People with exceptional behaviors in accidents will receive more social sympathy but will not receive any actual benefits*

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1 Abstract

"This study replicates Kutcher and Feldman's research on how deviating from daily routine behaviors affects regret. By analyzing routine or exceptional behavior, we aim to quantify regret, social norms, negative consequences, luck and compensation. A voting mechanism among 684 participants was used to measure these parameters in a variety of situations, including Hitchhiker incidents, route changes leading to car crashes, and changes in shopping habits leading to robberies. Our findings are consistent with those of Kutcher and Feldman, but in conclusion we tend to suggest that exceptional behavior increases social sympathy but also increases the likelihood of social criticism when an accident occurs."

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*Code and data are available at:https://github.com/Northboi/replication-of-impact-of-past-behaviour-normality-on-regret

2 Introduction

Every day of life is about constantly achieving various goals, whether they are spiritual or physical. People live day by day and develop various daily habits on the way to achieve their goals, and people regard this daily routine as normality (O'Connor, McCormack, and Feeney (2012)). Behaviors like eating lunch and listening to music are done to satisfy people's needs and goals. However, no one can guarantee that they will achieve every goal. Regret occurs when people are dissatisfied with some of the results they get. This emotion occurs as early as six years old (Alexander (1973)). The child makes a choice between two boxes with prizes and regrets when the prize in the other box is better than the one he chose. This is because after comparing the results, the child wants to get the better one instead of holding on to the current one.

Some people believe that when people make changes in their daily routine behavior, no matter the results are good or bad. Those who changed their behavior regretted it more than those who did not change their behavior (Geir Kirkebøen (2013)), and those who changed from the right option to the wrong option regretted more than those who directly chose the wrong option. Based on these concepts, Kutscher and Feldman started research. They selected a total of 684 participants (Kutscher and Feldman (2019)) to vote for various parameters of the representative characters of exceptions and routines in different scenarios (for example, if the participant thinks that the character A who represents the exception in a certain scenario will be more regret, he will vote for A instead of character B in regret aspect. And we use the total number of votes to quantify the size of parameters such as regret or luck). In part 1 they examined whether people who took hitch-hikers as an exception and were robbed felt more regret than people who took hitchhiking as a routine behavior. In Part 2, it was studied that people who took an exceptional route home and were involved in a car accident were less lucky than those who were involved in a car accident while taking their usual route home. After studying the first two scenarios, Kutscher and Feldman further explored, in a third scenario involving a robbery at a store, how much regret individuals who view going to store A as a routine behavior should feel compared to those who see it as an exceptional behavior , as well as how much compensation they were believed should receive. In our process of reproducing their paper, we mainly study and analyze the following results:

- In section 4.1, use table2 and figure1 to study whether people who hitchhiked and were robbed due to exceptional behavior have more regrets, social norms (injunctive and descriptive) and negative affect.
- In section 4.2, use table 3 and figure 2 to study whether people who are involved in a car accident due to changing their home route will regret it more.
- In section 4.3, use figure 3 and figure 4 to study whether people who were robbed due to the exception of changing stores are considered more regretful and deserve more compensation.

After analysis, we found that people who encountered bad situations due to exceptional behav-

ior had more regrets, injunctive social norms, negative affect and bad luck, and were considered worthy of more compensation. People who encountered bad situations due to routine behavior simply had more descriptive social norms. Therefore, we obtained the same results for graphs and tables as the initial reproducing study from Kutscher and Feldman. In conclusion, we believe that these results illustrate that under the same bad incident , people who do exceptional behavior are more likely to receive sympathy from society, but are also more likely to be criticized because of the harm caused by sudden changes and seems not likely to get other practical benefit from the incident.

3 Data

3.1 Data Source

The datasets used in this analysis are collected by Lucas Kutscher from Maastricht University, and Gilad Fledman from Maastricht University and University of Hong Kong(Kutscher and Feldman 2019). Real life data is collected in two datasets, in order to replicate the classic experiments initialized by Kahneman and Miller's [original] on norm theory. The experiments are dedicated to three various scenarios, which will be discussed in Section 3.1. The original experiments were created in 1986, and the datasets by Kutscher and Fledman will be collected in 2019. The datasets are chosen because Kutscher and Fledman modified and improved the design of the original experiment, making it more precise and unbiased; details on the improvement will be elaborate in Section 3.2. Moreover, the original experiment was conducted many years ago, which brings difficulties accessing the original data. For the reason above, datasets from Kutscher and Fledman are more appropriate for this analysis.The packages below are used in the process of making this analysis: psych(Revelle 2024), ggplot2(**ggplot2?**), dplyr(**dplyr?**), effsize(Torchiano 2020), reshape2(Wickham 2007), tidyverse(**tidyverse?**), knitr(**knitr?**), tidyr(Wickham 2024), stringr(Wickham 2023), kableExtra(Zhu et al. 2024), Hmisc(Jr, Charles Dupont, and others 2024), gridExtra(Auguie et al. 2024)

3.2 Attributes

3.2.1 Part 1: Hitch-hiker:

Mr. Jones, who avoids giving rides to any hitch-hacker, decided to lift a hitch-hacker yesterday, and ended up being robbed. Mr. Smith, who often gives rides to hitch-hackers regularly, decided to lift a hitch-hacker yesterday, and ended up being robbed. The original description of part 1 was stored in the variable "Sc1_text1".

To ensure all participants fully understand the scenario before answering the measurement questions, three comprehension questions are asked:

- 1."Who almost never takes hitch-hikers in his car?" choices: Mr. Jones, Mr. Smith
- 2."Who frequently takes hitch-hikers in his car?" choices: Mr. Jones, Mr. Smith
- 3."Who got robbed?" choices: Mr. Jones, Mr. Smith

The results of the questions are recorded in the variables "Sc1_Quiz1", "Sc1_Quiz2", "Sc1_Quiz3" in sequential order. Only participants who answer correctly for the above questions can continue to answer the measurement questions that can be used in the data.

After passing the comprehension questions, four measurement questions are being asked, corresponding to four standards of measurement, regret, injunctive norms, descriptive norms, and negative affect, matching the variables "Sc1_regret", "Sc1_socnorms1", "Sc1_socnorms2", "Sc1_combinednorms" in the data, respectively. These four measurement questions are:

Regret - "Who do you expect to experience greater regret over the episode?" choices: Mr. Jones, Mr. Smith

Injunctive norms - "Whose behaviour do you think will be more criticised by others in society?" choices: Mr. Jones, Mr. Smith

Descriptive norms: Whose behavior do you think is more common in society?" choices: Mr. Jones, Mr. Smith

Negative affect - "contemplating your previous answers about this scenario and factoring in both Mr. Jones and Mr. Smith personal routines and your perceptions of social norms and possible social criticism, who do you think overall experienced more negative feelings about the decision to take a hitch-hiker that day?" choices: Mr. Jones, Mr. Smith

The corresponding texts are allocated in "Sc1_text2", "Sc1_text3", and "Sc1_text4".

3.2.2 Part 2: Car accident

Mr. Adams, was driving on his usual route to home, and was involved in a car accident. Mr. White, was driving home, but on an alternate route that he barely visited before, then he was involved in a car accident. The original description of part 2 was stored in the variable "Sc2_text".

Similarly, three comprehension questions are asked to ascertain participations' understanding of Part 2: "Who was driving home after work on his regular route?"(Kutscher and Feldman 2019) choices: Mr. Adams, Mr. White "Who was driving on a route that he only takes when he wants a change of scenery?"(Kutscher and Feldman 2019) choices: Mr. Adams, Mr. White "Who was involved in an accident?"(Kutscher and Feldman 2019) choices: Mr. Adams, Mr. White, both Participants' answers of the questions above are under the variables "Sc2_quiz1", "Sc2_quiz2", "Sc2_quiz3" in sequential order.

Participants that pass the comprehension questions, will be answering four measurement questions to weight regret, randomness, and luck in this scenario:

Regret - "Who is more upset over the accident?"(Kutscher and Feldman 2019) choices: Mr. Adams, Mr. White

Randomness for Mr. Adam - "Mr. Adams' accident is just a random coincidence."(Kutscher and Feldman 2019) choices: pick a number from 1 - 7, 1 means strongly disagree, and 7 means strongly agree

Randomness for Mr. White - "Mr. White's accident is just a random coincidence."(Kutscher and Feldman 2019) choices: pick a number from 1 - 7, 1 means strongly disagree, and 7 means strongly agree

Luck - "Which of the two do you think is less lucky?"(Kutscher and Feldman 2019) choices: Mr. Adams, Mr. White

The corresponding texts are allocated in "Sc2_text2", "Sc2_text3". The results are stored under the variables "Sc2_regret", "Sc2_random_1", "Sc2_random_2", and "Sc2_lucky" in order.

3.2.3 Part 3: Robbery

There are two distinct convenience stores around Mr. Paul's neighborhood. Mr. Paul visits Store A more often than Store B.

[Routine behavior condition](Kutscher and Feldman 2019): Mr. Paul visited Store A last night, and encountered a robbery in the store. As a consequence, he lost his right arm due to a gunshot wound.

[Self-produced exception condition](Kutscher and Feldman 2019): Mr. Paul wanted a shift in routine last night, so he visited Store B, and encountered a robbery in the store. As a consequence, he lost his right arm due to a gunshot wound.

[Other produced exception condition](Kutscher and Feldman 2019): Mr. Paul visited Store B last night, because Store A was closed due to renovation. Then, he encountered a robbery in the store. As a consequence, he lost his right arm due to a gunshot wound.

The original text for each condition is stored in variables "Sc3_C1_text", "Sc3_C2_text", "Sc3_C3_text".

Besides Experiment 1, another Experiment was conducted by a new group of participants, who only answer questions for scenario 3, to avoid "concerns that exposure to questions in Part 1 and 2 somehow affected answers in Part 3" (Kutscher and Feldman 2019). This part of the experiment is divided into three small scenarios, which are [Routine behavior condition], [Self-produced exception condition], [Other produced exception condition] as listed. Three comprehension questions are included in Experiment 1 to test participants' perception for part 3. Since there are three small scenarios, the questions are asked repeatedly for distinct scenarios. Answers are stored under the variables "Sc3_C1_quiz1", "Sc3_C1_quiz2", and

"Sc3_C1_quiz3" for [Routine behavior condition], "Sc3_C2_quiz1", "Sc3_C2_quiz2", and "Sc3_C2_quiz3" for [Self-produced exception condition], "Sc3_C3_quiz1", "Sc3_C3_quiz2", and "Sc3_C3_quiz3" for [Other produced exception condition]. Similar to the other two parts, participants can only process the measurement questions once they correctly answer the comprehension questions. Notice that these comprehension questions are not asked for Experiment 2: "Which convenience store does Mr. Paul visits frequently?"(Kutscher and Feldman 2019) choices: Store A, Store B "Which convenience store did Mr. Paul visited last night?"(Kutscher and Feldman 2019) choices: Store A, Store B "Did Mr. Paul lose the use of his right arm as a result of a gunshot wound?"(Kutscher and Feldman 2019) choices: Yes, No

After passing the comprehension questions, two measurement questions are asked to participants in both experiments, the texts are allocated in "sc3_c1_text2", "sc3_c1_text3", "sc3_c2_text2", "sc3_c2_text3", "sc3_c3_text2", "sc3_c3_text3" for each experiment. Notice that the same question asked in Experiment 1 and Experiment 2 are formulated with some variations. In Experiment 1, the questions are: Compensation - "How much money should Mr. Paul received compensation for his loss? (11-point scale: 0 representing 0$ to 10 representing 1,000,000 dollar; typical award: 500,000 dollar)"(Kutscher and Feldman 2019) Regret - "assume there was no compensation given to Mr. Paul. How much regret does he feel over the situation? (1 – no regret to 5 – very strong regret)"(Kutscher and Feldman 2019)

In Experiment 2, the questions are altered into the form below: Compensation - "Mr. Paul seeks compensation for both the physical and psychological harm suffered. How much money should Mr. Paul receive in compensation?."(Kutscher and Feldman 2019) choices: 0 representing $0, 10 representing $1,000,000$ Regret - "Assume there was no compensation given to Mr. Paul. How much regret does he feel about visiting store [A/B]?"(Kutscher and Feldman 2019) choices: choose number from 1 - 5, 1 represents no regret, 5 represents very strong regret The results of the questions are allocated in the variables "sc3_c1_compensation", "sc3_c1_regret", "sc3_c2_compensation", "sc3_c2_regret", "sc3_c3_compensation", and "sc3_c3_regret" for both experiments.

Furthermore, informations about each participants are also included in the data files, encompassing the following variables: "Q_TotalDuration" representing the total time in seconds that participant took to complete all questions, "age" representing the age of participants, "gender" representing the gender of participants, "serious" represents the seriousness of participants' responses. In addition, "Q53", "Q54", and "engunder" are three variables that are ambiguous in their meaning, since the author did not interpret them in the original paper, and no explanations are included in the datasets. Nevertheless, only responses of the measurement questions are in the usage of this analysis, so all other variables that are comparatively unrelated cannot alternate the final results.

The variables that are applied in this study are: "Sc1_regret", "sc1_socnorms1", "sc1_socnorms2", "sc1_combinednorms", "Sc2_regret", "Sc2_random_1", "Sc2_random_2", "Sc2_lucky", "Sc3_C1_quiz1", "Sc3_C1_quiz2", "Sc3_C1_quiz3", "Sc3_C2_quiz1", "Sc3_C2_quiz2", "Sc3_C2_quiz3", "Sc3_C3_quiz1", "Sc3_C3_quiz2", "Sc3_C3_quiz3". If the question contains various answers, such as (choices: Mr. Jones, Mr. Smith), then 1

Table 1: First 10 rows of four responses variables of part 1.

Data for Part 1: Hitch-hiker			
Regret	Injunctive norms	Descriptive norms	Negative affect
1	1	2	1
1	1	2	1
1	1	2	1
1	1	2	1
1	1	2	1
1	1	2	1
1	1	2	1
1	1	2	1
1	1	2	2
1	1	2	1

represents the first choice, and 2 represents the second choice. If the question involves rating, such as (1 – no regret to 5 – very strong regret)(Kutscher and Feldman 2019), then the actual number represents the rating.

The table @ref(tab:ptonedata)is a glimpse of the dataset, with the four responses variables of part 1 that will be used in the analysis.

4 Result

4.1 Part 1: Hitch-hiker:

In the first part, after 342 participants answered the four measurement questions about Mr. Jones and Mr. Smith, the processed data were shown in table @ref(tab:ptonetab).

In "Regret" aspect, 315 out of 342 participants chose Mr. Jones, who took hitch-hikers as an exceptional behavior. Only 27 people chose Mr. Smith, who usually takes hitch-hikers. In order to better show the difference in votes, the "Percentage" of "Regret" in the chart can achieve this. 92.1% of the participants thought Mr. Jones would regret for this incident more, while only 7.9 % of participants thought Mr. Smith would regret it more. This big difference in voting means that the vast majority of participants believed that Mr. Jones, who was robbed due to his exceptional behavior, would regret it more. In terms of "Social Injunctive norms", even more participants chose Mr. Jones, which are 326 participants, accounting for 95.3% of the total participants. Only 16 participants, or 4.7%, chose Mr. Smith. This shows that nearly 95% of people feel that Mr. Jones, who was robbed because he suddenly changed his routine and acted exceptionally, will be criticized by more people in society. People might

Table 2: Part 1 (hitchhiker): Counts and proportions for perceived regret, social norms, and negative affect.

Character	Regret		Social norms (injunctive)		Social norms (descriptive)		Negative affect	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Exception Jones	315	92.1%	326	95.3%	32	9.4%	317	92.7%
Routine Smith	27	7.9%	16	4.7%	310	90.6%	25	7.3%

criticize him because if he did not choose to take hitch-hikers on that day, he wouldn't have been robbed. In terms of "Social descriptive norms", 90.6% of the total participants (310 participants) chose Mr. Smith, while only 9.4% (32 participants) chose Mr. Jones. This means that most people think that in the same situation where Mr. Smith was robbed for taking hitch-hikers, Mr. Smith, who regarded this behavior as a routine, would be regarded as a relatively normal situation. People may think that Mr. Smith takes hitch-hikers everyday. If he is robbed on one of those days, it is just because he was unlucky that day, people are not inclined to blame him. In terms of "Negative Affect", 92.7% of the total participants (317 participants) chose Mr. Smith, while only 7.3% (25 participants) chose Mr. Jones. "Negative Affect" is a conclusion drawn from the above-mentioned "Regret", "Social Injunctive norms" and "Social descriptive norms". Considering the routine habits of Mr. Jones and Mr. Smith, the vast majority of participants believed that Mr. Jones would have more negative consequences from being robbed by hitch-hikers.

In order to better visualize the proportion of participants choosing Mr. Jones and Mr. Smith in each question, Figure @ref(fig:fig1) shows the proportion of participants choosing Mr. Jones and Mr. Smith in the hitch-hikers robbery event in "Regret", "Social Injunctive norms", "Social descriptive norms" and "Negative affects" four measurement questions. In Table 1, we only see data about numbers, but after visualizing these numbers in Figure 1 by bar charts, we can clearly see that the difference in votes between Mr. Jones and Mr. Smith in every aspect is big. That's what's interesting about the results of this study. In any of the four areas, the difference in votes between Mr Jones and Mr Smith was huge and not even close. This shows that among the four questions in the first part, most of the participants in the hitch-hikers' robbery incident had the same opinions. Participants generally believed that Mr. Jones would feel more regret, be more negatively affected, and be criticized by society more for being robbed due to his exceptional behavior.

4.2 Part 2: Car accident

In the second part, the same 342 participants answered the four measurement questions of Mr. Jones and Mr. Smith. The processed data are shown in Table 3.In terms of "regret", 277 of the 342 participants chose Mr. White who caused a car accident due to an exceptional change of route home, while only 65 people chose Mr. Adams. 81% of the participants thought Mr. White would feel more regretful and sad about the car accident, while only 19% thought
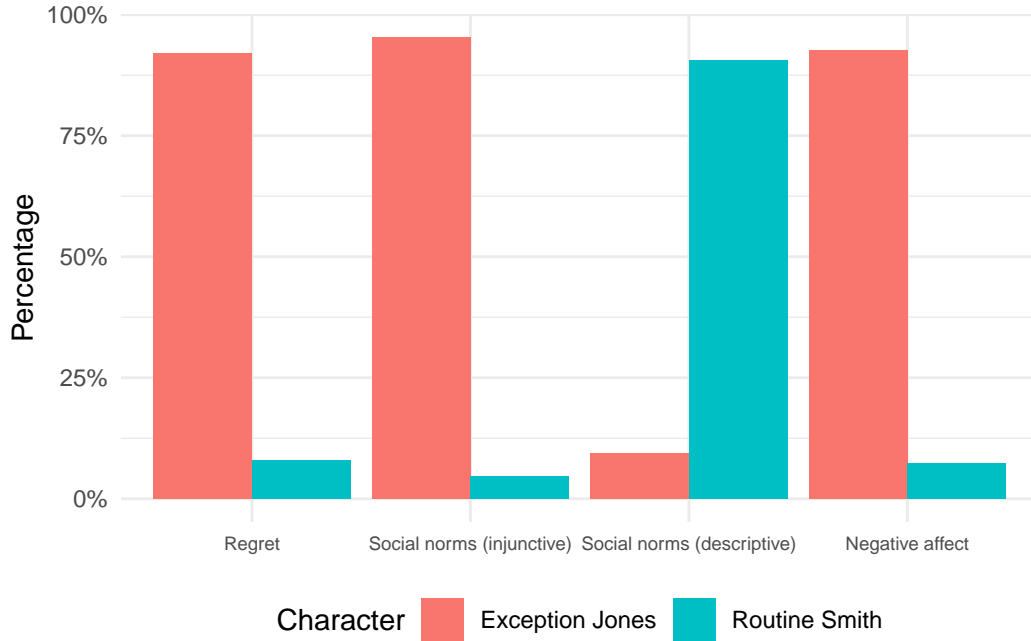
Figure 1: Part 1: Proportions for perceived regret, injunctive social norms, descriptive social norms, and negative affect

Table 3: Part 2 (car accident): Counts and proportions for perceivedregret and luck

	Regret		Luck	
Character	Count	Percentage	Count	Percentage
Routine Adams	65	19.0%	114	33.3%
Exception White	277	81.0%	228	66.7%

Mr. Adams would be more regretful and sad. In terms of "Luck", the number of people and proportions choosing Mr. Adams and Mr. White are closer. 114 people chose Mr. White in terms of "Luck" and thought he had worse luck, which accounted for one-third of the total participants, or 33.3%. Two-thirds, or 66.7%, believed that Mr. White had worse luck. A total of 228 participants chose Mr. White in terms of "Luck".

In order to visualize the data of table3, this can be achieved by relying on the bar charts of Figure2. Figure2 shows the proportion of participants choosing Mr. Adams and Mr. White in the car accident in "Regret" and "Luck" two measurement questions. As the red and blue bars in each measurement question shows, it can be seen that Mr. White, who made an exception (changed his route home) and suffered a car accident, is considered to be more regretful and less lucky. And the height difference between the red bar and the blue bar is still big, although not as big as in figure 1. This shows that in this car accident, when the participants were faced

with the two measurement questions "regret" and "luck", their opinions on choosing between Mr. Adams and Mr. White were still consistent, which tends to choose the one who did the exceptional behavior.
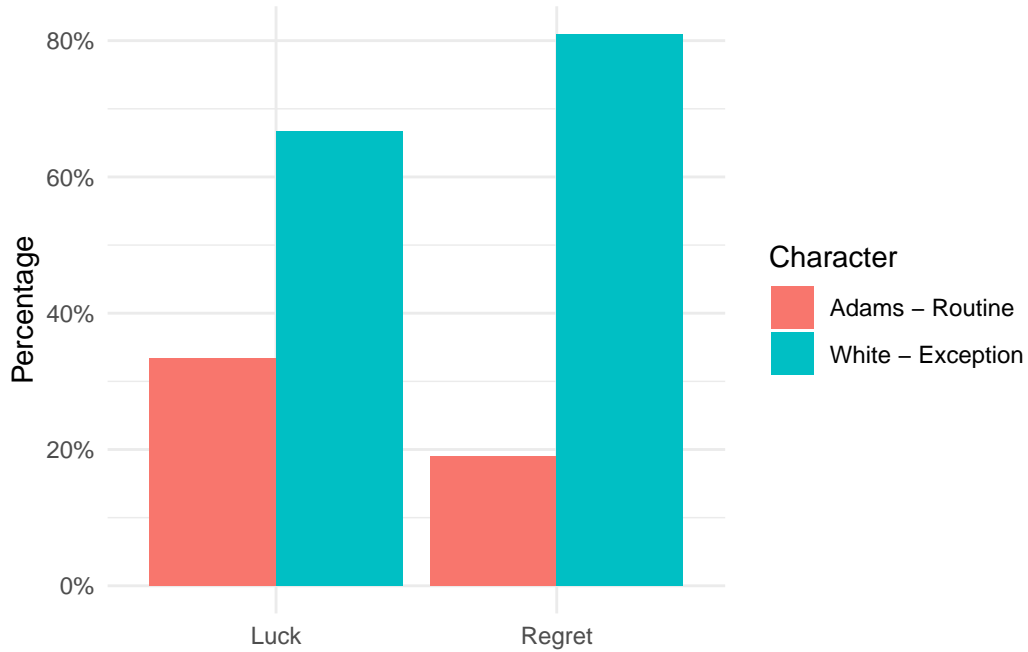

Figure 2: Part 2: Proportions for perceived regret and luck.

4.3 Part 3: Robbery

Two sets of experiments are done separately for part 3, designated as Experiment 1 and Experiment 2, respectively. As mentioned in Section 3.2.3, the respondents are asked the same measurement questions for three different small scenarios, which are [Routine behavior condition], [Self-produced exception condition], and [Other-produced exception condition]. The first question requires respondents to choose how much compensation should Mr. Paul receives in each condition, where 0 represents 0 dollar, and 10 represents 1,000,000 dollars. The second question asks for respondents to choose the level of regret Mr. Paul feels if he does not receive any compensation, where 0 represents no regret, and 10 represents very regret.

In Figure 3, two separated exception conditions are combined as one variable [Exception condition]. Both exception conditions hold similar properties, and similar shapes in the violin graphs, therefore conjoining two of the conditions will not end up with any ambiguous outcome. On the other hand, by merging both exception conditions, the differences in responses between routine and exceptions can be shown with more clarity in such visuals.

Figure 3 contains four panels, each demonstrates two violin plots for [Routine condition] and [Exception condition]. Each black dot in the violin plot stands for a respondent's answer for the corresponding questions. The top two panels represent the results for the compensation question and the regret question of Experiment 1, which are collected from the same 342 participants who answer Part 1 and Part 2. Thereupon, the bottom two panels are the results for both questions of Experiment 2, collected from 344.

Firstly, the panel located on the top left is the results of the compensation question in Experiment 1. It is evident that the violin graphs for [Routine condition] and [Exception condition] hold identical shapes. The modes of responses are clearly 5, which reflect on the compensation of 500,000 dollars, and the second most chosen value is 10, which means the compensation for Mr. Paul should be 1,000,000 dollars. Without a doubt, the opinion on the amount of compensation for Mr. Paul, does not vary due to the type of condition (routine or exception) for most of the respondents in Experiment 1.

The other result for Experiment 1, which is from the regret question, is illustrated in the top right panel. The overall shapes between the violin graphs for [Routine condition] and [Exception condition] are similar, with a large portion of respondents choosing high level regret (3, 4, 5), and a few choosing the lower level of regrets(0, 1, 2). Yet, there is still a noticeable difference. Focusing on the higher level, respondents who chose level 3 and level 4 are almost identical, with a slight preference for level 3. Conversely, it is discernible that respondents choose level 4 more commonly than level 3. That being said, respondents for Experiment 1 deduce a high level of regret for both conditions, with a marginally bias towards higher level of regret for the [Exception condition].

The bottom two panels are from Experiment 2, where the left one demonstrates the result for the compensation question. In line with the violin graph of compensation question for Experiment 1, violin graphs for both conditions are virtually the same, with the mode of 5. Still, a major difference between the results for Experiment 2 with Experiment 1 is the variation of answers. Majority of respondents in Experiment 1 choose 5 as the answer, with relatively small portions of individuals choosing other answers. In Experiment 2, the distribution of responses is more even. Although 5 and 10 are popular choices, still, the difference between other options with 5 and 10 is not significant.

On the bottom right, is the result for the regret question in Experiment 2. This panel holds a high degree of similarity with the panel of regret for Experiment 1, which proves that two sets of independent respondents have equivalent opinion on the level of regret Mr. Paul feels if he does not receive any compensation.

As mentioned, Figure 3 combined [Self-produced exception condition] and [Other-produced exception condition] into a single condition, [exception condition]. In Figure 4, these two exception conditions are treated separately, into two violin plots. By doing so, it is possible to identify the variation between two exception conditions, and contrast them with the [Routine Condition]. Figure 4 also contains four panels corresponding to two experiments, with three
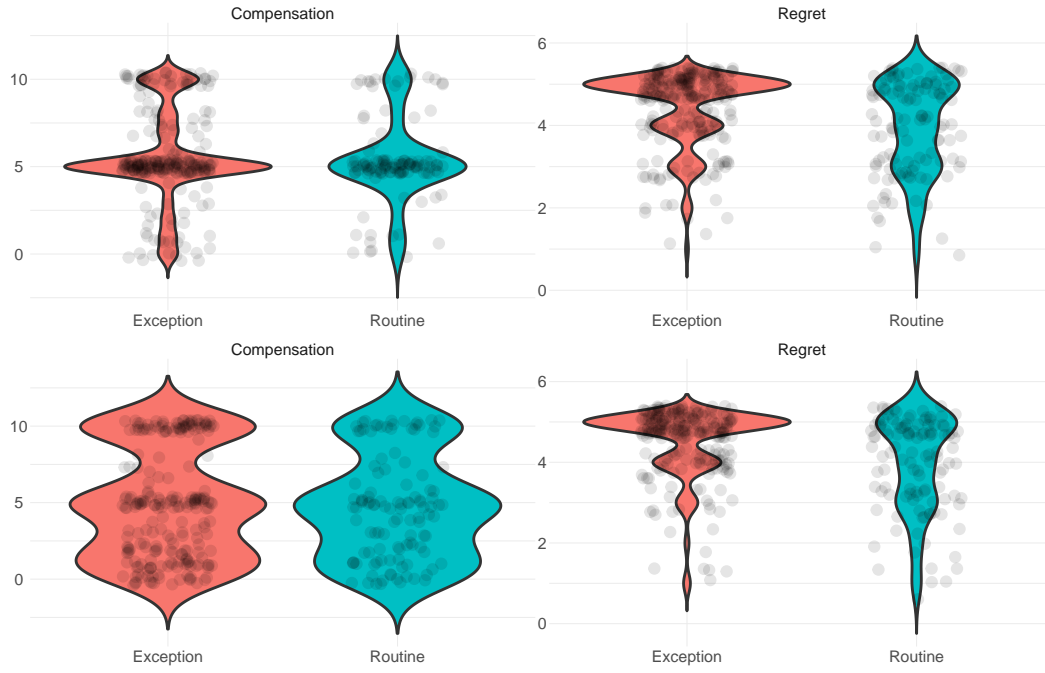
Figure 3: Part 3: Victim compensation and regret (with exception conditions combined). The top two plots are for Experiment 1, the bottom twoplots are for Experiment 2. Error bars represent standard error. Scales: Regret–1 to 5; Compensation–1 to 10

violin graphs in each panel representing three conditions. Same as Figure 3, the upper two panels are designated for Experiment 1, and the lower two are aligned with Experiment 2.

The panel on the upper left demonstrates the results of compensation questions for Experiment 1. With the same conclusion as Figure 3, the violin plots for three conditions show matching characteristics, with the majority of participants vote for 5 as a compensation for Mr. Paul.

In the upper right panel of level of regret, identical trends can be witnessed across the three conditions, with high popularity for the larger numbers, and less votes for the smaller numbers, which is the same for Figure 3. However, comparing [Self-produced exception condition] and [Other-produced exception condition], the violin plot for [Self-produced exception condition] holds a wider range in the choice of 10, reflecting in more participants' thinking of Mr. Paul will feel more regret if he decides to visit Store B by himself. Furthermore, another noticeable deviation exists, which is the lack of votes for the lower ranking numbers in the plot of [Self-produced exception condition]. For example, some clear votes can be seen in the choice of 2 for [Other-produced exception condition], on the contrary, the plot of [Self-produced exception condition] on the choice of 2 is almost a straight line, indicating minimum individuals choose to vote for this low ranking number. Therefore, we can conclude that in Experiment 1, the overall results for [Self-produced exception condition] is higher than [Other-produced exception condition].

The lower left panel is the results of compensation questions for Experiment 2. The violin plots for three conditions are similar in shape, with more even distribution of votes.

Lastly, the lower right panel displays results of level of regret for Experiment 2. The same pattern can be seen in the results of level of regret for Experiment 1, where [Self-produced exception condition] has a wider shape in the highest ranking 5, and a much thinner shape in the lower ranking numbers, compared to [Other-produced exception condition].

5 Discuss

Reviewing the entire body of research, we replicate Kutcher and Feldman's research on the effect of normality of past behavior on regret. The entire study was divided into three parts, including Hitch-hiker incident, Car accident incident and store robbery incident. We used the votes of 684 participants to quantify the parameters of each victim in each event (such as the victim's regret, luck, etc.), and used this to compare the routine behavior and behavior after different events. Parametric differences among victims of exceptional behavior. We replicated exactly the same results as Kutcher and Feldman's, but the goals of our study were different. The theme of our study is "People who do extraordinary things in accidents that cause accidents will receive more sympathy but are also more likely to be criticized by society." After processing the data in each event and analyzing the tables and figures related to them, we finally reached this conclusion.
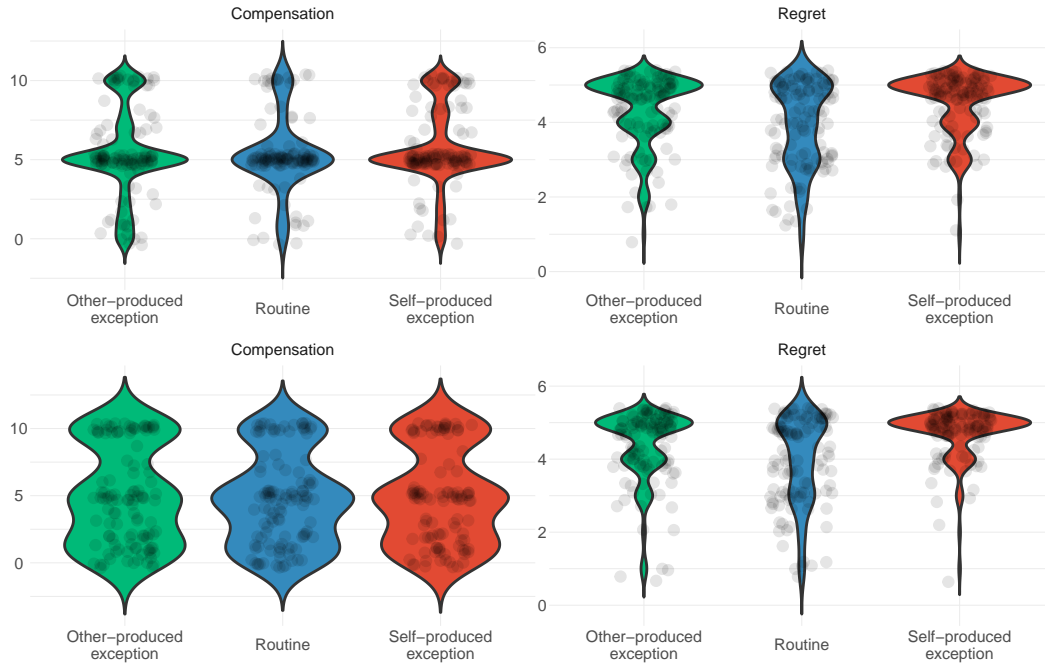
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Figure 4: Part 3: Victim compensation and regret by conditions. The top two plots are for Experiment 1, the bottom two plots are for Experiment2. Error bars represent standard error. Scales: Regret–1 to 5; Compensation–1 to 10

In part 1 and part 2, Mr. Jones and Mr. White, who were robbed and had a car accident because of their exceptional behavior, both received the majority of votes from the participants. In terms of regret, this shows that society is generally more sympathetic to those who were punished for their exceptional behavior. Hurt people. In the second part, two-thirds thought Mr. White was even unluckier. This suggests that when accidents occur, people are more likely to associate bad luck with exceptional behavior rather than routine behavior. And when no accident occurs, people cannot compare the rights and wrongs of routine behavior and exceptional behavior.

In part 3, two experiments were done separately. In the scenario, Mr. Paul was put into three different condition, where the first condition is him getting hurt after he follows his usual routine, the other two are getting hurt after a change of routine, one was a decision made by Mr. Paul himself, and the other change of Routine was due to other situations. By comparing the exception conditions with the routine condition, it is obvious that more respondents vote towards higher levels of regret for the exception condition, particularly the condition that change in routine was caused by other situations. However, votes for compensations are significantly similar to each other, within the comparison of exception conditions with routine condition, or comparing three conditions together. Indeed, there is a difference between Experiment 1 and Experiment 2, where votes for Experiment 2 are more evenly distributed. The reason for this phenomenon to happen, is how the question for Experiment 1 stated that the typical compensation is 500,000 dollars, but Experiment 2 did not have such a statement. In Experiment 1, votes are more focused on 500,000 dollars for all conditions, this demonstrates that with the awareness of typical compensation, the majority of participants did not choose a higher compensation for the exception conditions. No matter whether Mr. Paul follows routine or not, no matter whether the change of routine was caused by himself or others, when it comes to actual monetary payment, all conditions are considered "typical" even if some condition received more sympathy. Same phenomenon occurred in Experiment 2, votes are evenly distributed because the respondents are missing the information of what is a typical compensation. Still, the choice of compensation amount did not change due to Mr. Paul was in a different condition, and the level of regret is much higher in these conditions.

Therefore, we found that when an accident occurs, the person who caused the accident by doing exceptional behavior does not seem to have any other practical benefits except gaining more social sympathy.

These fundings also illustrates the double-edged nature of society's response to exceptional behavior. After an accident, even if the victim who did the exceptional behavior seems to be the unlucky one and needs more comfort, he still needs to pay the price for his behavior. They will not have more benefits than losses just because their exceptional behavior caused the accident. .

However, the design of this study still has limitations. The study involved quantifying some emotional variables like regret and luck, and collecting votes from participants by asking them questions. The number of participants who chose the same option was finally calculated to quantify the affective variable. Firstly, This statistical method is not necessarily precise.

The complexity of emotions is difficult to take into account when quantifying, and allowing participants to make choices is actually a self-report of their feelings. And there is the potential for bias in this voting-like mechanism. For example, in Part 1, a participant was asked who do you think is more likely to be criticized by society, Mr. Jones or Mr. Smith. This participant had a problem with Mr. Smith, so the existence of bias will lead to inaccurate voting results. This participant does not care about the role of exceptional behavior and routine behavior in this question, but because the participant has a bad relationship with Mr. Smith, he may choose Mr. Smith in this question about social criticism. This kind of bias sounds difficult to happen, but it does exist. In order to obtain the most rigorous research results, it is necessary to avoid as much as possible the possibility of bias caused by the diversity of personal experiences. Although quantifying emotions such as regret and luck may risk biasing statistical reports related to them, we believe that these emotional quantifications can be combined in psychology and even behavioral economics in the future to contribute to these fields.

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