# RACHEL SEVERSON

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The Minds Lab: <a href="http://hs.umt.edu/psychology/severson/">http://hs.umt.edu/psychology/severson/</a>
Faculty Profile: <a href="http://www.umt.edu/people/Severson4587">http://www.umt.edu/psychology/severson/587</a>

#### AREAS OF EXPERTISE

Cognitive Developmental Science; Social Cognitive Development; Anthropomorphism; Social Perspective Taking; Pretense & Imagination; Selective Social Learning; Social-Moral Judgments and Reasoning; Environmental Moral Reasoning.

### **POSITIONS**

Associate Professor (tenured), 2020-current Department of Psychology, University of Montana Missoula, MT, USA

Assistant Professor, 2016-2020 Department of Psychology, University of Montana Missoula, MT, USA

Postdoctoral Research Fellow, 2013-2016 Knowledge, Imagination, and Development (K.I.D.) Studies Centre Dr. Susan A. J. Birch, Director Department of Psychology, University of British Columbia Vancouver, BC, Canada

Instructor (Visiting Assistant Professor), 2011-2013
Department of Psychology, Western Washington University
Bellingham, WA, USA

Fulbright Fellow, 2010-2011
U.S.-Norway Fulbright Commission, U.S. Department of State
Centre for the Study of Mind in Nature (Norwegian Centre of Excellence), University of Oslo Oslo, Norway

#### **EDUCATION**

- Ph.D. University of Washington, Developmental Psychology, 2010 Committee: Peter Kahn, Jr. (Chair), Stephanie Carlson, Betty Repacholi, & Gene Myers
- M.A. Antioch University Seattle, Integrative Studies in Psychology, 2004
- B.S. Western Washington University, Environmental Policy & Assessment, 1997

Updated: January 2021

## OTHER PROFESSIONAL EXPERIENCE

Director, UM Living Lab, 2019-present

Located in the Missoula Public Library (funded by Science Education Partnership Award (SEPA) through NIH)

Science Advisor, New York Hall of Science, 2009-2012

Wild Minds: What Animals Really Think (NSF-funded traveling exhibit on animal cognition)

Advisor/Consultant, Oakland Museum of California, 2010 Natural Sciences Exhibit

# PUBLICATIONS (students underlined)

### **Journal Articles**

- Danovitch, J. H., & **Severson, R. L.** (2021). Children's understanding of emerging technologies: Introduction to the special issue. *Human Behavior and Emerging Technologies*, 3(4), http://dx.doi.org/10.1002/hbe2.285
- Birch, S. A. J., **Severson, R. L.**, & Baimel, A. (2020). Children's understanding of when a person's confidence and hesitancy is a cue to their credibility. *PLOS ONE*, *15* (1), e02227026. https://doi.org/10.1371/journal.pone.0227026
- **Severson, R. L.,** & Woodard, S. R. (2018). Imagining others' minds: The positive relation between children's role play and anthropomorphism. *Frontiers in Psychology*, *9*, 2140. doi: 10.3389/fpsyg.2018.02140
- **Severson, R. L.**, & Lemm, K. M. (2016). Kids see human too: Adapting an individual differences measure of anthropomorphism for a child sample. *Journal of Cognition and Development*, 17, 122-141. doi: 10.1080/15248372.2014.989445
- Baimel, A., **Severson, R. L.**, Baron, A. S., & Birch, S. A. J. (2015). Enhancing 'theory of mind' through synchrony. *Frontiers in Psychology, 6,* 870. doi: 10.3389/fpsyg.2015.00870
- Kahn, P. H., Jr., Kanda, T., Ishiguro, H., Freier, N. G., **Severson, R. L.**, Gill, B. T., Ruckert, J. H., & Shen, S. (2012). "Robovie, you'll have to go into the closet now": Children's social and moral relationships with a humanoid robot. *Developmental Psychology, 48*, 303-314. doi: 10.1037/a0027033
- Kahn, P. H., Jr., Kanda, T., Ishiguro, H., Gill, B. T., Ruckert, J. H., Shen, S., Gary, H., Reichert, A. L., Freier, N. G., & Severson, R. L. (2012). Do people hold a humanoid robot morally accountable for the harm it causes? Proceedings of the 7<sup>th</sup> ACM/IEEE International Conference on Human-Robot Interaction (HRI 2012, Boston, MA, March 5-8, 2012) (pp. 22-30). Piscataway, NJ: Institute of Electrical and Electronics Engineers (IEEE). doi: 10.1145/2157689.2157696 (Best Paper Award; 25% acceptance rate)
- **Severson, R. L.**, & Carlson, S. M. (2010). Behaving as or behaving as if? Children's conceptions of personified robots and the emergence of a new ontological category. *Neural Networks, Special Issue on Social Cognition: From Babies to Robots, 23*, 1099-1103. doi: 10.1016/j.neunet.2010.08.014

- **Severson, R. L.**, & Kahn, P. H., Jr. (2010). In the orchard: Farm worker children's moral and environmental reasoning. *Journal of Applied Developmental Psychology*, *31*, 249-256. Doi: 10.1016/j.appdev.2010.02.003
- Kahn, P. H., Jr., Ruckert, J. H., **Severson, R. L.**, Reichert, A. L., & Fowler, E. (2010). A nature language: An agenda to catalog, save, and recover patterns of human-nature interaction. *Ecopsychology*, *2*, 59-66.
- Kahn, P. H., Jr., **Severson, R. L.**, & Ruckert, J. H. (2009). The human relationship with nature and technological nature. *Current Directions in Psychological Science*, *18*, 37-42. Doi: 10.1111/j.1467-8721.2009.01602.x
- Kahn, P. H., Jr., Freier, N. G., Kanda, T., Ishiguro, H., Ruckert, J. H., **Severson, R. L.**, & Kane, S. K. (2008). *Design patterns for sociality in human-robot interaction*. Proceedings of the 3<sup>rd</sup> ACM/IEEE International Conference on Human-Robot Interaction (HRI 2008, Amsterdam, The Netherlands, March 12-15, 2008) (pp. 97-104). Piscataway, NJ: IEEE. doi: 10.1145/1349822.1349836 (18% acceptance rate)
- Kahn, P. H., Jr., Friedman, B., Gill, B. T., Hagman, J., **Severson, R. L.**, Freier, N. G., Feldman, E. N., Carrère, S., & Stolyar, A. (2008). A plasma display window? The shifting baseline problem in a technologically-mediated natural world. *Journal of Environmental Psychology*, 28, 192-199. Doi: 10.1016/j.jenvp.2007.10.008
- Kahn, P. H. Jr., Saunders, C. D., **Severson, R. L.**, Myers, O. E., Jr., & Gill, B. T. (2008). Moral and fearful affiliations with the animal world: Children's conceptions of bats. *Anthrozoös*, *21*, 375-386. Doi: 10.2752/175303708X371591
- Stanton, C. M., Kahn, P. H., Jr., **Severson, R. L.**, Ruckert, J. H., & Gill, B. T. (2008). *Robotic animals might aid in the social development of children with autism*. Proceedings of the 3<sup>rd</sup> ACM/IEEE International Conference on Human-Robot Interaction (HRI 2008, Amsterdam, The Netherlands, March 12-15, 2008) (pp. 271-278). Piscataway, NJ: IEEE. doi: 10.1145/1349822.1349858 (36% acceptance rate)
- Kahn, P. H., Jr., Ishiguro, H., Friedman, B., Kanda, T., Freier, N. G., **Severson, R. L.**, & Miller, J. (2007). What is a human? Toward psychological benchmarks in the field of human-robot interaction. *Interaction Studies: Social Behavior and Communication in Biological and Artificial Systems*, *8*, 363-390. Doi: 10.1075/is.8.3.
- Friedman, B., Kahn, P. H., Jr., Hagman, J., **Severson, R. L.**, & Gill, B. (2006). The watcher and the watched: Social judgments about privacy in a public place. *Human-Computer Interaction*, *21*, 235-272. Doi: 10.1207/s15327051hci2102\_3
- Kahn, P. H., Jr., Freier, N. G., Friedman, B., Severson, R. L., & Feldman, E. (2004). Social and moral relationships with robotic others? Proceedings of the 13th International Workshop on Robot and Human Interactive Communication (ROMAN 2004, Kurashiki, Okayama, Japan, September 20-22, 2004) (pp. 545-550). Piscataway, NJ: IEEE. doi: 10.1109/ROMAN.2004.1374819

## **Chapters in Edited Volumes**

**Severson, R. L.,** <u>Bean, P., & Caughie, C.</u> (in press). Farm worker children's judgments about pesticides and concern for the natural environment. In Corona, Y., V. Derr, V. Medina,

- A. Montoya, & L. Ortiz (Eds.). *Buscando el Terruño: Los Niños, Los Jóvenes y El Cuidado de la Tierra*. La Prensa de UAM, México.
- Severson, R. L., Bean, P., & Caughie, C. (2020). The emergence of concern for the natural environment: Farm worker children, pesticides, and direct experience with nature. In V. Derr & Y. Corona (Eds.), Latin American Transnational Children and Youth: Experiences of Nature and Place, Culture, and Cares Across the Americas (pp. 186-198). Routledge.
- Kahn, P. H., Jr., **Severson, R. L.**, & Ruckert, J. H. (2009). Experiencing technological nature and the problem when good enough becomes good. In M. Drenthen, J. Keulartz, & J. Proctor (Eds.), *New Visions of Nature* (pp. 145-176). Dordrecht, The Netherlands: Springer.
- Friedman, B., Kahn, P. H., Jr., Hagman, J., **Severson, R. L.**, & Gill, B. (2009). The watcher and the watched: Social judgments about privacy in a public place. Reprinted in R. Harper (Series Ed.), S. Harrison (Vol. Ed.), *Media Space 20 + Years of Mediated Life*. London: Springer.
- Kahn, P. H., Jr., & **Severson, R. L.** (2008). Environmental education. In F. C. Power, R. J. Nuzzi, D. Narvaez, D. K. Lapsley, & T. C. Hunt (Eds.), *Moral education: A handbook* (Vol. 1, pp. 166-167). Westport, CT: Praeger.

#### **Invited Reviews and Commentaries**

- **Severson, R. L.** (2015). Good science? We should all be asking [Review of the book *Who's asking? Native science, Western science, and science education,* by D. L. Medin & M. Bang]. *Journal of Applied Developmental Psychology, 38,* 70-71. doi:10.1016/j.appdev.2014.11.003
- **Severson, R. L.** (2015). Film review: "School's Out: Lessons from a Forest Kindergarten." *Journal of Educational Controversy, 9.* Open access: <a href="http://www.wce.wwu.edu/Resources/CEP/eJournal/v009n001/">http://www.wce.wwu.edu/Resources/CEP/eJournal/v009n001/</a>
- **Severson, R. L.** (2014). The value of (research on) animals in children's lives: Commentary on Mueller. *Human Development*, *57*, 26-29. doi:10.1159/000357792

## **Technical Reports**

- Severson, R. L., Bean, P., Caughie, C., & Kodner, R. (2020). The role of citizen science in science perception, meaning, and environmental values: An evaluation of the Living Snow Project (Technical Report). Missoula, MT: University of Montana, ScholarWorks. https://scholarworks.umt.edu/psych\_pubs/17/
- Kahn, P. H. Jr., Kanda, T., Ishiguro, H., Ruckert, J. H., **Severson, R. L.**, Freier, N. G., Gill, B. G., Kane, S. K., Klasnja, P., & Reichert, A. L., (2010). *Coding manual for the "Robovie, you need to go into the closet now!" study.* Seattle, WA: University of Washington, UW ResearchWorks Archive. Available online at: http://hdl.handle.net/1773/15887
- Friedman, B., Kahn, P. H., Jr., Hagman, J., & **Severson, R. L.** (2005). *Coding manual for 'The Watcher and The Watched: Social Judgments about Privacy in a Public Place'* (Tech. Rep. No. IS-TR-2005-07-01). Seattle, WA: University of Washington, The Information School. Available online at: <a href="http://hdl.handle.net/1773/2074">http://hdl.handle.net/1773/2074</a>

- Kahn, P. H., Jr., Friedman, B., **Severson, R. L.**, & Feldman, E. N. (2005). *Creativity tasks and coding system Used in the plasma display window study* (Tech. Rep. No. IS-TR-2005-04-01). Seattle, WA: University of Washington, The Information School. Available online at: <a href="http://hdl.handle.net/1773/2050">http://hdl.handle.net/1773/2050</a>
- Kahn, P. H., Jr., Friedman, B., Freier, N. G., & **Severson, R.** (2003). *Coding manual for children's interactions with AIBO, the robotic dog The preschool study* (Tech. Rep. No. UW CSE 03-04-03). Seattle, WA: University of Washington, Department of Computer Science and Engineering. Available online at: <a href="ftp://ftp.cs.washington.edu/tr/2003/04/UW-CSE-03-04-03.pdf">ftp://ftp.cs.washington.edu/tr/2003/04/UW-CSE-03-04-03.pdf</a>

# PRESENTATIONS (students underlined)

## **Invited Talks**

- Lee, S., Zuroff, H., Herbert-Meny, J., Carlton, P., & Severson, R. L. (2022, Aug). *Create, collaborate, and grow under one roof.* Library Tri-Conference, Missoula, MT.
- **Severson, R. L.** (2022, May). *Children's understanding of robots and voice-based assistants*. Panel on Here, there, and everywhere: Emerging technologies and the future of children. Children and Screens' "Ask the Experts" webinar series.
- **Severson, R. L.** (2022, May). *Women scientists*. Annual speaker for the As You Like It Club, Missoula, MT.
- Severson, R. L., Bray, H., & Truitt, H. (2021, August). *How to celebrate our wins: Under one roof.* Public Service Academy, University of Montana Max S. Baucus Institute's Department of Public Administration & Policy.
- Cochran, B., Fiore, C., & **Severson, R. L.** (2020, May). Panel on *What does psychology have to offer to help us during a pandemic?* Alumni Virtual Engagement, University of Montana Alumni Association.
- **Severson, R. L.** (2019, October). Panel on *Emotionally Intelligent Robots: More Human than Human?* (with Jonathan Gratch and Sidney D'Mello). USC Visions and Voices, University of Southern California, Los Angeles, CA.
- **Severson, R. L.** (2019, April). "Alexa, are you spying on me?" Identity, privacy, and technology panel (with Greg Larson, moderated by Jeremy Smith). University of Montana College of Humanities & Sciences Dialogue, Missoula, MT.
- **Severson, R. L.** (2019, February). Screen Time and Green Time: Effects of Increased Technology on Children's Development. Bringing the U to You Lecture Series, UM and MSU Alumni Associations, Great Falls, MT.
- Severson, R. L. (2018, October). Panel on *Emerging Technologies: Children's Engagement with Intelligent and Interactive Media* (with Patricia Greenfield, Mark Mon Williams, and moderated by Jakki Bailey). Digital Media and Developing Minds: Second National Congress. Cold Springs Harbor Laboratory (Cold Springs Harbor, NY).
- **Severson, R. L.** (2016, May). Discerning minds: Children's developing skepticism of an unjustifiably confident model. Centre for the Study of Mind in Nature, University of Oslo (Oslo, Norway).

- **Severson, R. L.** (2016, April). *Discerning minds: Children's developing skepticism of an unjustifiably confident model.* Department of Psychology Colloquium, University of Montana (Missoula, MT).
- **Severson, R. L.** (2014, February). *Seeing human: Children's anthropomorphic conceptions of robots.* Department of Psychology, Developmental Area Colloquium, University of British Columbia (Vancouver, BC, Canada).
- **Severson, R. L.** (2013, May). *Growing up green: What does time in nature do for your child?* Department of Psychology Family Academy Lecture Series. Western Washington University (Bellingham, WA).
- **Severson, R. L.** (2012, August). *Children's conceptions of robots as life-like: Are they just pretending?* Conference on Perceiving and Conceiving Natural and Non-natural Agents: From People to Computers to Gods. Vanderbilt University (Nashville, TN).
- **Severson, R. L.** (2011, March). *Thinking "as" or thinking "as if": The role of pretense in children's and young adults' attributions to a robot dinosaur.* Paper presented at the HRI Pioneers Workshop at the 6<sup>th</sup> ACM/IEEE International Conference on Human Robot Interaction (HRI 2011), Lausanne, Switzerland.
- **Severson, R. L.** (2011, April). *The intrinsic value of animals and robots: On the development of moral conceptions of non-human others.* Social Choice Research Group, Department of Economics, Norwegian School of Economics and Business Administration (Bergen, Norway).
- Severson, R. L. (2010, December). Comment on A. Wax and M. Farah, *The Neuroscience of Deprivation: Implications for Law and Policy (with an initial focus on sentencing)*. Center for the Study of Mind in Nature Conference on Law and the Science of Moral Judgment, University of Oslo (Oslo, Norway).
- **Severson, R. L.** (2010, November). *Thinking as or thinking as if: The role of pretense in children's attributions to robots.* Center for the Study of Mind in Nature Language and Rationality Seminar, University of Oslo (Oslo, Norway).
- **Severson, R. L.** (2010, September). *The intrinsic value of animals and robots: On the development of moral conceptions of non-human others.* Centre for the Study of Mind in Nature Colloquium, University of Oslo (Oslo, Norway).
- **Severson, R. L.** (2008, September). Robotic Others: The Emergence of a New Technological Genre? Seattle Robotics Society (Seattle, WA).
- Kahn, P. H., Jr., & **Severson, R. L.** (2008, March). *Designing for the human relation with nature and technological nature*. The Portico Group: Architects, Landscape Architects, Interpretive Planners, & Exhibit Designers (Seattle, WA).

### **Conference Presentations**

Smith, K., & Severson, R. L. (2022, April). Learning to see human: universal aspects and cultural variations in the development of anthropomorphism. Paper presented at the University of Montana Conference on Undergraduate Research (UMCUR), Missoula, MT.

- Cordingley, K. J., & Severson, R. L. (2022, February). *Emerging adults and identity development in the time of COVID-19*. Paper presented at University of Montana Graduate Student Research Conference (GradCon), Missoula, MT.
- Woodard, S. R., Sweezy, S. E., & Severson, R. L. (2021, April). *Are robots morally culpable? The role of intentionality and anthropomorphism.* Paper presented at the biennial meeting of Society for Research in Child Development (online).
- Sweezy, S. E., Woodard, S. R., & Severson, R. L. (2021, February). *Are robots morally culpable? The role of intentionality and anthropomorphism.* Paper presented at University of Montana Graduate Student Research Conference (GradCon), Missoula, MT.
- <u>Taylor, K.,</u> & **Severson, R. L.** (2020, April). *Inaccuracy mentalizing humans predicts greater mentalizing of nature and technology.* Paper presented at the University of Montana Conference on Undergraduate Research (UMCUR), Missoula, MT.
- <u>Denny, M. E.</u>, & **Severson, R. L.** (2020, April). *The right job for me: The motivation, support network, and emotional fortitude of crisis workers.* Paper presented at the University of Montana Conference on Undergraduate Research (UMCUR), Missoula, MT.
- Bean, P., Caughie, C., & Severson, R. L. (2020, Feb). *Making a case for nature*. Paper presented at University of Montana Graduate Student Research Conference (GradCon), Missoula, MT.
- **Severson, R. L.**, Woodard, S. R., & Birch, S. A. J. (2019, October). *Mentalizing beyond humans: Theory of mind accuracy is unrelated to anthropomorphism.* Poster presented at the biennial meeting of the Cognitive Development Society, Louisville, KY.
- Woodard, S. R., Severson, R. L., & Birch, S. A. J. (2019, October). Do children always trust confident individuals? Not when it comes to moral deliberations. Poster presented at the biennial meeting of the Cognitive Development Society, Louisville, KY.
- Beall, A., Ryan, C., Barker, R., & Severson, R. L. (2019, April). Do young children treat a robot as having intentions and being culpable for its actions? Poster presented at the University of Montana Conference on Undergraduate Research, Missoula, MT.
- Taylor, K. B., Ryan, C., Beall, A., Woodard, S. R., & Severson, R. L. (2019, April). Context Matters in Children's Reasoning about Confident and Hesitant Individuals. Paper presented at the University of Montana Conference on Undergraduate Research, Missoula, MT.
- **Severson, R. L.**, Li, H., Birch, S. A. J., & Lillard, A. (March, 2019). *The Role of Culture in Anthropomorphic Beliefs Among White-Canadian, Asian-Canadian, and Chinese Children and Adults.* Paper presented at the biennial meeting of Society for Research in Child Development, Baltimore, MD.
- Lau, P., Woodard, S. R., Severson, R. L., & Birch, S. A. J. (2018, June). *Children's context-dependent interpretations of confidence cues*. Paper presented at the Development 2018 Conference, St. Catharines, ON, Canada.

- Barker, R., Lindner, B., & Severson, R. L. (2018, April 27). Children's Understanding of Robots: A New Ontological Category or Just Pretend? Poster presented at the University of Montana Conference on Undergraduate Research, Missoula, MT.
- Cooke, S., & Severson, R. L. (2018, April 27). Are robots animate or inanimate? Children's pronoun use provides insight into categorization challenge. Poster presented at the University of Montana Conference on Undergraduate Research, Missoula, MT.
- Taylor, K. B., Schuster, D., Rosston, S., Gillespie, C., Woodard, S. R. & Severson, R. L. (2018, April 27). Sometimes hesitancy is key: Effects of moral deliberations on children's interpretation of credibility cues. Poster presented at the University of Montana Conference on Undergraduate Research, Missoula, MT.
- Woodard, S. R. & **Severson, R. L.** (2018, April 20). *Do children always trust confident individuals? Not when it comes to moral deliberations.* Poster presented at the University of Montana GradCon A Graduate Student Research Conference, Missoula, MT.
- **Severson, R. L.**, Lau, P., Li, V., & Birch, S. A. J. (2017, October). *Sometimes hesitancy is key: Effects of moral deliberations on children's interpretation of credibility cues.* Poster presented at the biennial meeting of the Cognitive Development Society, Portland, OR.
- **Severson, R. L.**, Baimel, A., & Birch, S. A. J. (2017, October). When is confidence a justified credibility cue? Poster presented at the biennial meeting of the Cognitive Development Society, Portland, OR.
- Baimel, A., **Severson, R. L.**, & Birch, S. A. J. (2017, March). *Children and adult's theory of mind supports anthropomorphic tendencies*. Poster presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.
- Birch, S. A. J, Baimel, A., & **Severson, R. L.** (2017, March). *Children and adult's understanding of unjustified confidence*. Poster presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.
- **Severson, R. L.** (2016, October). *Young children attribute less to a robot when asked to take a peer's perspective.* Paper presented at the Society for Research in Child Development Special Topics Meeting on Technology and Media in Children's Development, Irvine, CA.
- **Severson, R. L.**, & Birch, S. A. J. (2016, June). *Discerning minds: Are children skeptical of an unjustifiably confident informant?* Poster presented at the annual meeting of the Jean Piaget Society, Chicago, IL.
- Severson, R. L., Birch, S. A. J., Tahiroglu, D., Moses, L. J., Ghrear, S., & Haddock, T. (2016, June). *The Children's Social Understanding Scale Predicts Social-Emotional Functioning*. Poster presented at the annual meeting of the Jean Piaget Society, Chicago, IL.
- Haddock, T., Ghrear, S., Brosseau-Liard, P., **Severson, R.**, Birch, S., & Li, V. (2016, June). *The curse of knowledge across development: A fluency misattribution account.* Poster presented at the annual meeting of the Jean Piaget Society, Chicago, IL.

- Baimel, A., **Severson, R.**, Birch, S., & Norenzayan A. (2015, May). *Synchronous ritual and mental state reasoning*. Presented at the Cultural Evolution of Religion Consortium's 2015 Plenary Meeting (Religion in the text and on the ground), Montreal, Canada.
- **Severson, R.** L., Li, H., & Lillard, A. (2015, March). *Cultural contributions to anthropomorphic beliefs*. Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
- Severson, R. L., & Birch, S. A. J. (2015, March). Discerning minds: Older children become skeptical of an unjustifiably confident informant. Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
- Baimel, A., Severson, R. L., & Birch, S. A. J. (2015, March). *The 'eyes' have it: Predicting individual differences in anthropomorphism*. Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
- Ghrear, S., Haddock, T., **Severson, R. L.**, Penner, E., & Birch, S. A. J. (2015, March). *Developmental changes in children's curse of knowledge bias*. Poster presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
- Baimel, A., **Severson, R.**, Birch, S., & Norenzayan, A. (2015, February). Synchronous ritual and mental state reasoning. Poster presented at the 16th annual meeting of the Society for Personality and Social Psychology, Long Beach, CA.
- **Severson, R. L.**, & Lemm, K. M. (2013, October). *IDAQ-Child Form: A new measure of individual differences in anthropomorphism in children*. Poster presented at the annual meeting of the Cognitive Development Society, Memphis, TN.
- Severson, R. L., Younger, R., McCrain, M., Dachenhausen, M., Wheat, K. (2013, June). Are Children's Attributions of Animate Characteristics to a Robot and Puppet Veridical or a Product of Pretense? Poster presented at the annual meeting of the Jean Piaget Society, Chicago, IL.
- Severson, R. L., Wheat, K., Dachenhausen, M., Younger, R., McCrain, M. (2013, June). The Relation Between Individual Differences in Fantasy Orientation and Attribution of Lifelike Characteristics to a Robot. Poster presented at the annual meeting of the Jean Piaget Society, Chicago, IL.
- Severson, R. L. (2013, April). The Role of Pretense and Anthropomorphism in Children's Attributions of Life-Like Characteristics to Robots. Paper presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.
- Wheat, K., Dachenhausen, M., Younger, R., McCrain, M., & Severson, R. L. (2013, April). The Relation Between Individual Differences in Fantasy Orientation and Attribution of Life-like Characteristics to a Robot. Poster presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.
- **Severson, R. L.** (2011, March). *Thinking as or thinking as if: The role of pretense in children's and young adult's attributions to a robot dinosaur.* Poster presented at the 6<sup>th</sup> ACM/IEEE International Conference on Human-Robot Interaction (HRI 2011), Lausanne, Switzerland.

- **Severson, R. L.** (2009, June). Animism in a technological world: Children's conceptions of a personified robot. Poster presented at the annual meeting of the Jean Piaget Society, Park City, UT.
- Kahn, P. H., Jr., Severson, R. L., Ruckert, J. H., & Reichert, A. (2009, April). *Robots in the lives of children*. Paper presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.
- Kahn, P. H., Jr., Kanda, T., Ishiguro, H., Freier, N. G., **Severson, R. L.**, Ruckert, J. H., & Gill, B. T. (2009, April). *Children's Social and Moral Relationship with a Humanoid Robot: Behavior and Reasoning*. Poster presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.
- Friedman, B., Hook, K., Gill, B., Eidmar, L., Sallmander-Prien C., & **Severson, R. L.** (2008, October). *Personlig integritet: A comparative study of perceptions of privacy in public places in Sweden and the United States*. Paper presented at the 5<sup>th</sup> ACM/IEEE Nordic Conference on Human Computer Interaction (NordiCHI 2008), Lund, Sweden.
- **Severson, R. L.** (2008, September). *Relations with wildness in nature*. Discussant remarks at the XVI International Conference of the Society for Human Ecology, Bellingham, WA.
- Kahn, P. H., Jr., Ruckert, J. H., & Severson, R. L. (2007, June). *Nature goes digital Does it matter?* Paper presented at the conference on Psychology-Ecology-Sustainability, Portland, OR.
- **Severson, R. L.** (2007, June). *In the orchard: Farm worker children's moral and environmental reasoning.* Paper presented at the conference on Psychology-Ecology-Sustainability, Portland, OR.
- Kahn, P. H., Jr., Friedman, B., Gill, B., Hagman, J., **Severson, R. L.**, Freier, N. G., et al. (2007, March). *Does it matter that nature's "real"? A plasma window's effects on looking behavior and heart rate recovery from low-level stress*. Poster presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.
- Kahn, P. H., Jr., **Severson, R. L.**, & Freier, N. F. (2007, March). *Towards a new comparative paradigm in developmental psychology: Human-robot interaction*. Poster presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.
- Kahn, P. H., Jr. & **Severson, R. L.** (2006, October). *Biocentrism in a technological world.*Paper presented at the XIV International Conference of the Society for Human Ecology, Bar Harbor, ME.
- Saunders, C. D., Kahn, P. H., Jr., **Severson, R. L.**, Gill, B., & Myers, O. E. (2006, October). *Fear and caring: Children's conceptions of bats*. Paper presented at the XIV International Conference of the Society for Human Ecology, Bar Harbor, ME.
- Kahn, P. H., Jr., Friedman, B., Gill, B., Hagman, J., **Severson, R. L.**, Freier, N. G., et al. (2006, June). *Does it matter that nature's "real"? A plasma window's effects on looking behavior and heart rate recovery from low-level stress.* Poster presented at the annual meeting of the Jean Piaget Society, Baltimore, MD.

- Kahn, P. H., Jr., & **Severson, R. L.** (2005, October). *Social and moral relationships with robotic pets?* Paper presented at the XIII International Conference of the Society for Human Ecology, Salt Lake City, UT.
- Severson, R. L. & Kahn, P. H., Jr. (2005, October). Social and moral judgments about pesticides and the natural environment: A developmental study with farm worker children. Paper presented at the Society for Human Ecology, Salt Lake City, UT.
- **Severson, R. L.** & Kahn, P. H., Jr. (2005, June). Social and moral judgments about pesticides and the natural environment: A developmental study with farm worker children. Poster presented at the Jean Piaget Society Conference, Vancouver, BC.
- Feldman, E. N., Kahn, P. H., Jr., & **Severson, R. L.** (2005, April). A developmental approach to investigating creativity in children: New methods for analyzing the unusual uses test. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.
- **Severson, R. L.** & Kahn, P. H., Jr. (2005, April). Social and moral judgments about pesticides and the natural environment: A developmental study with farm worker children. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.

## **Workshops and Roundtable Presentations**

- Kahn, P. H., Jr., **Severson, R. L.**, Ruckert, J. H., & Reichert, A. (2008, September). *Technological nature*. Roundtable at the XVI International Conference of the Society for Human Ecology, Bellingham, WA.
- Kahn, P. H., Jr., Rupp, A., **Severson, R. L.**, McClintock, K., Ruckert, J. H., Stromdahl, P. (2008, September). *Designing for the Biodiversity of Human Experience: A Conversation Between (and with) a Research Lab and Professional Design Firm.* Roundtable at the XVI International Conference of the Society for Human Ecology, Bellingham, WA.
- Kahn, P. H., Jr., Kanda, T., Freier, N. G., **Severson, R. L.**, & Ishiguro, H. (2008, March). *Coding Behavioral Video Data and Reasoning Data in Human-Robot Interaction.* Workshop presented at 3<sup>rd</sup> ACM/IEEE International Conference on Human Robot Interaction (HRI 2008), Amsterdam, Netherlands.
- Kahn, P. H., Jr., Freier, N. G., **Severson, R. L.**, & Stanton, C. (2006, September). *Coding video data in human-robot social interaction: Behavior and reasoning*. Tutorial presented at the 15<sup>th</sup> IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN '06), University of Hertfordshire, Hatfield, UK.

## **GRANTS**

• Co-Investigator Severson (University of Montana) and Investigator Holly Truitt (City of Missoula). "The Link: A Collective, Place-Based Approach to Inspiring Missoula's Next-Generation Healthcare Work Force." Science Education Partnership Award (SEPA; R25) (June 1, 2019-May 31, 2024), *National Institute of Health*. Amount funded: \$1,313,811.

- Principle Investigator Severson (internal grant). "UGP 2019: Will children trust a robot's factual information and moral decisions?", Small Grant (May 1, 2019-August 31, 2020), *University of Montana*. Amount funded: \$5,000.
- Principle Investigator Severson (internal grant). "UGP 2017: NSF CAREER Grant Will children learn from educational robots?", Mentored Proposal Development Grant (May 1, 2017-August 31, 2018), *University of Montana*. Amount funded: \$7,748.
- Principle Investigator Severson (internal grant). "UGP 2017: Efficient or faithful imitation of a robot model", Small Grant (May 1, 2017-August 31, 2018), *University of Montana*. Amount funded: \$5,000.
- Principle Investigator Severson (internal grant). "Children's understanding of robots," Minigrant (April 2012- March 2014), *Western Washington University*. Amount funded: \$2,466.
- Principle Investigator Severson. "A shifting baseline? Norwegians' experiences, conceptions, and values for nature," Fulbright Research Grant (August 2010-June 2011), U.S.-Norway Fulbright Foundation; U.S. Department of State, Bureau of Educational and Cultural Affairs. Amount funded: approx. \$25,000.
- Co-Principle Investigator Severson and Principle Investigator Susan A. J. Birch. "Imagining other perspectives: Developing and testing new approaches for assessing and fostering perspective taking," *Imagination Institute*. Finalist (top 10% out of 250 applicants); Amount requested: \$195,179.

## **TEACHING**

# **University of Montana**

# **Undergraduate Lecture Courses**

- Developmental Psychology (PSYX 230)
- Child Development (PSYX 330)
- Psychological Statistics (PSYX 222)

### **Graduate Courses**

- Advanced Developmental Psychology (PSYX 540)
- Advanced Social-Developmental Psychology (PSYX 555)
- Graduate Reading Seminar (PSYX 596)

## Professional Non-credit Courses

• Psychology of the Pandemic (UM Online)

## **Western Washington University**

## **Undergraduate Lecture Courses**

- Introduction to Psychology (PSY 101)
- Lifespan Developmental Psychology (PSY 230)
- Honors Psychology Colloquium (HNRS 204)
- Child Development (PSY 330)
- Research Methods (PSY 301)

# **Undergraduate Seminars**

- Developmental Psych: Pretense & Imagination (PSY 430)
- Psychological Theory (Philosophy of Psychology) (PSY 482)

### AWARDS AND HONORS

- Nominated to President's Council of Advisors on Science and Technology, Office of the President of the United States of America, by Dr. Kelvin Droegemeier, Director of the Office of Science and Technology policy and Director of the National Science Foundation (2019)
- Women's Leadership Initiative Fellow (2019-2020), University of Montana
- Early Career Travel Award (2015), Society for Research in Child Development (\$500)
- Travel Award (2015), Department of Psychology, University of British Columbia (CAD\$1000)
- Travel Award (2015), Post Doctoral Fellows Office, University of British Columbia (CAD\$500)
- Honoree (2012), Senior Giving Campaign, Western Foundation, Western Washington University
- Fulbright Fellowship (2010-2011), U.S. Department of State, U.S.-Norway Fulbright Foundation, Oslo, Norway (approx. US \$25,000)
- Alcor Graduate Student Fellowship (2009), Department of Psychology, University of Washington (\$9,000)
- Excellence and Innovation Travel Award (2009), The Graduate School, University of Washington (\$600)
- Bolles Graduate Student Fellowship (2008-2009), Department of Psychology, University of Washington (\$3,000)
- Excellence and Innovation Travel Award (2005), The Graduate School, University of Washington (US\$600)
- Commendation Letter for Excellence in Undergraduate Teaching (2007), Department of Psychology, University of Washington

## PROFESSIONAL ACTIVITIES

## **Journal Editor**

- Editorial Board, Acta Psychologica, Lifespan Development section (2021-current)
- Editorial Board, *Human Behavior and Emerging Technologies* (2019-current)
- Editor (with Dr. Judith Danovitch, University of Louisville), Special Issue on "Children's Understanding of Emerging Technologies", *Human Behavior and Emerging Technologies* (2020-21)
- Guest Academic Editor, *PLoS ONE* (2018-2019)

### **Ad Hoc Reviewer**

#### Journals

- Autonomous Robots
- Child Development
- Child Development Perspectives
- Children and Media
- Cognitive Development
- Cognitive Psychology
- Cognitive Science
- Developmental Psychology
- Developmental Science
- Ecopsychology
- Environment and Behavior
- Frontiers in Psychology
- Human Behavior and Emerging Technologies
- Human Computer Interaction
- Human Development
- Human Robot Interaction
- Humanities
- *Imagination, Cognition, and Personality*
- Interaction Studies
- International Journal of Human-Computer Studies
- Journal of Cognition and Development
- Journal of Environmental Psychology
- Journal of Experimental Child Psychology
- Journal of Human-Robot Interaction
- Philosophies
- PLOS ONE
- Robotics
- Sustainability

## Grants

- National Science Foundation
- Austrian Science Fund Hertha Firnberg Programme

## **Conferences**

- Society for Research in Child Development: Special Topic Meeting on 'Learning through Play and Imagination'
- HRI 2020: Annual ACM/IEEE International Conference on Human-Robot Interaction— Pioneers Workshop
- HRI 2019: Annual ACM/IEEE International Conference on Human-Robot Interaction
- APA 2009 (Division 9): 117<sup>th</sup> American Psychological Association Annual Convention—Division 9: Society for the Psychological Study of Social Issues (SPSSI)
- CHI 2011-12: Annual ACM CHI Conference on Human Factors in Computing Systems
- HRI 2007-11: Annual ACM/IEEE International Conference on Human-Robot Interaction

• RO-MAN 2006: 15<sup>th</sup> IEEE International Symposium on Robot and Human Interactive Communication

## **Professional Memberships**

- Association for Psychological Science (APS)
- Society for Research in Child Development (SRCD)
- Cognitive Development Society (CDS)
- Jean Piaget Society (JPS)

# Workshop and Symposium Organizer

- Chair/Symposium Organizer, symposium on "Causes and Correlates of Anthropomorphism," Society for Research in Child Development Biennial Meeting (SRCD 2015), Philadelphia, PA.
- Chair/Symposium Organizer, symposium on "Selective Social Learning: Children's Epistemic Understanding of Credibility Cues," Society for Research in Child Development Biennial Meeting (SRCD 2015), Philadelphia, PA.
- Technical Program Committee, International Workshop on Collaborative Robots and Human Robot Interaction (CR-HRI 2011), Philadelphia, PA.
- Workshop Co-organizer, "Coding Behavioral Video Data and Reasoning Data in Human-Robot Interaction," 3<sup>rd</sup> ACM/IEEE International Conference on Human Robot Interaction (HRI 2008), Amsterdam, The Netherlands.
- Workshop Co-organizer, "Coding video data in human-robot social interaction: Behavior and reasoning," 15<sup>th</sup> IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2006), University of Hertfordshire, Hatfield, UK.
- Symposium Organizer, "Interactions with Wildness," XVI International Conference of the Society for Human Ecology (2008), Bellingham, WA, USA.
- Roundtable Co-organizer, "Technological nature" and "Designing for the Biodiversity of Human Experience: A Conversation Between (and with) a Research Lab and Professional Design Firm," XVI International Conference of the Society for Human Ecology (2008), Bellingham, WA, USA.

### **Professional and University Service**

- Member, Fulbright Committee (August 2022-current)
- Member, Executive Committee of the Faculty Senate (ECOS), University of Montana (Jan 2021-June 2022)
- Member, UM Academic Planning Group (2021)
- Fellow, Women's Leadership Initiative, University of Montana (2019-2020)
- Senator, Faculty Senate, University of Montana (May, 2017-2020; May 2020-2023)
- Member, Department Executive Committee, UM Department of Psychology (2018-2021)
- Director, Experimental Psychology Doctoral Program, UM Department of Psychology (2018-2021)
- Member, Child Clinical Psychology Faculty Search Committee, UM Department of Psychology (2018-19, 2019-20, 2020-21 AYs)
- Faculty Committee and Advisor, UM Human and Family Development Interdisciplinary Minor (Spring 2016-current)
- Member, Research & Creative Scholarship Council, University of Montana (March-May

2018)

- Member, Student Instructional Equipment Fund (SIEF) Proposal Committee, UM College of Humanities and Sciences (Feb 2018-May 2019)
- Member, Scholarship Committee, UM Department of Psychology (Fall 2016-May 2019)
- Faculty Organizer, Experimental Areas Brownbag Series, UM Department of Psychology (Fall 2016-May 2019)
- Co-organizer, Family Academy Lecture Series (public lecture series on child development), Department of Psychology, Western Washington University (2013)
- Fulbright Applicant Interviews, Western Washington University (2012)
- Committee Member, Community Learning and Service Project (CLASP) to link community members with research being conducted at Western Washington University (2011-2013)
- Committee Member, CSMN (University of Oslo) Action Group on Women in Philosophy (2010-2011)
- Committee Member, CSMN (University of Oslo) Committee for Professional Development: Writing and Publications (2010-2011)
- Student Representative, Society for Human Ecology Board (2008-2009)

## MEDIA COVERAGE OF RESEARCH

### **Interviews**

• Confluence: A Podcast (University of Montana Graduate School)
Kinch, A. (2021). Episode 25: A Conversation with Dr. Rachel Severson on Personified Technology and Singing Lilies. Available online: <a href="https://www.umt.edu/grad/telling-our-story/confluence-podcast/default.php">https://www.umt.edu/grad/telling-our-story/confluence-podcast/default.php</a>

### • BBC World Service Radio

Davidovic, Ivana. (2019, January 28). How are smart speakers affecting us, from privacy to child development? BBC The Why Factor. Available online: https://www.bbc.co.uk/programmes/w3cswrl7

#### CNN

Kelley, S. M. (2018, October 16). Growing up with Alexa: A child's relationship with Amazon's voice assistant. CNN Business. Available online: https://www.cnn.com/2018/10/16/tech/alexa-child-development/index.html

## FOX ABC Montana

Sun, S. (2018, Sep. 26). Research suggests kids share emotions with technology. Available online: <a href="http://www.abcfoxmontana.com/story/39181521/research-suggest-kids-share-emotion-with-technology">http://www.abcfoxmontana.com/story/39181521/research-suggest-kids-share-emotion-with-technology</a> and <a href="http://www.abcfoxmontana.com/video?autoStart=true&topVideoCatNo=default&clipId=146">http://www.abcfoxmontana.com/video?autoStart=true&topVideoCatNo=default&clipId=146</a> 39015

• Undiscovered Podcast (WNYC – Science Friday)

Minoff, A., & Feder, E. (2018, September 11). I, Robovie. WNYC Undiscovered Podcast. Available online: https://www.wnycstudios.org/story/i-robovie

## • Fast Company

Reader, R. (2018, June 27). Kids and AI. Fast Company: Are We There Yet? with Ruth

Reader. Available online: <a href="https://www.fastcompany.com/video/how-ai-could-be-impacting-childhood-development/mKiAA7vm">https://www.fastcompany.com/video/how-ai-could-be-impacting-childhood-development/mKiAA7vm</a>

#### NPR

Doucleff, M., & Aubrey, A. (2017, October 30). Alexa, Are You Safe For My Kids? NPR Morning Edition. Available online: <a href="https://www.npr.org/sections/health-shots/2017/10/30/559863326/alexa-are-you-safe-for-my-kids">https://www.npr.org/sections/health-shots/2017/10/30/559863326/alexa-are-you-safe-for-my-kids</a>

### • **KPLU 88.5 FM** Seattle-Tacoma NPR station

Spitzer, G. (2013, June 17). 'Sort of' alive: Researchers probe how kids think about robots. NPR (KPLU 88.5). Available online: <a href="http://knkx.org/post/sort-alive-researchers-probe-how-kids-think-about-robots">http://knkx.org/post/sort-alive-researchers-probe-how-kids-think-about-robots</a>

## • BBC Science in Action, BBC World Service

Stewart, J. (2009, July 10). Real nature versus technological nature. *BBC Science in Action (World Service)*. Available online: <a href="http://www.bbc.co.uk/programmes/p003jkk2">http://www.bbc.co.uk/programmes/p003jkk2</a> (start 20:30)

## • KJR 95.7 FM Seattle, WA

Ebi, K. (2008, June 22). A window to nature. *Connected KJR 95.7 FM*. Available online: http://hs.umt.edu/psychology/severson/media\_files/NatureWindow.mp3

## **Magazines**

### Vision

Brockman, C. (2020, December 23). Kids, confidence, and credibility: UM Psychologist adds to research on how children learn. *Vision 2020: University of Montana Research, Innovation, and Imagination*. Available online: <a href="https://medium.com/vision-magazine-2020/kids-confidence-and-credibility-d5d2954a5154">https://medium.com/vision-magazine-2020/kids-confidence-and-credibility-d5d2954a5154</a>

## APS Observer

Jaffe, E. (2010, May/June). This side of paradise: Discovering why the human mind needs nature. *APS Observer*. Available online: https://www.psychologicalscience.org/observer/getArticle.cfm?id=2679

## New York Times Magazine

Bloom, P. (2009, April 15). Natural Happiness. *New York Times Magazine*. Available online: <a href="http://www.nytimes.com/2009/04/19/magazine/19wwln-lede-t.html">http://www.nytimes.com/2009/04/19/magazine/19wwln-lede-t.html</a>

# • APA GradPsych Magazine

Azer, B. (2009, January). Natural views for healthy hearts. *APA gradPsych Magazine: Research Roundup*, 7, 12.

## AUVSI

Davis, B. (2008, June). Ones to Watch: Rachel Severson. AUVSI's Unmanned Systems, 26, 53-54.

# Newspapers

## • The Age (Australia)

Biegler, P. (2016, November 20). The real costs of making friends with robots. *The Age*. Retrieved online at: <a href="http://www.theage.com.au/technology/technology-news/the-real-costs-of-making-friends-with-robots-20161027-gscgbe">http://www.theage.com.au/technology/technology-news/the-real-costs-of-making-friends-with-robots-20161027-gscgbe</a>

# • The Oregonian

Rojas-Burke, J. (2009, May 27). The best natural healer turns out to be nature. *The Oregonian*. Retrieved online at:

http://www.oregonlive.com/health/index.ssf/2009/05/the best natural healer turns.html

### Seattle Times

Song, K. M. (2008, June 11). UW study reaffirms nature's stress relieving powers. *The Seattle Times*. Retrieved online at:

http://seattletimes.nwsource.com/html/localnews/2004470165 nature11m.html

# **Online News Coverage (select)**

# • IEEE Spectrum

Ackerman, E. (2012, April 30). Do kids care if their robot friend gets stuffed into a closet? <a href="http://spectrum.ieee.org/automaton/robotics/artificial-intelligence/do-kids-care-if-their-robot-friend-gets-stuffed-into-a-closet">http://spectrum.ieee.org/automaton/robotics/artificial-intelligence/do-kids-care-if-their-robot-friend-gets-stuffed-into-a-closet</a>

## • ABC News Online

Dye, L. (2009, April 8). Technological nature takes over. *ABCNews.com*. http://abcnews.go.com/Technology/DyeHard/story?id=7282121&page=1

# • New York Daily News

Abels, J. (2008, August 9). When it comes to stress, technology has nothing on nature. *New York Daily News*. Retrieved online at:

http://www.nydailynews.com/lifestyle/health/2008/08/10/2008-08-

10 when it comes to stress technology has n.html