

## Curriculum Vitae

Rachel Sarah Herz

[www.rachelherz.com](http://www.rachelherz.com)

Adjunct Faculty, Brown University  
Part-time Faculty, Boston College

Owner-President,  
RSH Enterprises, LLC

**Citizenship:** American and Canadian

**Languages:** English and French

### Education

<i><b>Institution</b></i>	<i><b>Degree</b></i>	<i><b>Year</b></i>	<i><b>Department</b></i>
Queen's University	B.A. Honors	1985	Psychology
<i>Thesis: A comparison of the ability of (+)amphetamine and caffeine to produce environmental specific conditioning</i>			
University of Toronto	M.A.	1987	Psychology
<i>Thesis: The role of visual cues for cache-recovery and spatial memory in the black-capped chickadee</i>			
University of Toronto	Ph.D.	1992	Psychology
<i>Thesis: The relationship between odor and emotional memory</i>			

### Postgraduate Training

1992-1994 NSERC post-doctoral fellow, Department of Psychology, University of British Columbia

### Faculty Appointments

1994-2000	Assistant Member, Monell Chemical Senses Center, Philadelphia, PA
2000-2005, 2008	Visiting Assistant Professor, Department of Psychology, Brown University
2005-2011	Visiting Assistant Professor, Department of Psychiatry and Human Behavior, Warren Alpert Medical School of Brown University
2004-present	Faculty, Sleep and Chronobiology Summer Behavioral Sciences Research Apprenticeship Program, E.P. Bradley Sleep and Chronobiology Research Lab, Warren Alpert Medical School of Brown University
2011-present	Adjunct Assistant Professor, Department of Psychiatry and Human Behavior, Warren Alpert Medical School of Brown University
2013-present	Part-time Faculty, Department of Psychology and Neuroscience, Boston College
2016-present	Faculty, Food Studies Program, Brown University
2019	Visiting Scholar, Radcliffe Institute for Advanced Study, Harvard University

### Other Positions

2005-	Co-Founder and Co-Owner, Sniffiggle, LLC
2008-	President and Owner, RSH Enterprises, LLC

### Awards and Honors

1989-1991 Ontario Graduate Student Scholarship

1991-1992	Life Sciences Graduate Degree Completion Award
1992-1994	NSERC Post-Doctoral Fellowship
1994	Ajinomoto USA Inaugural Award to Promising Young Scientists in the Chemical Senses
1998-2000	Morley R. Kare Fellow, Monell Chemical Senses Center
2002	Moskowitz Jacobs Award for Research Excellence in the Psychophysics of Taste and Smell
2004-	Member of the Society of Sigma Xi
2004-2010	Distinguished Lecturer, Institute of Food Technologists
2018	Applied Neurogastronomy Challenge Gina A. Mullin Award

## RESEARCH INTERESTS

- **Olfaction: Cognition, Perception, Emotion and Behavior**
  - Memory
  - Language and Context Effects
  - Sex Differences in Social and Sexual Attraction
  - Circadian Phase and Sleep
  - BMI
- **Emotion, Sensory Systems, Motivated Behavior**
  - Disgust, Morality, Taste, Food, Eating Behavior, Person Perception
- **Evolution**

Techniques include: cognitive-behavioral, psychophysics, neuroimaging

## PUBLICATIONS

### **59 Peer Reviewed Articles**

Beninger, R.J., & Herz, R.S. (1986). Pimozide blocks establishment but not expression of cocaine-produced environment-specific conditioning. *Life Sciences*, *38*, 1425-1431.

Herz, R.S., & Beninger, R.J. (1987). Comparison of the ability of (+)-amphetamine and caffeine to produce environment-specific conditioning. *Psychopharmacology*, *92*, 365-370.

Sherry, D.F., Vaccarino, A.L., Buckenham, K., & Herz R.S. (1989). The hippocampal complex of food-storing birds. *Brain Behaviour and Evolution*, *34*, 308-317.

Cupchik, G.C., Winston, A., & Herz, R.S. (1992). Judgments of similarity and difference between paintings. *Visual Arts Research*, *18*, 36-49.

Herz, R.S., & Cupchik, G.C. (1992). An experimental characterization of odor-evoked memories in humans. *Chemical Senses*, *17*, 519-528.

Herz, R.S., & Cupchik, G.C. (1993). The effect of hedonic context on evaluations and experience of paintings. *Empirical Studies of the Arts*, *11*, 147-166.

Herz, R.S., Zanette, L., & Sherry, D.F. (1994). The role of visual cues for cache-recovery and spatial memory in the black-capped chickadee. *Animal Behaviour*, *48*, 343-351.

- Herz, R.S., & Cupchik, G.C. (1995). The emotional distinctiveness of odor-evoked memories. *Chemical Senses*, 20, 517-528.
- Herz, R.S., & Engen, T. (1996). Odor memory: Review and analysis. *Psychonomic Bulletin and Review*, 3, 300-313.
- Herz, R.S. (1996). A comparison of olfactory, visual and tactile cues for emotional and non-emotional associated memories. *Chemical Senses*, 21, 614-615.
- Herz, R.S. (1997). Emotion experienced during encoding enhances odor retrieval cue effectiveness. *American Journal of Psychology*, 110, 489-505.
- Herz, R.S. (1997). The effects of cue distinctiveness on odor-based context dependent memory. *Memory & Cognition*, 25, 375-380.
- Herz, R.S. & Cahill, E. D. (1997). Differential use of sensory information in sexual behavior as a function of gender. *Human Nature*, 8, 275-286.
- Herz, R.S. (1998). Are odors the best cues to memory? A cross-modal comparison of associative memory stimuli. *Annals of the New York Academy of Sciences*, 855, 670-674.
- Herz, R.S. (1998). An examination of objective and subjective measures of experience associated to odors, music and paintings. *Empirical Studies of the Arts*, 16, 137-152.
- Herz, R.S. (1999). Caffeine effects on mood and memory. *Behaviour, Research and Therapy*, 37, 869-879.
- Epple, G. & Herz, R.S. (1999). Ambient odors associated to failure influence cognitive performance in children. *Developmental Psychobiology*, 35, 103-107.
- Herz, R.S., & von Clef, J. (1999). The influence of verbal labeling on the perception of ambiguous odors. *Chemical Senses*, 24, 599-600.
- Herz, R.S., McCall, C. & Cahill, L. (1999). Hemispheric lateralization in the processing of odor pleasantness versus odor names. *Chemical Senses*, 24, 691-695.
- Herz, R.S. (2000). Verbal coding in olfactory versus non-olfactory cognition. *Memory & Cognition*, 28, 957-964.
- Herz, R.S., & von Clef, J. (2001). The influence of verbal labeling on the perception of odors: Evidence for olfactory illusions? *Perception*, 30, 381-391.
- Herz, R.S., & Epple, G. (2001). The success of our failure-induction experimental design: Response to Black. *Developmental Psychobiology*, 39, 149-150.
- Herz, R.S., & Schooler, J.W. (2002). A naturalistic study of autobiographical memories evoked to olfactory versus visual cues. *American Journal of Psychology*, 115, 21-32.

- Herz, R.S., & Inzlicht, M. (2002). Gender differences in response to physical and social signals involved in human mate selection: The importance of smell for women. *Evolution and Human Behavior*, 23, 359-364.
- Herz, R.S. & Beland, S.L. (2002). A test of odor associative learning. *Chemical Senses*, 27, 664.
- Herz, R.S. (2003). The effect of verbal context in olfactory perception. *Journal of Experimental Psychology: General*, 132, 595-606.
- Carskadon, M.A. & Herz, R.S. (2003). Olfactory arousal threshold in Stage 2, Stage, and REM sleep in comparison to an auditory signal. *Sleep*, 26 (Suppl), A445-446.
- Herz, R.S., Eliassen, J.C., Beland, S.L., & T. Souza. (2004). Neuroimaging evidence for the emotional potency of odor-evoked memory. *Neuropsychologia*, 42, 371-378.
- Carskadon, M.A. & Herz, R.S. (2004). Minimal olfactory perception during sleep: Why odor alarms will not work for humans. *Sleep*, 27, 402-405.
- Herz, R.S., (2004). A naturalistic analysis of autobiographical memories triggered by olfactory, visual and auditory stimuli. *Chemical Senses*, 29, 217-224.
- Herz, R.S., Beland, S.L. & Hellerstein, M. (2004). Changing odor hedonic perception through emotional associations in humans. *International Journal of Comparative Psychology*, 17, 315-339.
- Herz, R.S., Schankler, C. & Beland, S. (2004). Olfaction, emotion and associative learning: Effects on motivated behavior. *Motivation and Emotion*, 28, 363-383.
- Herz, R.S. (2005). Odor-associative learning and emotion: Effects on perception and behavior. *Chemical Senses*, 30, i250-i251.
- Margolskee, R. F., Reed, R. R., Herz, R., & Breslin, P. (2006). Taste and smell in translation: Applications from basic research. *Chemical Senses*, 31, A26.
- Herz, R.S. (2009). Aromatherapy facts and fictions: A scientific analysis of olfactory effects on mood, physiology and behavior. *International Journal of Neuroscience*, 119, 263-290.
- Herz, R.S. (2009). Basic processes in human olfactory cognition: Current questions and future directions. *Annals of the New York Academy of Sciences*, 1170, 313-317. DOI: 10.1111/j.1749-6632.2009.03921.x
- Herz, R.S. (2010). Trygg Engen: Pioneer of olfactory psychology. *Chemosensory Perception*, 3, 135-136.
- Herz, R. S. (2011). PROP taste sensitivity is related to visceral but not moral disgust. *Chemosensory Perception*, 4, 72-79. DOI: 10.1007/s12078-011-9089-1

- Herz, R.S. & Hinds, A. (2013). Stealing is not gross: Language distinguishes visceral disgust from moral violations. *American Journal of Psychology*, *126*, 275-286. DOI: 10.5406/amerjpsyc.126.3.0275
- Herz, R.S. (2014). Verbal priming and taste sensitivity make moral transgressions gross. *Behavioral Neuroscience*, *128*, 20-28. DOI:10.1037/a0035468
- Herz, R.S. (2014). Strohminger versus McGinn and the meaning of disgust. *Emotion Review*, *6*, 218-219. DOI: 10.1177/1754073914523042
- Carskadon, M.A., Saletin, J.M., Van Reen, E., Bartz, A., Hart, C., Raynor, H. & Herz, R.S. (2015). Circadian influences on smell and taste detection thresholds: Preliminary results from adolescents. *Sleep*, *38* (Suppl), A67.
- Sugiyama, H., Oshida, A., Thueneman, P., Littell, S., Katayama, A., Kashiwagi, M., Hikichi, S. & Herz, R.S. (2015). Proustian products are preferred: The relationship between odor-evoked memories and product evaluation. *Chemosensory Perception*, *8*, 1-10. doi: 10.1007/s12078-015-9182-y
- Herz, R.S. (2016). Birth of a Neurogastronomy Nation: The inaugural symposium of the international society of neurogastronomy. *Chemical Senses*, *41*, 101-103. doi:10.1093/chemse/bjv073
- Herz, R. S. (2016). The role of odor-evoked memory in psychological and physiological health. *Brain Sciences*, *6*(3),22. [https://doi:10.3390/brainsci6030022](https://doi.org/10.3390/brainsci6030022).
- Ershadi, M., Russell, J.A. & Herz, R.S. (2017). The (non)-effect of induced emotion on desire for different types of foods. *Food Quality and Preference*, *62*, 214-17. <https://doi.org/10.1016/j.foodqual.2017.06.009>
- Herz, R.S., Van Reen, E., Barker, D., Hilditch, C., Bartz, A. & Carskadon, M.A. (2018). The influence of circadian timing on odor detection. *Chemical Senses*, *43*, 45-51. [https://doi:10.1093/chemse/bjx067](https://doi.org/10.1093/chemse/bjx067)
- Herz, R.S., Van Reen, E., Barker, D., Bartz, A. & Carskadon, M.A. (2018). Olfactory sensitivity declines with number of hours awake. *Chemical Senses*, *43*, e.110. [https://doi:10.1093/chemse/bjy003](https://doi.org/10.1093/chemse/bjy003)
- White, T.L., Cunningham, C. & Herz, R.S., (2018). Individual differences and the 'selfish' relationship between empathy and disgust. *American Journal of Psychology*, *131*, 439-450.
- Sayette, M.A. Marchetti, M., Herz, R.S., Martin, L.M. & Bowdring, M.A. (2019). Pleasant olfactory cues can reduce cigarette craving. *Journal of Abnormal Psychology*, *128*, 327-340. <https://dx.doi.org/10.1037/abn0000431>
- Johnson, M.B., Kingston, R., Utell, M.J., Wells, J.R., Singal, M., Troy, W.R., Horezniak, S., Dalton,

P., Ahmed, F.K., Herz, R.S., Osimitz, T., Praver, S. & Yin, S. (2019). Exploring the science, safety and benefits of air care products: perspectives from the inaugural air care summit. *Inhalation Toxicology*, 31, 12-24.

Herz, R.S., Van Reen, E., Gredvig-Ardito C. & Carskadon, M.A. (2020). Insights into smell and taste sensitivity in normal weight and overweight-obese adolescents. *Physiology & Behavior*, 221. <https://doi.org/10.1016/j.physbeh.2020.112897>.

Weiss, J. J., Attuquayefio, T., White, E. B., Geng, B., Handoko, R., Herz, R. S., ... & Farhadian, S. F. (2020, October). 456. Implementing an At-Home Smell Test for Early Assessment of COVID-19 in High-Risk Healthcare Workers. In *Open Forum Infectious Diseases* (Vol. 7, No. Supplement\_1, pp. S295-S296). US: Oxford University Press.

Weiss, J. J., Attuquayefio, T. N., White, E. B., Li, F., Herz, R. S., White, T. L., Campbell, M., Geng, B., Datta, R., Wyllie, A. L., Grubaugh, N. D., Casanovas-Massana, A., Muenker, M. C., Moore, A. J., Handoko, R., Iwasaki, A., Martinello, R. A., Ko, A. I., Small, D. M., Farhadian, S. F., ... Yale IMPACT Research Team (2021). Tracking smell loss to identify healthcare workers with SARS-CoV-2 infection. *PloS one*, 16(3), e0248025. <https://doi.org/10.1371/journal.pone.0248025>

Herz, R.S. (2021). Scent perception and its therapeutic potential for pain management. *International Journal of Professional Holistic Aromatherapy*, 10(1), 17-22.

Herz, R.S., Herzog, E. D., Merrow, M & Noya, S.B. (2021). The circadian clock, the brain, and COVID-19: the cases of olfaction and the timing of sleep. *Journal of Biological Rhythms*, 36(5), 423-431. doi: 10.1177/07487304211031206

Herz, R.S. (2021). Olfactory Virtual Reality: A new frontier in the treatment and prevention of posttraumatic stress disorder. *Brain Sciences*, 11, 1070. <https://doi.org/10.3390/brainsci11081070>

Herz, R.S. & Bajec, M. R. (2022). Your money or your sense of smell? A comparative analysis of the sensory and psychological value of olfaction. *Brain Sciences*, 12, 299. <https://doi.org/10.3390/brainsci12030299>

Herz, R.S., Larsson, M., & Trujillo, R., Casola, M.C., Ahmed, F.K., Lipe, S. & Brashear M.E. (2022). A three-factor benefits framework for understanding consumer preference for scented household products: psychological interactions and implications for future development. *Cognitive Research: Principles and Implications*, 7(28). <https://doi.org/10.1186/s41235-022-00378-6>

#### **40 Book Chapters and Invited Articles**

Herz, R.S., & Eich, E. (1995). Commentary and envoi. In Crowder, R.G. & Schab, F.B. (Eds.), *Memory for Odors* (pp. 159-175). Hillsdale, New Jersey: Erlbaum.

Herz, R.S. (1996). The relationship between odor and emotion in memory. *The Aromachology Review*, 5, 1-8.

- Epple, G. & Herz, R.S. (1998). The Smell of Failure. *The Aromachology Review*, 7, 1-7.
- Herz, R.S. & Laneader, A. (1998). An evaluation of caffeine-induced mood and state-dependent memory effects. In L.S. Harris (Ed.), *NIDA Research Monograph Series*, 179 (p. 160). Bethesda, MD: NIH.
- Herz, R.S. (1999). Differential importance of olfactory information in the human heterosexual response as a function of gender. In R.E. Johnson (Ed.), *Advances in Chemical Signals in Vertebrates* (pp. 373-382). New York: Plenum Publishing Corporation.
- Herz, R.S. (1999). Olfaction and memory. *H&R Contact*, 77, 23-27.
- Herz, R.S. (2000). Scents of Time. *The Sciences (July/August)*, 34-39.
- Herz, R.S. (2001). Beliefs influence perception of natural and synthetic odors. *The Aromachology Review*, 9,1-7.
- Herz, R.S. (2001). How odor-evoked memories differ from other memory experiences: Experimental investigations into the Proustian phenomenon. In T. Lorig (Ed). *Compendium of Olfactory Research* (pp. 23-38). New York: Olfactory Research Fund, Ltd.
- Herz, R.S. (2001). Ah, sweet skunk: Why we like or dislike what we smell. *Cerebrum*, Vol.3(4), 31-47.
- Herz, R.S. (2002). Mood and cognitive performance during odor exposure. In C. Rouby, B. Schaal, D. Dubois, R. Gervais, & A. Holley (Eds.), *Olfaction, Taste and Cognition* (pp.160-177). New York: Cambridge University Press.
- Herz, R.S. (2002, November). Do Scents Affect People's Moods or Work Performance? *Scientific American*. <http://www.scientificamerican.com/article.cfm?id=do-scents-affect-peoples>
- Herz, R.S. (2003). Women's psychology of fragrance: A lifespan study. [https://www.researchgate.net/publication/256436890\\_Women%27s\\_psychology\\_of\\_fragrance\\_A\\_lifespan\\_study](https://www.researchgate.net/publication/256436890_Women%27s_psychology_of_fragrance_A_lifespan_study)
- Herz, R.S. (2004). Where memory, emotion and olfaction meet. *Clinician's Research Digest*, 22 (4) April 2004, pg.4.
- Herz, R.S. (2004). Scentsational memory. *The Scotch Malt Whiskey Society Newsletter*, 74, 6-9.
- Herz, R.S. (2004). Lipsitt, Lewis, P: Sensory contributions to infant development. In C.B. Fisher & R.M. Lerner (Eds.), *Applied Developmental Science Encyclopedia* (pp. 666-671). Thousand Oaks, CA: Sage Publications, Inc.
- Herz, R.S. (2005). The unique interaction between language and olfactory perception and cognition. *Trends in Experimental Psychology Research*. (pp. 91-109). New York: Nova

Science Publishers, Inc.

Herz, R.S. (2006). I know what I like: Understanding odor preferences. In J. Drobnick (Ed). *The Smell Culture Reader*. (pp. 190-203). Oxford:Berg.

Herz, R.S. (2006). Olfaction. In J.E. Wolfe, K.R. Kluender, D.M. Levi, L.M. Bartoshuk, R.S. Herz, R.L. Klatzky, S.J. Lederman (Eds). *Sensation & Perception*, Sunderland, MA: Sinauer Associates, Inc.

Herz, R. (January 21, 2008). Buying by the Nose. *ADWEEK*. <http://www.adweek.com/brand-marketing/buying-nose-94779/>

Herz, R.S. (2008). Olfaction. In J.E. Wolfe, K.R. Kluender, D.M. Levi, L.M. Bartoshuk, R.S. Herz, R.L. Klatzky, S.J. Lederman (Eds). *Sensation & Perception 2<sup>nd</sup> Ed*. Sunderland, MA: Sinauer Associates, Inc.

Herz, R.S. (2010). Aromatherapy. In B. Goldstein (Ed). *Encyclopedia of Perception*. (pp.62-64). Thousand Oaks, CA: Sage Reference Publications.

Herz, R.S. (2010). Fragrance and Perfume. In B. Goldstein (Ed). *Encyclopedia of Perception*. (pp. 465-468). Thousand Oaks, CA: Sage Reference Publications.

Herz, R.S. (2010). The emotional, cognitive and biological basics of olfaction: Implications and considerations for scent marketing. In A. Krishna (Ed). *Sensory Marketing*. (pp. 87-107). New York: Routledge Academic.

Herz, R.S. (2010). Trygg Engen. *American Psychologist*, 65, 294.

Herz, R.S. (2011). Perfume. In J. Gottfried (Ed). *The Neurobiology of Sensation and Reward*. (pp. 371-389). London: Taylor & Francis.

Herz, R.S. (2011). Odor-evoked memory. In J. Decety & J. Cacioppo (Eds). *The Oxford Handbook of Social Neuroscience*. (pp. 265-276). New York: Oxford University Press.

Herz, R.S. (2011). Olfaction. In J.E. Wolfe, K.R. Kluender, D.M. Levi, L.M. Bartoshuk, R.S. Herz, R.L. Klatzky, S.J. Lederman & D.M. Merfeld (Eds). *Sensation & Perception 3<sup>rd</sup> Ed*. Sunderland, MA: Sinauer Associates, Inc.

Herz, R.S. (2012). Odor memory and the special role of associative learning. In G.M. Zucco, R.S. Herz & B. Schaal (Eds). *Olfactory Cognition: From Perception and Memory to Environmental Odours and Neuroscience*. (pp. 95-114). Amsterdam, Holland: John Benjamins Publishing Company.

Herz, R.S. (2012). The cooties they carry. *Psychology Today*, July/August, 48-49.

Herz, R.S. (2013). Nose job. *Brown Alumni Magazine*, May/June, 19.



Herz, R.S. (2014). [Anosmia](#). *World Book Encyclopedia*.

Herz, R.S. (2014). Olfaction. In J.E. Wolfe, K.R. Kluender, D.M. Levi, L.M. Bartoshuk, R.S. Herz, R.L. Klatzky, S.J. Lederman & D.M. Merfeld (Eds). *Sensation & Perception 4<sup>th</sup> Ed.* Sunderland, MA: Sinauer Associates, Inc.

Herz, R.S. (2016). Not against our will. *The Invisible Project*.

Herz, R.S. (2018). Olfaction. In J.E. Wolfe, K.R. Kluender, D.M. Levi, L.M. Bartoshuk, R.S. Herz, R.L. Klatzky, S.J. Lederman & D.M. Merfeld (Eds). *Sensation & Perception, 5<sup>th</sup> Ed.* Sunderland MA: Sinauer Associates; New York: Oxford University Press.

Herz, R.S. (2020). Olfaction. In J.E. Wolfe, K.R. Kluender, D.M. Levi, L.M. Bartoshuk, R.S. Herz, R.L. Klatzky, S.J. Lederman & D.M. Merfeld (Eds). *Sensation & Perception, 6<sup>th</sup> Ed.* Sunderland MA: Sinauer Associates; New York: Oxford University Press.

Herz, R. S. (2022). Olfaction and health. In *Olfaction: An Interdisciplinary Perspective from Philosophy to Life Sciences* (pp. 193-211). Springer, Cham.

LeMarie, L. & Herz, R.S. (in preparation). The efficacy of emotion and format in anti-smoking messaging varies by smoking status.

## TEXTBOOKS

Wolfe, J.E., Kluender, K.R., Levi, D.M., Bartoshuk, L.M., Herz, R.S., Klatzky, R.L. & Lederman, S.J. (2006). *Sensation & Perception*. Sunderland, MA: Sinauer Associates, Inc.

Wolfe, J.E., Kluender, K.R., Levi, D.M., Bartoshuk, L.M., Herz, R.S., Klatzky, R.L. & Lederman, S.J. Merfeld, D. (2008). *Sensation & Perception, 2<sup>nd</sup> Ed.* Sunderland, MA: Sinauer Associates, Inc.

Wolfe, J.E., Kluender, K.R., Levi, D.M., Bartoshuk, L.M., Herz, R.S., Klatzky, R.L. & Lederman, S.J. Merfeld, D. (2011). *Sensation & Perception, 3<sup>rd</sup> Ed.* Sunderland, MA: Sinauer Associates, Inc.

Zucco, G.M., Herz, R.S., & Schaal, B. (2012). *Olfactory Cognition: From Perception and Memory to Environmental Odours and Neuroscience*. Amsterdam, Holland: John Benjamins Publishing Company.

Wolfe, J.E., Kluender, K.R., Levi, D.M., Bartoshuk, L.M., Herz, R.S., Klatzky, R.L. & Lederman, S.J. Merfeld, D. M. (2014). *Sensation & Perception, 4<sup>th</sup> Ed.* Sunderland, MA: Sinauer Associates, Inc.

Wolfe, J.E., Kluender, K.R., Levi, D.M., Bartoshuk, L.M., Herz, R.S., Klatzky, R.L. & Lederman, S.J. Merfeld, D. M. (2018). *Sensation & Perception, 5<sup>th</sup> Ed.* Sunderland MA: Sinauer Associates; New York: Oxford University Press.

Wolfe, J.E., Kluender, K.R., Levi, D.M., Bartoshuk, L.M., Herz, R.S., Klatzky, R.L. & Lederman, S.J. Merfeld, D. M. (2020). *Sensation & Perception, 6<sup>th</sup> Ed.* New York: Oxford University Press.

## POPULAR SCIENCE BOOKS

Herz, R. (2007). *The Scent of Desire: Discovering Our Enigmatic Sense of Smell*. New York: William Morrow/HarperCollins Publishers.

Herz, R. (2012). *That's Disgusting: Unraveling the Mysteries of Repulsion*. New York: W.W. Norton and Company.

Herz, R. (2018). *Why You Eat What You Eat: The Science Behind Our Relationship With Food*. New York: W.W. Norton and Company.

## BLOGS

[Psychology Today](#)

[The Huffington Post](#)

[Twitter](#)

## PATENTS

Herz, R.S. (Published March 30, 2006; currently lapsed). *System for Increasing Compliance with Medication Regime*.

Herz, R.S. & McCann, K. (April, 2007; Currently lapsed). *System for Correlating Smells and Flavors to Descriptive Language*.

## EXHIBITIONS

2001-2006 Brain: The World Inside Your Head: *Sensory Memory*. Opening venue: The Smithsonian Institution, Washington, DC, from July 2001-January 2002.

1999 *Olfactory Memory*. The Exploratorium Museum, San Francisco, CA.

## INVITED LECTURES AND PRESENTATIONS

### *Academia and Education*

1. Department of Psychology, University of Toronto, March, 1992.
2. Department of Psychology, University of British Columbia, December, 1993.
3. The European Chemoreception Organization, Blois, France, July, 1994.
4. The Addiction Research Foundation, Toronto, April, 1995.
5. Department of Psychology, University of Pennsylvania, April, 1996.
6. Department of Psychology, University of Toronto, March, 1997.
7. International Symposium on Olfaction and Taste, San Diego, July, 2000.
8. Department of Psychology, University of Pittsburgh, November, 1997.
9. Department of Psychology, Lafayette College, March, 1998.
10. Department of Psychology, University of Pennsylvania, October, 1998.
11. APS/NIDA Symposium: Motives for behavior: From neurobiological to cognitive perspectives. Denver, CO, June 1999.
12. Department of Chemistry, University of Indiana, November, 1999.
13. Department of Psychology, Brown University, February 2000.
14. International Symposium on Olfaction and Taste, Brighton, England, July, 2000.

15. Department of Psychology, Connecticut College, October, 2000.
16. Brain Science and Behavior Mentoring Program, Department of Psychology, Brown University, August, 2001.
17. Swedish Government Sponsored Invited Guest Lectureship, University of Stockholm, University of Uppsala, Sweden, August 2001.
18. Food Update Annual Meeting: Olfactory Cognition: Effects on Mood, Behavior and Memory. Key Biscayne, FL, April 2002.
19. Chemical Senses: Molecules to Perception School and Conference: Odor-associative learning and memory. Trieste, Italy, May 2002.
20. APS Invited Symposium, *Chair*: Cognitive and Perceptual Issues in Olfaction and Flavor. New Orleans, LA. June, 2002.
21. Society of Flavor Chemists, Annual Meeting, *After Dinner Speaker*: Odor + Emotion = Effects on Perception, Cognition and Behavior. Newark, NJ, February 2004.
22. International Symposium on Olfaction and Taste: Kyoto, Japan, July 2004.
23. McMaster University: Psychology Department Colloquium, Hamilton, Ontario, February 3, 2005
24. Brandeis University, Psychology Department Colloquium, Waltham, MA, March 10, 2005
25. Society of Cosmetic Chemists, New Jersey Chapter Annual Meeting Invited Speaker, October 5, 2005.
26. University of Florida, Center for Smell and Taste Seminar, Gainesville, Florida, November 3, 2005.
27. Association for Chemoreception Sciences Annual Meeting: Industry Symposium, Sarasota, Florida, April 27, 2006.
28. Carolinas Psychology Conference, Keynote Speaker, Raleigh, North Carolina, March 31, 2007.
29. Stone Barns Center for Food and Agriculture: Westchester, NY, April 6, 2008.
30. Sputnik: Keynote speaker, New York City, May 29, 2008
31. NYC Arts in Education Roundtable: "What is Creativity?" Lincoln Center, New York City, June 10, 2008.
32. Sensory Marketing Conference: Keynote Speaker, University of Michigan, Ann Arbor, Michigan, June 20, 2008.
33. International Symposium on Olfaction and Taste: San Francisco, California, July 2008.
34. Brown University: Parents/Family Weekend Special Lecture, Providence, RI, October 25, 2008.
35. University of Montreal, Haute Etudes Comerciales: Scent Marketing Colloquium, October 30, 2008.
36. Culturgest: Lisbon, Portugal, November 13, 2008.
37. Fahrenheit 212, New York City: "Genius Lunch" Guest Speaker: March 12, 2009.
38. Columbia University, School of Architecture, "Preservation in Abstraction Roundtable": March 30, 2009.
39. Florida International University: Psychology Department Colloquium, April 16, 2009.
40. Brown University: Women & Men of Brown University Special Lecture, April 30, 2009.
41. Brown University: Staff Development Day Special Course, June 4, 2009.
42. Tales of the Cocktail Annual Meeting: New Orleans, LA, July 12, 2009
43. Scentsy: Salt Lake City, UT, August 13, 2009
44. Cornerstones of Science: Brunswick, ME, September 16, 2009.
45. Proctor & Gamble, Sensory Arts & Science Symposium: Cincinnati, OH, October 6, 2009

46. Research Institute for Fragrance Materials Annual Meeting: West Orange, NJ, February 9, 2010.
47. Parsons The New School for Design, Special Speaker, New York City, March 26, 2010.
48. Association for Chemoreception Sciences Annual Meeting: St. Petersburg, FL, April 24, 2010.
49. International Chewing Gum Association Annual Meeting: New York City, May 27, 2010.
50. Johnson & Wales University: College of Culinary Arts, Providence, RI, April 1, 2011.
51. Association for Chemoreception Sciences Annual Meeting and Eckerd College. The Emotional Power of Scent. St Petersburg, FL. April 16, 2011.
52. Society of Wine Educators Annual Meeting: Warwick, Rhode Island, August 3, 2011.
52. The explOratorium: After Dark "The Senses", San Francisco, CA, November 3, 2011.
53. CSPA Annual Meeting: Ft. Lauderdale, FL, December 7, 2011.
54. Scent World Expo: Miami, FL, December 8, 2011.
55. Science Café: Brown University Bookstore, April 5, 2012.
56. Boston College: Department of Psychology, May 11, 2012.
57. Association for Psychological Science Annual Meeting: Chicago, IL, May 26, 2012.
58. Colgate University: Department of Biology and Saperstein Jewish Center, September 11, 2012.
59. The New York Public Library: *That's Disgusting*, Public Lecture, October 25, 2012.
60. Art Beyond Sight: Keynote Speaker and Session Chair, Metropolitan Museum of Art, NYC October 26-27, 2012.
61. Boston Jewish Community Center: *That's Disgusting* JBC talk: November 14, 2012.
62. Wheaton College: Department of Religion, February 13, 2013.
63. Brown University: Department of Cognitive, Linguistic and Psychological Sciences, March 14, 2013.
64. Association for Chemoreception Sciences Annual Meeting: Huntington Beach, CA, April 20, 2013.
65. Worcester Jewish Community Center, *That's Disgusting* JBC talk: May 8, 2013.
66. World Candle Congress: Keynote speaker. Hollywood, FL, July 11, 2013.
67. North American Brain Injury Society: Legal Issues in Brain Injury, Invited speaker. New Orleans, LA, September 20, 2013.
68. Davidson College, North Carolina: *Special Lecture Series*, Keynote Speaker, February 11, 2014.
69. Brown University: Guest Lecturer, Department of Cognitive, Linguistic and Psychological Sciences, February 27, 2014.
70. *Psi Chi Distinguished Lecturer*: SWPA Annual Meeting, San Antonio, TX, April 4, 2014
71. Connecticut College: Department of Psychology Colloquium, April 7, 2014.
72. Laurelmead Cooperative, Providence, RI: Invited Lecture, May 27, 2014.
73. Brown University: Guest Lecturer, Department of Cognitive, Linguistic and Psychological Sciences, October 9, 2014.
74. Wheaton College: Department of Religion, February 19, 2015.
75. Washington & Lee University, Lexington VA. Keynote Speaker, Undergraduate Conference in Science, Society and the Arts. March 13, 2015.
76. Association for Chemoreception Sciences Annual Meeting: Bonita Springs, FL. April 23, 2015.
77. Brown University: Guest Lecturer, Department of Cognitive, Linguistic and Psychological Sciences, October 15, 2015.

78. Brown University: Guest Lecturer, Department of Cognitive, Linguistic and Psychological Sciences, October 27, 2016.
79. University of Wisconsin-Madison: Department of Psychology, April 12, 2017
80. Association for Chemoreception Sciences, Annual Meeting: Bonita Springs, FL. April 29, 2017.
81. Association for Psychological Science, Annual Meeting: Boston, MA. May 17, 2017.
82. 4<sup>th</sup> Flavors, Fragrances and Perception Symposium, Rutgers University: New Brunswick, NJ. June 8, 2017.
83. Chairperson, Pangborn 2017, Sensory Science Symposium: Providence RI. August 21, 2017.
84. Brown University: Guest Lecturer, Department of Cognitive, Linguistic and Psychological Sciences, October 17, 2017.
85. Invited Speaker, AVANT Institute Symposium “Flavors and Fragrances – Chemical Awakening of the Senses and Emotions”, Bridgewater, NJ. December 13, 2017.
86. Invited Speaker, International Symposium of Neurogastronomy, Lexington, KY. March 3, 2018.
87. Invited Speaker, Food Studies at Brown University Speaker Series, March 22, 2018
88. Invited Speaker, Wheaton College: Department of Religion, April 11, 2018.
89. Invited Speaker, “Literary Feast”, Broward County Public Library, May 4-5, 2018
90. Invited Speaker, HCPA Air Care Summit, National Harbor, MD, May 18, 2018
91. Guest Lecturer, Brown University, Department of Cognitive, Linguistic and Psychological Sciences, October 29, 31, 2018
92. Keynote Address, Johnson & Wales University, Rhode Island, November 1, 2018
93. Invited Speaker, 40<sup>th</sup> Annual Jewish Book Festival, St Louis, MO, November 8, 2018
94. Keynote Speaker, 5<sup>th</sup> Annual Albright Symposium, “Our (super) Human Brains”. Museum of Science, Boston, MA, November 14, 2018
95. University of North Carolina, Chapel Hill. Your Health Radio. November, 2018.
96. Invited Speaker, [TEDx Natick](#), MA January 26, 2019
97. Invited Speaker, Department of Philosophy, Harvard University, March 13, 2019
98. Invited Speaker, Radcliffe Institute for Advanced Study, Harvard University, March 15, 2019
99. Invited Speaker, Alltech ONE19, Lexington, KY May 21, 2019
100. Keynote Speaker, Women In Olfactory Science, Wageningen, NL May 24, 2019
101. Invited Speaker, TEDx Salon, Natick MA, May 30, 2019.
102. Invited Speaker, Sharon Adult Center, Sharon MA, June 6, 2019
103. Invited Speaker, Wellness Program, Brown University , June 12, 2019
104. Invited Speaker, Orchard Cove, Hebrew Senior Life, Canton MA, June, 13, 2019
105. Invited Speaker, International Symposium of Neurogastronomy, New Orleans, LA, June 20, 2019
106. Keynote Address, Florida State University, 7<sup>th</sup> Annual Postdoctoral Symposium, September 18, 2019
107. Invited Speaker, Young President’s Organization, Miami, FL, September 19, 2019
108. Invited Speaker, 2<sup>nd</sup> Annual Cultural Potluck, Brown University, November 4, 2019
109. Invited Speaker, Gastronomy Program, Boston University, November 25, 2019
110. Invited Speaker, Health and Wellness Program, Brown University, January 16, 2020
111. Featured Author, Association of Rhode Island Authors, “Lively Literati”, East Greenwich, RI, January 29, 2020

112. Invited Speaker, Culinary Historians of Boston, Boston, MA, February 3, 2020
113. Invited Speaker, Wheaton College: Department of Religion, March 4, 2020
114. Invited Expert Panelist, "Scents of Direction", virtual event for FGI, June 30, 2020
115. Invited Expert Panelist, "The Chronobiology of Covid-19", CARE conference, European Biological Rhythms Society, July 9, 2020.
116. Keynote Speaker, virtual conference Botanica 2020 September 18, 2020
117. Invited Speaker, virtual conference HCPA, September 24, 2020.
118. Invited Speaker, Neilson Lecture, Smith College, October 8, 2020
119. Invited Speaker, Fifth Sense UK, #LetsTalkSmellandTaste "The Psychology of Smell", January 25, 2021
120. Invited Speaker, SXSW 2021 "What is Taste?", March 19, 2021
121. Invited Speaker, WGBH Boston Talks: The Science of Food, March 25, 2021
122. Keynote Speaker, Cultural Life Series, Johnson & Wales University, April 8, 2021
123. Invited speaker, HCPA Mid-Year Annual Meeting, May 26, 2021
124. Keynote Speaker, IBEX Investors event, Amangiri, Utah, June 3, 2021
125. Invited Speaker, "Sensory Insights", Smell and Taste Association of North America, Instagram Live, August 11, 2021
126. Invited Speaker, GBH "Ask the Expert", The Science of Smell, September 24, 2021
127. Invited Speaker, Fifth Sense UK, #LetsTalkSmellandTaste "The Psychological and Quality of Life Impact of Smell Loss", October 27, 2021
128. Invited Speaker, Sanofi Canada, "The Importance of Smell", January 27, 2022.
129. Conference Presentation, Association for Chemoreception Sciences, April 22, 2022
130. Invited Speaker, Alltech ONE22 and ISN, May 24, 2022.
131. Invited Speaker, World Perfumery Congress, June 30, 2022

### ***Printed Press Interviews: Partial Listing***

Multiple interviews for: The New York Times, Time Magazine, US News & World Report, The Economist, New Scientist, U.S.A Today, The Washington Post, The LA Times, The London Times, The American Psychology Association Monitor, The Financial Times (London), The Scientist, BBC Focus, "O" The Oprah Magazine, The New Yorker, Psychology Today, HuffPost, Thrillist, Eater.com, The Atlantic

### ***Television and Radio Interviews: Partial Listing***

Numerous interviews, including for: CBC, "The Science of the Senses", @Discovery.ca (The Discovery Channel, Canada), The Discovery Channel USA, ABC Discovery News, ABC News, The BBC, National Geographic, NBC Nightly news, Korean Public Broadcasting, ABC "The Chronicle", FOX News, CBS "The Early Show", CBS "Sunday Morning", NPR, PRI, Radio-Television Suisse, Radio Canada.

## **FUNDING**

### ***Research Grants Received: Principal Investigator***

- |           |  |
|-----------|--|
| 1995-1996 | Olfactory Research Fund: "The emotional distinctiveness of odor-evoked memories." (\$35,000) |
| 1996-1997 | Olfactory Research Fund: "The emotional quality and accuracy of memories                     |

- associated to olfactory versus musical stimuli." (\$35,000)
- 1996-1997 NIH/NIDA, B/START: "Caffeine state-dependent memory: Relation to dose & mood." (\$60,000)
- 1998-2001 H & R Florasynth: "Mechanisms involved in the perception of odor pleasantness." (\$95,000)
- 2001-2002 Oakland Innovation: "Olfactory emotional conditioning: Effects on perception and cognition." (\$35,000)
- 2001-2002 Brown University Faculty Development Fund (\$1,500)
- 2001-2002 Brown University Magnetic Resonance Foundation/Itlleson Foundation: "An examination of the neural areas involved in emotional versus non-emotional olfactory and visual memory." (\$10,000)
- 2003 Sense of Smell Institute: "Women's psychology of fragrance through the life stages." (\$15,000)
- 2003-2004 International Flavors and Fragrances: "Emotion and Olfactory Perception." (\$15,000)
- 2012 Brown University Office of International Affairs, Travel Grant to advise/participate in "Smellscapes in Istanbul" workshop (\$750)

***Research Grants: Co-Investigator or Consultant***

- 1997-1998 Olfactory Research Fund: Co-Investigator with Gisela Epple, Ph.D. "The influence of odor-evoked memories on child behavior."
- 1997-1998 NIH/NIA "Emotional arousal, olfactory memory and the amygdala: Implications for understanding Alzheimer's disease." Co-Investigator with PI Larry Cahill, Ph.D. Center Grant for CNLM, University of California, Irvine.
- 2014-2018 NIH/NIDDK "Food Choices in Overweight & Normal Weight Adolescents—Sleep & Circadian Rhythms". Role= Consultant. PI Mary Carskadon, Ph.D., Department of Psychiatry and Human Behavior, Brown University Alpert Medical School. Providence RI. 1 R01 DK101046-01
- 2014-2018 NIH/NCI "An Olfactory Method for Controlling Cigarette Craving." Role = Consultant. PI Michael Sayette, Ph.D., Department of Psychology and Psychiatry, University of Pittsburgh, Pittsburgh, PA. 1 R01 CA184779-01
- 2019 Circadian Positioning Systems and E.P. Bradley Hospital, Rhode Island. Role = Expert consultant on olfaction.
- 2020-2025 NIH/NICCIH "Cognitive and Affective Mechanisms Underlying an Olfactory

Approach to Modify Cigarette Craving: A Neurobehavioral Investigation". Role = Consultant. PI Michael Sayette, Ph.D., Department of Psychology and Psychiatry, University of Pittsburgh, Pittsburgh, PA. R01 AT010896

## MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Psychonomic Society, Association for Chemoreception Sciences, Association for Psychological Science, Sigma Xi, The Weyland Collegium, International Academy of Digital Arts and Sciences, ARIA, The Authors Guild

## PROFESSIONAL SERVICE

**Ad hoc reviewer:** The American Journal of Psychology; Biological Psychology; Chemical Senses; Chemosensory Perception; Developmental Psychobiology; Evolution and Human Behavior; Journal of Experimental Psychology; Journal of Sleep Research; Memory & Cognition; Motivation and Emotion, Memory; Neuropsychologia; Physiology and Behavior; Perception; Sleep; Behavioral Brain Research; Cognition & Emotion; Cognition, WIRE's Cognitive Science; Food Quality and Preference; Cognitive, Affective & Behavioral Neuroscience; Attention, Perception & Psychophysics; Appetite; Psychological Science; PLOSOne; Psychoneuroendocrinology; Neuroscience Letters; Cognitive Research: Principles and Implications; Perspectives on Psychological Science; Scientific Reports;

**Editorial Board:** *Chemosensory Perception*; Special Issue Editor, *Food Quality & Preference*; Guest Editor Special Issue: "Advances in Human Olfactory Perception" (2020-2021); *Brain Sciences*;

**Chief Advisor:** Sensory Memory exhibit at The Smithsonian Museum (2001-2002) and Olfactory Memory exhibit at the Exploratorium Museum in San Francisco (1999).

**Administrative:** Association for Chemoreception Sciences: Long Range Planning Committee (2004-2007); Awards Committee (2006-2007); Industry Liaison Committee (2006-2015); Website Committee (2013-2018); Bylaws Committee (2013- 2016); Social Media Committee (2017-2018); Social Committee (2016-2017); Executive Committee, Councilor (2013-2015); Executive Committee, Secretary (2016-2018); Long-Range Planning Committee (2019-)

Pangborn 2017: Scientific Committee; Organizing Committee

**Advisory Boards:** The Fragrance Foundation, FifthSense, OVR Technology

## TEACHING AND MENTOR EXPERIENCE

### COURSES TAUGHT

#### *Brown University*

2000-2003	Elementary Psychology & Laboratory PY01 Child Development PY81
2006-2008	Olfaction and Human Behavior PY019
2010-2011	The Psychology of Aversion PY1520, CLPS1550
2013-present	Sleep and Chronobiology Research, CLPS 1194 (faculty)



2014-present Perception and Mind, CLPS 0500, ad hoc lecturer  
2022- The Sensory and Psychological Science of Food and Eating Behavior, CLPS 1555

***Boston College***

2013-2014 Research Practicum: The Psychology of Pleasure and Aversion PSYC4479  
2016-present Research Practicum: Neurogastronomy: Sensory Processes and the Psychology of Food PSYC4479

***University of Pennsylvania***

1995-1999 Undergraduate Lab Seminar in Social Psychology, Co-led with Professor Paul Rozin

***University of British Columbia***

1993 Cognition and Perception

***University of Toronto***

1991 Developmental Psychology Laboratory

**MENTORING**

***Brown University***

2000-2004 Ph.D. Candidates: Beth Kellerman, Theresa Lagman, Tracy Rupp  
2001-2002 Honors Students: Margaret Hellerstein, Corrente Schankler  
2000-2002 Research Assistants: Molly Morgan-Bove, Sophia Beland  
2010-2011 Undergraduate Research Projects: Alden Hinds, Joseph Ellis  
2012 Research Assistant: William Palmer  
2015 Sleep and Chronobiology Dement Fellow: Karen Konkoly

***Boston College***

2014-2017 Mahsa Ershadi, PhD candidate, Boston College  
2015-2017 Kelly Sangster, Honors student, Boston College  
2017 Alexandra Allam, Honors student, Boston College

***Other Universities***

2016-2019 Lea Maria Sullivan Martin, PhD Candidate, University of Pittsburgh

***Monell Chemical Senses Center***

1995-1999 Mentor for minority high school and college students as research assistants in my laboratory. Mentor and supervisor for senior research assistants in my laboratory.

**ACADEMIC SERVICE**

***Brown University***

2002-2004 Sophomore Advisor  
2001-2002 Psychology Department Colloquium Committee Chair  
2012-2013 The Triple Helix Editorial Board

***Monell Chemical Senses Center***

1995 In-House Seminar Series Organizer

- 1996-1997 Sponsors Meeting Organizer
- 1998-1999 Personnel Committee
- 1995-1999 *Monell Center Psychology Journal Club*, led a bi-monthly psychology journal discussion group for faculty, post-docs, and students.
- 1999 IRB Committee and University of Pennsylvania Monell IRB representative

## **PUBLIC RECOGNITION**

- Scientist of the Month Profile, *Scientific American*, November, 1999.
- *Newsmakers: The People Behind Today's Headlines 2008, Issue 1*. L. Avery (Ed). Pp. 28-29. New York: Thomson Gale.
- Finalist for the American Academy for the Advancement of Science Prize for Excellence in Science Books
- Celebrity Judge: National Rotten Sneakers Contest. Montpelier Vermont, March, 18, 2008-present.
- Wikipedia: [http://en.wikipedia.org/wiki/Rachel\\_Sarah\\_Herz](http://en.wikipedia.org/wiki/Rachel_Sarah_Herz)
- [The New York Times Acrostic Puzzle](#). Complete solution. November 30, 2014.
- [TEDx](#) speaker

## **Documentary Films**

- [The Empire of Scents \(Le Nez\)](#) (2014; Kim Nguyen, Director)
- [Mystify: Michael Hutchence](#) (2019; Richard Lowenstein, Director)
- [Eat Me or \(Try Not to\)](#) (2022; Michael Lam, Director)

## **CONSULTING**

### ***Educational and Medical/Research Organizations***

The Smithsonian Institutes, The Exploratorium Museum, The Franklin Institute, New Jersey Medical School, The Fragrance Foundation, The Sense of Smell Institute, The Institute of Food Technologists, Research Institute for Fragrance Materials.

### ***Corporate***

Unilever, Givaudan, International Flavors and Fragrances, Firmenich, Haarmann & Reimer, AromaSys, McCormick Inc, Proctor & Gamble, Cadbury-Kraft, The Coca-Cola Company, The Kellogg Company, PepsiCo, Kao Corporation USA and Japan, Coty, Inc., Pfizer, Inc., Southern Wine & Spirits, Nikon, Dial/Henkel, SCA Sweden, SC Johnson, Elizabeth Arden, Sterling-Rice Group Culinary Council, Droga5, Noosa Yogurt, Johnsonville, LLC, OVR Technology, Motif FoodWorks, L'Oreal

### ***Expert Witness***

21 cases involving the psychological science of odor (and flavor) perception, and loss of the sense of smell. Plaintiff and Defense.