested with insects.
- that it is going to look great in the new pot.
- that it has four leaves.

You have tickets to a concert. You get to the concert venue and...

- find out the concert is canceled.
- end up meeting the band.
- find your seat.

You are preparing for a debate. The night before the debate you...

- lose your voice.
- feel that you are really prepared.
- look over your notes.

You and your baseball team are at a game. During the game you...

- hit a home run.
- strike out.
- wear baseball cleats.

You make crafts to sell at the craft fair. After the craft fair has ended, you realize...

- you sold all of your products.
- you have only sold a few items.
- it is time to pack up.

You sign up to run a marathon. On the day of the marathon you...

- place in the top 10 runners.
- decide to drop out of the race.
- drink a lot of water.

You go to the grocery store to get food for a BBQ. When you get home you...

- realize all the hamburger buns you bought are moldy.
- make delicious hamburgers.
- defrost the hamburger patties.

You are at work and have a meeting with your supervisor. During the meeting, the supervisor tells you that...

- you are about to get a promotion.
- the company has to let you go.
- you are on the schedule next week.

You decide you are going to read ten books in one month. By the end of the month...

- you have read twelve books.
- you have only read one book.

- you have read multiple books.

You are in the lab when you make progress on your experiment. When you go to show your coworkers...

- they celebrate your work.
- they end up taking credit for your work.
- they listen to you talk about your work.

You decide to do laps in the pool. When you are on your final lap...

- you have just enough energy to finish.
- you have to give up halfway through.
- you do a butterfly stroke.

You are waiting in line to order food. When you get up to the cash register...

- the cashier offers you a coupon for a free meal.
- you find out that the restaurant is completely out of your favorite meal.
- you pay for your meal.

You order something online. When you check your phone, you get a notification that your package has been delivered. When you open your front door...

- your package is sitting there waiting for you.
- there is no package outside.
- you look outside.

You are finishing up a shift at work. As you are about to leave, your manager approaches you and...

- asks you to work a couple more hours, off the clock.
- tells you that you are getting a promotion.
- tells you about a new shipment of product that is coming in.

Other Condition

Marisa was walking to the office. She only had about five minutes left of her walk. She was debating whether or not to stop and buy a coffee when...

- she saw a \$10 bill on the sidewalk.
- she tripped on the sidewalk.
- she saw a coffee shop.

Lauren was writing a paper for her class. She sat in her office chair and thought about how to write her next paragraph. As she began to type she...

- thought of a great opening sentence.
- got a case of writer's block.
- started her first sentence with the word "the".

Aaron's bag was in his room. He went down the hallway to go and get his bag. When he got to his room he...

- found his bag on his bed.
- didn't see his bag.
- stepped on his carpet.

Cati was browsing a news website that she had never used before. When she clicked on an article, she saw...

- that the article was very interesting
- a pop-up that said she had a virus on her computer.
- her computer screen.

Vishal was biking to the park. He stopped at a red light. When the light turned green he began to pedal and...

- saw the park in the distance.
- his bike chain broke.
- gripped the handlebars.

Shelby wanted to buy a computer. When she went to check how much money was in her bank account she found that...

- she had a negative balance.
- she had twenty more dollars than she anticipated.
- her bank logo was green.

Puren woke up for class. She got ready, headed out the door, and...

- made it to class on time.
- made it to class 30 minutes late.
- went to class.

Laura was on a skiing trip. She was skiing down the hill when...

- she broke her ski poles.
- she landed a new trick for the first time.
- she adjusted her ski goggles.

Caitlin took an exam for class. When she went to check her grade she...

- saw she got an A.
- realized she failed the exam.
- clicked on the course website.

George auditioned for a play. When the cast list came out he...

- celebrated getting the lead role.
- saw he had not made the cast list.
- read the list.

Joel was editing footage for his film class. When he closed out of his editing software ...

- he forget to hit save and lost all of his footage.
- he thought it was his best film project yet.
- he shut his laptop.

Molly wanted to go indoor rock climbing. She drove to the climbing gym and...

- had a fun time climbing with friends.
- realized she forgot her climbing shoes.
- climbed one of the walls.

Julia booked a flight to Portland, Maine. Her flight landed and...

- she headed straight to the beach.
- she realized she was in Portland, Oregon.
- she left the airport.

Sandra went to a coffee shop to buy a latte. She got her drink and...

- thought it was delicious.
- accidentally burned her tongue.
- walked out of the coffee shop.

Tom went to the store to purchase an iPad. When he get to the store he realized ...

- that the iPad was on sale.
- that the iPad was sold out.
- that the iPad had a camera.

Elizabeth purchased a Lego set. She planned to build it when she got home. When she opened the box, the Lego set...

- looked like it would be a lot of fun to assemble.
- was missing a lot of pieces.
- was in a plastic bag.

Kevin bought a plant at the store. When he began to repot the plant he saw...

- that it was infested with insects.
- that it was going to look great in his new pot.
- that it had four leaves.

Alex had tickets to a concert. When she got to the concert venue she...

- found out that the concert was canceled.
- ended up meeting the band.
- found her seat.

Phoebe was preparing for a debate. The night before the debate she...

- lost her voice.
- felt that she was very prepared.

- looked over her notes.

Connor and his baseball team are at their game. During the game he...

- hit a home run.
- struck out.
- wore baseball cleats.

Jordan made crafts to sell at the craft fair. After the craft fair had ended, she realized...

- she sold all of her products
- she had only sold a few items.
- it was time to pack up.

Dianne signed up to run a marathon. On the day of the marathon she...

- placed in the top 10 runners.
- decided to drop out of the race.
- drank a lot of water.

Frank went to the grocery store to get food for a BBQ. When he got home he...

- realized all the hamburger buns he bought were moldy.
- made delicious hamburgers.
- defrosted the hamburger patties.

Summer was at work when she had a meeting with her supervisor. During the meeting, her supervisor told her that...

- she was about to get a promotion.
- the company had to let her go.
- she was on the schedule for next week.

Abigail decided that she was going to read ten books in one month. By the end of the month...

- she had read twelve books.
- she had only read one book.
- she had read multiple books.

Rose was in the lab when she made progress on her experiment. When she went to show her coworkers...

- they celebrated her work.
- they ended up taking credit for her work.
- they listened to her talk about her work.

Trevor decided to do laps in the pool. When he was on his final lap...

- he had just enough energy to finish.
- he had to give up halfway through.
- he did a butterfly stroke.

Penelope was waiting in line to order food. When she got up to the cash register...

- the cashier offered her a coupon for a free meal.
- she found out that the restaurant was completely out of her favorite meal.
- she paid for her meal.

Richard ordered something online. When he checked his phone, he got a notification that his package had been delivered. When he opened his front door...

- his package was sitting there waiting for him.
- there was no package outside.
- he looked outside.

Mia was finishing up a shift at work. As she was about to leave, her manager approached her and...

- asked her to work a couple more hours, off the clock.
- told her that she was getting a promotion.
- told her about a new shipment of product that was coming in.

Study 3

Table 3. Spearman correlation analysis of self-report measures scores and proportion of response types.

	Positive	Negative	Neutral	FHS
Positive	1.00			
Negative	-0.75	1.00		
Neutral	-0.78	0.30	1.00	
FHS	-0.23*	0.23*	0.15	1.00

*p<0.05

Study 3: Valence Selection Task

Maria was having a retirement party. Tony brought 5 cupcakes to the party, and Sandy brought 6. When Maria got to the party she found...

- 11 beautiful cupcakes waiting for her at her party.
- 10 cupcakes waiting for her at her party, all her least favorite flavor.
- 6 cupcakes waiting for her at her party.

Employees must be on time for 30 days at Jennifer's job to receive an award. On Jennifer's 30th day of being perfectly on time, her boss approached her and...

- gave her a substantial gift card for being on time for 30 days.

- said that she was 5 minutes late that day, so she would not be getting an award.
- said that it had been 31 days.

Mark had \$10 in his account to spend at the grocery store. He got a soda for \$1, a sandwich for \$3.50, and an apple for \$0.50. When he got to the register he found that...

- he had \$5 remaining in his account to get an ice cream on his way home.
- there was not enough money in his account and he had to put items back.
- the soda was \$1.50.

Esperanza made a reservation for 7 people that included herself, 3 of her friends from college, and 3 of her friends from work. When she got to the restaurant she saw...

- a beautiful 7-person table that was reserved by the window of the restaurant.
- that one of her friends was arguing with the hostess, saying they only had 7 chairs and they needed 10.
- that the reserved table had 4 chairs.

Amanda decided to water her plants every three days to keep them healthy. When she went to water them on the third day after her last watering, she found...

- that the plants were thriving and had grown new leaves.
- that the plants had wilted due to lack of water.
- that all of her plant pots were blue.

Sarah planned a surprise party for her best friend. She brought 20 balloons, and their other friend Alex brought 18. When Sarah's best friend entered the party venue, they found...

- a colorful display of 38 balloons waiting to celebrate their special day.
- 12 deflated and unusable balloons sagging around the room.
- multiple red balloons.

Reginald's teacher asked the class, "What is the name of the only state that begins with the letter 'F'?" Reginald raised his hand to answer the question, and...

- responded with the answer "Florida" and his teacher praised him.
- responded with the answer "Florida" causing all of his classmates to laugh and make fun of him.
- responded with the answer "Florence"

Emily was organizing a book club meeting. Sarah brought 4 books to share with the group, and David brought 7. When Emily arrived at the meeting, she found...

- 11 interesting books waiting for her at the meeting.
- 15 books waiting for her at the meeting, all from genres she hated.
- 6 books waiting for her at the meeting.

Students had to complete 10 assignments to qualify for a field trip. On Lucy's 10th completed assignment, her teacher approached her and...

- praised her outstanding work and informed her that she had earned a spot on the field trip.
- mentioned that she forgot to complete one assignment, so she would not be eligible for the field trip.
- realized that it was actually Lucy's 11th completed assignment.

Gary had \$30 in his wallet to spend at the mall. He bought a T-shirt for \$12, a pair of socks for \$5, and a hat for \$8. When he reached the cashier, he found that...

- he had \$5 remaining in his wallet to buy a small accessory.
- he didn't have enough money and had to return one of the items.
- the t-shirt was \$15

During a geography quiz, Mrs. Anderson asked the class, "Which is the only continent that is also a country?" Tommy confidently raised his hand and...

- answered "Australia" and Mrs. Anderson nodded approvingly.
- answered "Australia" but the whole class burst into laughter because the correct answer was "Antarctica."
- answered "Asia".

Sarah went to the bookstore with \$20 to buy a new book. She found a book she really liked, priced at \$12. After buying the book Sarah had...

- \$8, which she used to treat herself to a delicious coffee.
- \$18, but she regretted the purchase and felt like she wasted her money.
- \$12.

David went on a road trip and drove for 3 hours straight. He then took a break for 30 minutes before continuing his journey. Including the break, David's road trip was...

- 3 hours and 30 minutes long, giving him a chance to rest and stretch his legs.
- 2 hours and 30 minutes long, making him feel rushed and stressed.
- 3 hours long.

John went to the grocery store to buy apples. He picked up 8 apples from the shelf, but on his way to the checkout, he accidentally dropped 2 of them. When he got to the cash register John had...

- 6 juicy apples ready to be enjoyed.
- 8 apples that were all bruised and damaged.
- 4 apples.

Penelope decided to save money every week for a new bicycle that cost \$150. She saved \$15 each week for 10 weeks. Penelope ended up saving...

- \$150, which was enough to buy the bicycle and happily reward herself.
- Not enough to buy the bicycle, making her feel disappointed and discouraged.
- A reasonable amount, but she would like to keep saving for now.

George was organizing a bookshelf that contained 100 books. He managed to rearrange one-fifth of the books in a day. George rearranged...

- 20 books, which brought him a real sense of accomplishment.
- 25 books, but he accidentally dropped and damaged most of them.
- 50 books.