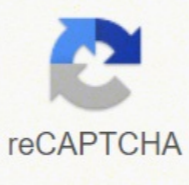




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Asparagus, a Love Story

Healthier Eating Could Be Just a False Memory Away

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Abstract. Across experiments involving 211 subjects, we tested the suggestion that subjects had false memories of eating asparagus, which is associated with negative health consequences. Subjects who had false memories for eating asparagus showed greater willingness to eat asparagus in a restaurant setting, and a willingness to pay more for asparagus in the grocery store. Ratings of photographs made after the suggestion were negatively affected when subjects were asked to eat the food that the suggestion implied (i.e., more asparagus and cauliflower). These results demonstrate that beliefs can be false before they lead to a positive food-related experience or behavior, and that these false beliefs can have healthy consequences.

Keywords: false memory, belief, consequences

Human memory is subject to many types and levels of distortion. People's memories of the events of their own lives can be inaccurate. Researchers have been able to plant false details for actual events (for a review, see Ayres & Rubin, 1998) and even entirely false events (e.g., Loftus & Pickrell, 2005; Hyman, Husband, & Billings, 1995; Loftus & Pickrell, 1995). These "false false memories" (Loftus & Bernstein, 2005) have even included impossible events, like meeting Bigfoot at Disneyland (Branan, Ellis, & Loftus, 2002) or undergoing a very specific, medical procedure (Maroney & Maroney, 2005).

False beliefs and memories can have real consequences for subjects. In one recent study (Bernstein, Laney, Morris, & Loftus, 2009b) we gave subjects false feedback that suggested they had gained weight as children after eating either 400 pickles or 400 hard-boiled eggs. A substantial majority of subjects (75% in the "pickles" group and 78% in the "eggs" group) believed the feedback. These beliefs were subsequently related to the consumption of the false event (increased after the false suggestion), and who reported a specific belief or memory for the event. These false food beliefs had consequences for subjects, including reduced self-reported willingness to eat pickles or eggs, and lower self-reported levels of liking of these foods. There was also some avoidance of closely related foods like pickle slices

on a hamburger and egg salad sandwiches. In later research, we showed that false memories could be planted about having gotten sick eating a fattening food, and those who fell for the suggestion showed avoidance later (Bernstein, Laney, Morris, & Loftus, 2009a).

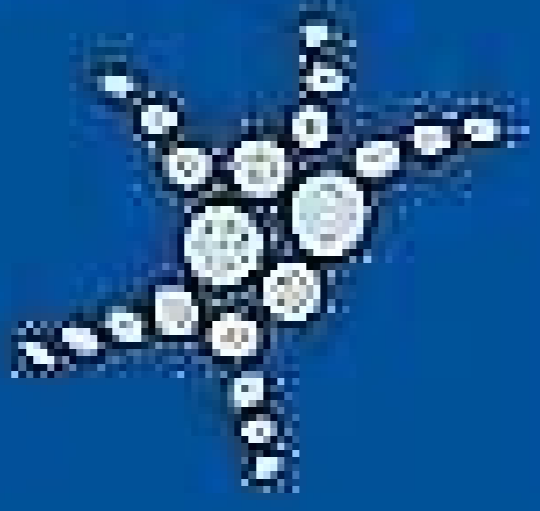
If a false belief that one had a negative experience with a food can lead people to avoid the food, could a positive false belief about a food lead people to want to eat the food more? The answer to this question is not obvious, because most rich false memory studies involve negative or neutral events. To our knowledge, no one has tested false beliefs for positive events and examined the associated consequences of these beliefs. Finding false beliefs for positive experiences and showing that such beliefs have positive consequences for one's attitudes and behaviors would have both theoretical and practical significance. First, this finding would demonstrate that it is possible to implant positive false beliefs and memories in people. Second, this finding would demonstrate that it is the case that treatment of certain disorders (e.g., generalized anxiety, phobias). Also, positive false memories could aid in the development of health or eating habits or possibly even reverse food aversions associated with chemotherapy in cancer patients.

With these ideas in mind, we sought to test a positive false memory effect. We suggested to subjects that they had

¹ The full title of this false memory was "Schistos, Maroon, Kitch, & Rubin, 2006. The way to make this distinction is to ask subjects whether they have a memory of eating the actual false event. We do this to avoid the common criticism that false memory studies are simply suggesting to subjects to believe in something. In fact, the present paper reports on a false memory and not a false belief. The two are not the same. "False memories and false beliefs" typically refer primarily to the former, while "false memory" or "false belief" is reserved for the latter. This study





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Appendix A

Table A.1. Childhood Trauma Questionnaire Items by Scale

When I was growing up,...

Emotional Abuse

3. People in my family called me things like "stupid," "lazy," or "ugly."
8. I thought that my parents wished I had never been born.
14. People in my family said hurtful or insulting things to me.
18. I felt that someone in my family hated me.
25. I believe that I was emotionally abused.

Physical Abuse

9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.
11. People in my family hit me so hard that it left me with bruises or marks.
12. I was punished with a belt, a board, a cord, or some other hard object.
15. I believe that I was physically abused.
17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.

Sexual Abuse

20. Someone tried to touch me in a sexual way or tried to make me touch them.
21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them.
23. Someone tried to make me do sexual things or watch sexual things.
24. Someone molested me.
27. I believe that I was sexually abused.

Emotional Neglect

5. There was someone in my family who helped me feel that I was important or special (R).
7. I felt loved (R).
13. People in my family looked out for each other (R).
19. People in my family felt close to each other (R).
22. My family was a source of strength and support (R).

Physical Neglect

1. I didn't have enough to eat.
2. I knew that there was someone to take care of me and protect me (R).
4. My parents were too drunk or high to take care of the family.
6. I had to wear dirty clothes.
16. There was someone to take me to the doctor if I needed it (R).

Minimization/Denial

10. There was nothing I wanted to change about my family.
14. I had the perfect childhood.
26. I had the best family in the world.

Note: (R) indicates a reverse-scored item.

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Sales-side ³ and brokerage services are provided by wholly-owned companies Sanford C. Retrieved 2021-09-11. Bernstein[5] Alliance Capital's growth capital and fixed income corporate investment, and its family of retail mutual funds, accompanied Bernstein's fixed income and tax-exempt fixed income management and its business with private clients. ä Cheng, Evelyn (May 2, 2018). 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[11][11] 2020 In June 2020, AllianceBertstein acquired the investment firm AnchorPath ³ for \$ 400 million. [13] 2021 In April 2021, AllianceBernstein moved to a new headquarters in Nashville, Tennessee. [14] [15] In September 2021, AllianceBernstein gave a gift of \$100,000 to Martha O'Bryan's Nashville-based center. [16] Columbia University asociÄ³ with AllianceBernstein in 2021. [17] In mid-August 2021, AllianceBertstein revealed to you that it has entered into a strategic ³ partnership with LSV LLC. [18] ORGANIZATION Institutional Investment Management AllianceBernstein provides investment services for institutions. "A former Wall Street money manager with \$500 billion is moving to Nashville from Manhattan to save money". money." Ingreso mi Bernstein I. Consultado el 21 de noviembre de 2018. AdemÄis, no parece capaz de mostrar la informaciÄ"n de mi cuenta. Historia OrÄgenes AllianceBernstein remonta sus orÄgenes a la fundaciÄ"n de Sanford C. fusionada con el negocio de asesorÄa de inversiones de MoodyÄs Investor Services, Inc.[4] 2000 Ä Ä*2015 En octubre de 2000, Alliance Capital adquiriÄ³ Sanford C. Bernstein en 1967 como una empresa de gestiÄ"n de inversiones para clientes privados. ä Ä«AB Locations.Ä» Post de Nashville. Bernstein y CompaÄ±Äa.Ä» Ä«AllianceBernstein envÄa personal a la escuela climÄtica.Ä» Si eres un Sanford C. ä Ä«Bernstein Global Management websiteÄ». ä Ä«Bernstein Research Website.Ä» Archivado desde el original el 14 de septiembre de 2019. ^ ^ Ä«La investigaciÄ"n de Shepard D. Bernstein para iPad y iPhone proporciona una nueva y muy conveniente manera de acceder a nuestra investigaciÄ"n principal en cualquier lugar... en cualquier momento. www.spglobal.com. Weisenseel, CFO Laurence E. Enlaces externos Datos de negocios para AllianceBernstein Holding L.P.: Google FinanceYahoo! FinanzasBloombergReutersSEC limings Obtenido de Ä« Osherow, cofundador Sanford C. www.barrons.com. ä Ä«List of 529 plans.Ä» Consultado el 23 de diciembre de 2015. ä Ä«Fidelity, AllianceBernstein Reap Payday After Winn-Dixie RescueÄ», ä Ä«Fourth Quarter Fact SheetÄ» (PDF). 27-oct-2017 VersiÄ"n 1.9.2 Apple ha actualizado esta aplicaciÄ"n para mostrar el icono de la aplicaciÄ"n Apple Watch.Compatibilidad con iPhone X Esta aplicaciÄ"n podrÄa necesitar una actualizaciÄ"n. Osherow Roger Hertog Lewis Ä. ä Ä«AllianceBernstein Forms Partnership with LSV Advisors for FirmÄs Private Wealth Business ä SWFIA». ä Bernstein 10th Annual Pan-European Conference Strategic Decisions 2013, AllianceBernstein LP, Sanford C. ä Michelle Dunstan, Lisa Sachs and Art. Not enough.Ä" Ä"AllianceBernstein sets timetable for opening of new Fifth + Broadway venue.Ä" Bernstein, Shepard D. 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