

Effect of Reproduction on the Suspect Presentation in Crime Stories

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Abstract

Include no author information in the initial submission, to facilitate blind review. The abstract should be one paragraph, indented 1/8 inch on both sides, in 9 point font with single spacing. The heading “**Abstract**” should be 10 point, bold, centered, with one line of space below it. This one-paragraph abstract section is required only for standard six page proceedings papers. Following the abstract should be a blank line, followed by the header “**Keywords:**” and a list of descriptive keywords separated by semicolons, all in 9 point font, as shown below.

Keywords: iterated narration; transmission chains; crime stories; suspect; guilt

[ek: General notes: make up your mind about generations vs. reproduction; original stories vs. seeds; stories vs. storytype vs. condition,...]

Introduction

One of the central goals in language use is the exchange of information [ek: cite!]. We obtain new information by reading the newspaper, or listening to the radio or a friend. We can use this newly acquired knowledge and communicate it to other people in our environment. In its simplified linear form, we know this transmission phenomenon as the game of Telephone. The first person whispers a sentence to their neighbor, who in turn has to pass it on to the next person, and so on. After several iterations, the last person in the chain announces the sentence which they ended up with. To everyone’s amusement, we often find that this final sentence differs remarkably from the initial one. This simple game nicely exemplifies the information loss and distortion that is associated with repeated exposure and reproduction of information.

(Bartlett, 1932) first introduces this methodology of transmission chains, i.e., chains of reproductions, as a scientific method. In his book “Remembering” (Bartlett, 1932), he presents a series of transmission chain studies, using stories such as Native American tales or sport reports for reproduction. Bartlett observes a significant information loss of the stories over generations of reproductions and that the content of the stories changes [ek: en par] with the reproducer’s prior knowledge. Bartlett used these observations as a foundation

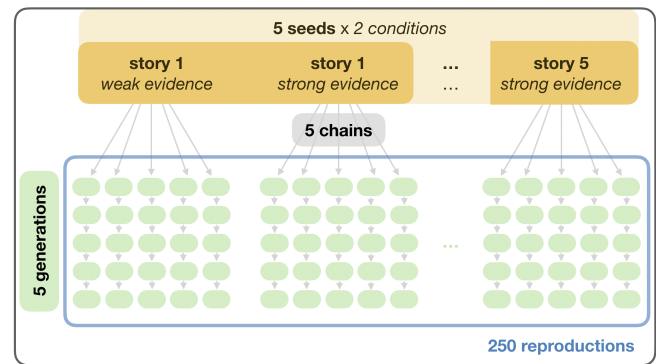


Figure 1: This is a figure.

for his theory that memory retrieval involves a process of reconstruction.

In recent years, the transmission chain method received a revival in the scientific community. [ek: Mesoudi and Whiten] extend Bartlett’s generalization hypothesis by using script theory to show that with each iteration, the described events become increasingly abstract. Further research showed that [ek: gender stereotypes: Bangerter 2000, Kashima 2000; cognitive biases: Kalish 2007, Griffiths 2007/2008; Stubbersfield 2015/2017; Hills/Jagiello 2018]

In summary, we know that we use language and communication to exchange information, but we also know that the process of passing on information is flawed in very particular ways. Given their political relevance, we look at how crime stories change in a transmission chain and how this is influenced by seemingly weak and strong of evidence.

To investigate how crime stories evolve over iterations, we conducted two experiments. First we collected a corpus of reproductions for five crime stories, each addressing a different type of crime (e.g., animal smuggling, arson or sexual assault). Each story existed in a weak and a strong evidence condition. This manipulation has successfully been used by (Van Prooijen, 2006) to uncover in- and out-group effects in guilt judgments. Similar to his study, the different conditions were achieved by changing the last sentence in the

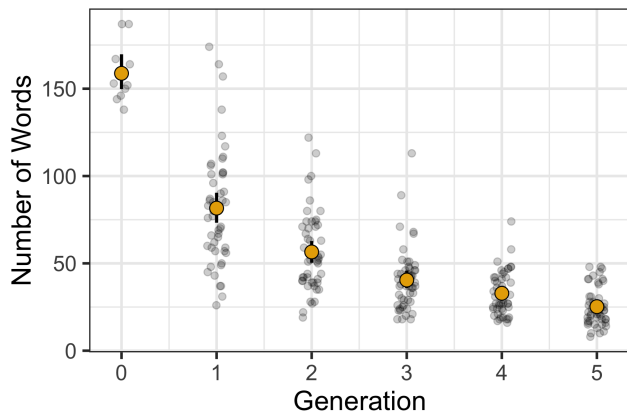


Figure 2: This is a figure.

story which then either suggested strong or weak evidence. We want to investigate how these stories develop in a transmission chain paradigm (as displayed in [ek: figure ref]). To evaluate the stories' development, we conducted a second experiment which asked participants to answer questions about the suspect's guilt, the likelihood of conviction and other suspect, author and reader related questions.

Corpus Collection

[ek: transmission chain method]

Material

We constructed five crime stories which mark the beginning of each reproduction chain. These will be referred to as *seeds*. All of these stories share a [ek: news-article-tone] and follow a similar structure: They report a crime that has happened, the police's search for the people who committed the crime, the arrest of one or multiple suspects and the possible punishment they face if found guilty. Furthermore, each of these five seed stories can occur in either of two conditions: a weak evidence and a strong evidence condition. This manipulation was achieved by varying the final sentence of the story.

Methods

74 Stanford students participated in this online study as part of their course requirements [ek: include _babe reference?]. Each participant read and reproduced each of the five stories. The assignment of the condition was random. After reading the instructions, participants read the story and whenever ready could proceed to the free reproduction. The story was not visible in the reproduction phase. The trial order was randomized.

Results

As suggested by (Bartlett, 1932), the length of reproductions decreases on average with the highest decrease in the first three generations. The difference between the fourth and fifth generation becomes almost negligible which could be a sign

for an almost perfect recall at this length ([ek: cite]).

[ek: ...]

A complete chain is a chain that has 5 reproductions/generations. For our subsequent analyses, we randomly chose 50 complete chains, evenly distributed over stories and conditions. Overall, this gives us a corpus that comprises 250 reproductions and 10 seed stories (see [ek: figure 1]).

Subjective Ratings

To evaluate the reproduction corpus, we obtained ratings for a variety of psychological variables to track their changes throughout the generations. We asked participants to answer questions about the suspect, the author, the reader and the evidence.

Material

The stories were taken from the corpus described in [ek: ref]. In the questions, we asked about the evidence, the suspect's guilt and possible conviction, the reader's beliefs about the author and the reader's emotional connection to the story. [ek: a complete list of the questions can be found...] Overall, participants were asked eight questions of interest and four attention check questions.

Methods

5392 participants were recruited over Amazon Mechanical Turk. Each participant read one story and answered twelve questions (including four attention checks). They indicated their response by moving a slider on a continuous scale. Each question was shown in isolation in a randomized order. Participants spent two to three minutes on this experiment and were paid 0.60ct (\$12-\$18 per hour). The story was visible throughout the experiment.

Results

[ek: ...]

We excluded [ek: nr] participants because they participated multiple times and another [ek: nr] because they failed at least two of the attention check questions. This leaves us with [ek: nr] participants. After the exclusion of the participants, each reproduction was rated on average by 17 subjects.

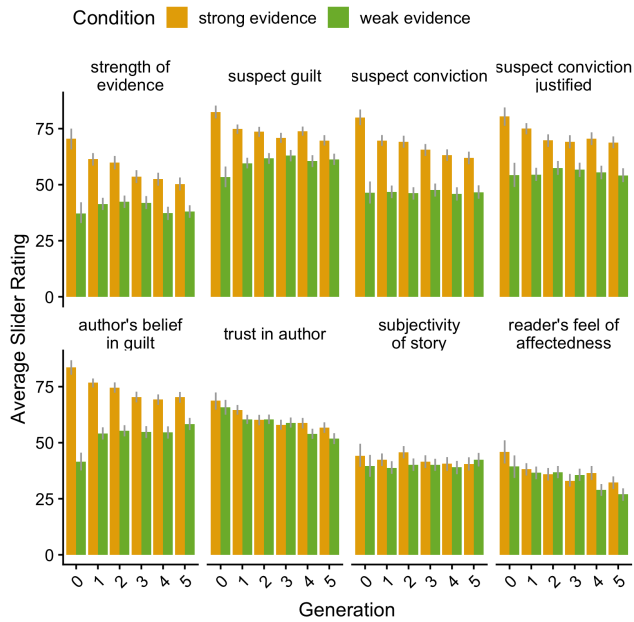


Figure 3: This is a figure.

Conclusion

Discussion

[ek: discuss differences between stories iwth in- and out-group effects for smuggler and professor]

References

- Bartlett, F. C. (1932). Remembering: An experimental and social study. *Cambridge: Cambridge University*.
- Van Prooijen, J.-W. (2006). Retributive reactions to suspected offenders: The importance of social categorizations and guilt probability. *Personality and Social Psychology Bulletin*, 32(6), 715–726.

	β	condition		β	generation		condition*generation			simple effects		
		SE	p		SE	p	β	SE	p	weak	str*gen	we*gen
evidence	-23.25	4.09	<0.0001***	-3.42	0.89	<0.001***	2.59	1.26	<0.05*	***	***	
suspect guilt	-17.28	3.40	<0.0001***	-1.34	0.74	<0.08	1.90	1.05	<0.08	***	.	
conviction	-27.01	4.15	<0.0001***	-2.79	0.90	<0.01**	2.74	1.28	<0.05*	***	**	
convicJustified	-19.02	4.35	<0.0001***	-1.69	0.95	<0.08	1.43	1.34	<0.29	***	.	
author belief	-27.53	3.72	<0.0001***	-2.14	0.81	<0.01**	3.42	1.15	<0.01**	***	**	
author trust	-0.82	2.25	<0.72	-1.94	0.49	<0.001***	-0.54	0.70	<0.44		***	***
story subjectivity	-6.12	2.21	<0.01**	-0.86	0.49	<0.08	1.40	0.69	<0.05*	**	.	
reader emotion	0.85	2.99	<0.78	-1.49	0.65	<0.05*	-1.11	0.92	<0.24	*	***	

Table 1: lmer(suspectconvictionJustified ~ generation * condition + (1—storyreproduction), data=dfmodel); high correlation of fixed effects

	β	condition		β	distance		condition*distance		
		SE	p		SE	p	β	SE	p
evidence	-24.90	5.24	<0.0001***	-36.49	10.92	<0.001***	27.75	15.41	<0.08
suspect committedCrime	-20.12	4.32	<0.0001***	-14.94	9.00	<0.10	26.15	12.71	<0.05*
suspect conviction	-31.87	5.26	<0.0001***	-36.83	10.96	<0.001***	39.48	15.47	<0.05*
suspect convictionJustified	-21.181	5.54	<0.001***	-21.42	11.55	<0.07	19.35	16.30	<0.24
author belief	-29.90	4.74	<0.0001***	-9.01	9.87	<0.37	39.02	13.94	<0.01**
author trust	-1.19	2.83	<0.68	-24.73	5.91	<0.001***	-4.93	8.36	<0.56
story subjectivity	-6.12	2.77	<0.05*	-5.05	5.79	<0.39	12.77	8.22	<0.13
reader emotion	0.54	3.70	<0.89	-25.34	7.72	<0.01**	-10.44	10.93	<0.35

Table 2: lmer(suspectconvictionJustified ~ sim * condition + (1—storyreproduction), data=dfmodel); high correlation of fixed effects

	condition			hedgesprop			condition*hedgesprop		
	β	SE	p	β	SE	p	β	SE	p
evidence	-15.74	1.95	<0.0001***	101.20	56.55	<0.08	-119.12	82.37	<0.15
suspect committedCrime	-11.93	1.59	<0.0001***	43.01	45.98	<0.36	-118.58	66.97	<0.08
suspect conviction	-19.10	1.96	<0.0001***	102.66	56.65	<0.08	-132.10	82.50	<0.12
suspect convictionJustified	-14.94	2.04	<0.0001***	30.91	59.10	<0.7	-70.91	86.08	<0.42
author belief	-17.91	1.75	<0.0001***	54.69	50.54	<0.29	-188.17	73.61	<0.05*
author trust	-2.16	1.13	<0.06	46.60	32.70	<0.16	27.80	47.74	<0.57
story subjectivity	-2.22	1.06	<0.05*	6.10	30.61	<0.85	-45.08	44.85	<0.32
reader emotion	-2.25	1.46	<0.13	-7.18	42.26	<0.87	49.49	61.67	<0.43

Table 3: lmer(suspectconvictionJustified hedgesprop * condition + (1—storyreproduction), data=dfmodel); hedges is centered; hedges = c("allegedly", "possibly", "maybe", "probably", "if", "around", "over", "nearly", "almost", "approximately", "vaguely", "up to", "roughly", "mainly", "kind of", "sort of", "kinda", "sorta", "about", "supposedly", "seem", "tend", "look like", "looks like", "appear to be", "think", "believe", "doubt", "be sure", "indicate", "suggest", "assume", "might", "perhaps", "possibility")