Kristen K. Greene
Curriculum Vitae

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UNIVERSITY EDUCATION

Ph.D.   Human-Computer Interaction/Human Factors, Department of Psychology, Rice University (expected Dec. 2010) Dissertation title: *What Happened in Sarasota? Effects of Multiple Races and Header Highlighting on Undervotes: A Usability Study and Cognitive Modeling Assessment.* Advisor: Dr. Michael D. Byrne

M.A.   Human-Computer Interaction/Human Factors, Department of Psychology, Rice University (2009) Thesis title: *Usability of New Electronic Voting Systems and Traditional Methods: Comparisons Between Sequential and Direct Access Electronic Voting Interfaces, Paper Ballots, Punch Cards, and Lever Machines.* Advisor: Dr. Michael D. Byrne

B.A.   Experimental Psychology, University of South Carolina (2003)
Senior Honors Thesis title: *Effects of Transcranial Magnetic Stimulation on Attentional Processes.* Thesis director: Dr. Gordon C. Baylis
Minors: Business and French

RESEARCH INTERESTS

I have maintained an active involvement in research for the past ten years, beginning in 2000 as an undergraduate at USC. As a graduate student, my current research focus is the assessment of voting system usability, specifically that of electronic voting machines. Such research is important in its own right, but also in its potential for wider applicability to more general computing and internet usability. I am particularly interested in the effects of different ballot designs and navigational models on human performance. What characteristics of an interface make users more efficient at their task, less likely to err, more satisfied with their experience? How can we use our knowledge of the human brain to best direct visual attention to important interface features or instructions? These research questions arose from my previous research on visual and tactile attention, from a desire to take a more applied approach to research. Although my overarching interest in how people interact with the world around them has remained constant, my research focus has transitioned from emphasis on the person, to emphasis on the person plus machine, on bettering the interface between the two.

REFEREED JOURNALS

Rorden, C., **Greene, K. K.**, Sasine, G. M., & Baylis, G. C. (2002). Enhanced tactile performance at the destination of an upcoming saccade. *Current Biology*, 12, 1429-1434.

Baylis, G. C., Simon-Dack, S. L., **Greene, K. K.**, & Rorden, C., (2004). The effect of ipsilesional cues on line-bisection errors: The importance of predictive value. *Neuropsychologia*, 42, 175-182.

REFEREED CONFERENCE PROCEEDINGS

Everett, S. P., **Greene, K. K.**, Byrne, M. D., Wallach, D. S., Derr, K., Sandler, D., & Torous, T. (2008). Electronic voting machines versus traditional methods: Improved preference, similar performance. *Human Factors in Computing Systems: Proceedings of CHI 2008.* New York, NY: Association for Computing Machinery.

Everett, S. P., Byrne, M. D., & **Greene, K. K.** (2006). Measuring the usability of paper ballots: Efficiency, effectiveness, and satisfaction. *Proceedings of the Human Factors and Ergonomics Society 50th Annual Meeting.* Santa Monica, CA: Human Factors and Ergonomics Society.

Byrne, M. D., **Greene, K. K.**, & Everett, S. P. (2007). Usability of voting systems: Baseline data for paper, punch cards, and lever machines. *Human Factors in Computing Systems: Proceedings of CHI 2007.* New York, NY: Association for Computing Machinery.

Greene, K. K., Byrne, M. D., & Everett, S. P. (2006). A comparison of usability between voting methods. *Electronic Proceedings of the* USENIX/ACCURATE *Electronic Voting Technology Workshop, 15th USENIX Security Symposium*, Vancouver, B.C., Canada: USENIX.

PUBLISHED ABSTRACTS

Boyer, J. L., Harrison, S., **Greene, K. K.**, & Ro, T. (2005). *Unconscious orientation and color processing without primary visual cortex.* Cognitive Neuroscience Society's Annual Conference, New York, NY.

Harrison, S., Boyer, J. L., **Greene, K. K.**, Chang, E., & Ro, T. (2005). *Unconscious vision in action.* Cognitive Neuroscience Society's Annual Conference, New York, NY.

Simon-Dack, S., **Greene, K. K.**, Rodriguez, D., Bovender, W., Smith, D., & Baylis, G. (2005). *The functional roles of the human auditory cortex: Detection of spatial patterns of auditory stimuli.* Cognitive Neuroscience Society's Annual Conference, New York, NY.

Rodriguez, D., Simon-Dack, S., **Greene, K. K.**, Smith, D., Brown, L., & Baylis, G. C. (2004). *ERP activity in individuals with ADHD on the attention networks test.* Cognitive Neuroscience Society's Annual Conference, San Francisco, CA.

Greene, K. K., Wilkinson, M., Castleberry, R., & Baylis, G. (2003). *Effects of transcranial magnetic stimulation (TMS) on tactile attention.* Cognitive Neuroscience Society's Annual Conference, New York, NY.

Gore, C., Karlsen-Gore, B., **Greene, K. K.**, Rorden, C., & Baylis, G. (2003). *Timing of activity in the right inferior parietal lobe during TMS-induced inattention.* Cognitive Neuroscience Society's Annual Conference, New York, NY.

Baylis, G. C., **Greene, K. K.**, Baylis, L. L., & Simon, S. L. (2001). *Line bisection in neglect: The effect of ipsilesional cues.* Cognitive Neuroscience Society's Annual Conference, New York, NY.

Baylis, L. L., Baylis, G. C., **Greene, K. K.**, & Simon, S. (2001). *Visual extinction and neglect: What is simultaneous stimulation?* Cognitive Neuroscience Society's Annual Conference, New York, NY.

POSTERS

Greene, K. K., & Byrne, M. D. (2007). *Usability testing of prototype electronic voting software.* National Science Foundation site visit for ACCURATE (A Center for Correct, Usable, Reliable, Auditable, and Transparent Elections), Baltimore, MD.

Everett, S. P., Byrne, M. D., & **Greene, K. K.** (2007). *Do voters notice if their choices are changed?* Houston Human Factors and Ergonomics Society's Annual Conference, Houston, TX.

Greene, K. K., Wilkinson, M. B., Baylis, G. C., & Castleberry, R. (2003). *Effects of transcranial magnetic stimulation on tactile and visual attention.* USC Discovery Day, Department of Psychology Undergraduate Research Showcase, University of South Carolina, Columbia, SC.

PRESENTATIONS

Greene, K. K. (2010). *What happened in Sarasota? Effects of multiple races and header highlighting on undervotes.* HF/HCI Research Seminar (Psychology 531), Rice University, Houston, TX.

Greene, K. K. (2010). *What happened in Sarasota? Effects of multiple races and header highlighting on undervotes.* Invited Talk: National Institute of Standards and Technology (NIST), Gaithersburg, MD.

Byrne, M. D., **Greene, K. K.**, & Everett, S. P. (2007). *Usability of voting systems: Baseline data for paper, punch cards, and lever machines.* Houston Human Factors and Ergonomic Society's Annual Conference, Houston, TX.

Greene, K. K. (2007). *Usability of an electronic voting interface: State information in a sequential navigation model.* HF/HCI Research Seminar (Psychology 531), Rice University, Houston, TX.

Greene, K. K. (2007). *Usability of electronic voting interfaces: Sequential versus direct access.* HF/HCI Research Seminar (Psychology 531), Rice University, Houston, TX.

Greene, K. K. (2007). *Iterative usability testing of a prototype electronic voting interface.* Topics in Human Computer Interaction (Psychology 640), Rice University, Houston, TX.

Greene, K. K., Everett, S. P., & Byrne, M. D. (2006). *Evaluating paper ballots: Usability differences between ballot types.* Houston Human Factors and Ergonomic Society's Annual Conference, Houston, TX.

Greene, K. K., Byrne, M. D., & Everett, S. P. (2006). *A comparison of usability between voting methods.* USENIX/ACCURATE Electronic Voting Technology Workshop, part of the 15th Annual USENIX Security Symposium.

Greene, K. K. (2006). *Trading old usability concerns for new ones: Implications of the Help America Vote Act.* Cognitive Research Seminar (Psychology 529), Rice University, Houston, TX.

Greene, K. K. (2005). *Visual distractors: Influences on saccadic and manual reaction times.* Cognitive Research Seminar (Psychology 529), Rice University, Houston, TX.

LECTURES

Greene, K. K., Crook, A. K., & Kell, H. (2007). *Are you sure about that? Inferring checking behavior from voting time deviations from Fitts' Law predictions.* Engineering Psychology (Psychology 540), Rice University, Houston, TX.

Greene, K. K. (2007). *Can ACT-R model human voting behavior?* 14th Annual ACT-R Summer School and Workshop, Carnegie Mellon University, Pittsburgh.

Greene, K. K. (2006). *Usability in the election process: Data from the November, 2006 election.* Election Systems, Technologies, and Administration (Psychology 480), Rice University, Houston, TX.

Greene, K. K. (2006). *A confirmatory factor analysis of the System Usability Scale.* Psychometrics (Psychology 602), Rice University, Houston, TX.

Greene, K. K. (2006). *Identification of important attributes in textbook-sales websites: A lens model approach.* Human Computer Interaction (Psychology 541), Rice University, Houston, TX.

Greene, K. K. (2005). *Descriptive decision-making.* Thinking (Psychology 527), Rice University, Houston, TX.

Greene, K. K. (2005). *Adversarial problem-solving and games.* Thinking (Psychology 527), Rice University, Houston, TX.

Greene, K. K. (2004). *Consciousness.* Introduction to Cognitive Psychology (Psychology 203), Rice University, Houston, TX.

RESEARCH EXPERIENCE

My consistent involvement in all stages of research has made me a proficient researcher, my four consecutive years as a TA for graduate level statistics have given me invaluable conceptual and procedural experience with statistics, and my various leadership positions have been truly instrumental in teaching me how to organize successful events and disseminate information effectively to a large number of people.

- **Graduate student**, working with Dr. Michael D. Byrne in the Computer Human Interaction Lab, Rice University Department of Psychology, 2004-present.
  Research on the usability of voting systems. In depth involvement at all stages of research: literature review, study design, participant recruiting, data collection, data analysis, write-up, and presentation of results. Was responsible for setting up new research space off-campus and procuring voting equipment from nearby counties.

- **Co-op, Lockheed-Martin Space Operations**, Summer 2008–February 2009.
  Paid internship in the Usability Testing and Analysis Facility at NASA Johnson Space Center (JSC), supervised by Dr. Jurine Adolf.
  Activities included writing test plan to evaluate Extravehicular Activity Information System with voice recognition software, participating in Human-Robotic Systems assessment, and aiding in operational volume evaluation of umbilical connectors. Performed heuristic usability evaluations of cursor control device test battery. Worked with Lighting Environment Test Facility to conduct study on head-mounted display use in simulated lunar lighting conditions.

- **Full-time paid Research Assistant** for Dr. Gordon C. Baylis, Attention and Perception Laboratory, USC, August 2003-July 2004.
  Research examined visual and tactile attention, specifically, visual extinction and neglect. Responsibilities included recruiting, scheduling, and paying participants for weekly trips to the Medical University of South Carolina in Charleston for collaborative research, and aiding in study design and data collection. Oversaw submission of an Institutional Review Board packet to local Veteran's hospital to open new research venues.

- **Paid Undergraduate Research Fellow** for Dr. Gordon C. Baylis, Attention and Perception Laboratory, USC, 2001-2002.
  Awarded this competitive research fellowship for the maximum allotment of two semesters; funded by the South Carolina Honors College. Continued previous research on visual hemineglect and extinction in brain-damaged patients, began new research on the interrelation of touch and vision. Responsibilities included patient identification and recruitment at Health South rehabilitation hospital, and data collection with patient and student populations. Used adaptive equipment when testing patients with neurological impairments and reduced fine motor control.

- Two consecutive **independent study research courses** with Dr. Gordon C. Baylis in the Attention and Perception Laboratory, USC, 2000-2001.
  Research focused on understanding the nature of visual hemineglect and extinction. Responsibilities included helping identify and recruit participants from the patient population at Health South rehabilitation hospital, and conducting experiments with those participants, as well as with participants from the USC student population.

TEACHING EXPERIENCE
- **Teaching Assistant for undergraduate statistics** (Statistical Methods in Psychology), worked for Professor Philip T. Kortum, Department of Psychology, Rice University, 2009-2010.
  Responsibilities included teaching weekly lab sessions and grading homework and exams.

- **Teaching Assistant for graduate level statistics** (Advanced Psychological Statistics I), worked for Professor Michael D. Byrne, Department of Psychology, Rice University, 2005-2009.
  Responsibilities included holding weekly office hours, holding additional one-on-one tutoring sessions with students, grading homework and exams, and aiding with answer key generation and assignment of grades.

- **Teaching Assistant for business calculus**, worked for Professor Gerald W. Baygents, University of South Carolina, spring 2000.
  Responsibilities included grading homework and preparing and holding bi-weekly review sessions throughout the semester.

LEADERSHIP AND SERVICE

- **Reviewer**, Computer Human Interaction Conference, 2009.

- **Conference Chair**, TX Regional Human Factors and Ergonomics Society One-Day Conference, 2008.
  Responsible for leading overall conference coordination, including communication between conference committees (registration, sponsorship, publicity, and program committees), scheduling and leading conference calls, emailing status summaries and task reminders, and balancing conference expenditures against revenue from registration fees and sponsor donations.

- **Reviewer**, Human Factors and Ergonomics Society Annual Meeting (specifically for the Test and Evaluation Technical Group), 2008.

- **Reviewer**, TX Regional Human Factors and Ergonomics Society One-Day Conference, 2008.

- **HF/HCI Research Seminar manager**, Rice University, 2005-2007.
  Responsible for organizing schedule and updating information online, reserving conference room as needed, and distributing materials necessary for upcoming seminars.

- **Department of Psychology Prospectives' Weekend coordinator**, Rice University, 2006.
  Oversaw planning of the department's recruitment weekend, including travel and hotel arrangements for prospective graduate students, scheduling lab tours and meetings between prospective students and faculty, and organizing departmental social events.

- **President**, USC Chapter of Psi Chi (National Honor Society in Psychology), Spring 2003.
  Oversaw duties of all Psi Chi officers and coordinated with faculty advisors, planned meeting activities throughout the semester (such as arranging guest speakers and interactive panel discussions). Secured funding to institute an Outstanding Undergraduate Teaching Award.

- **Vice President**, USC Chapter of Psi Chi, Spring 2002-Fall 2002.
  Head of membership drive; duties included identifying qualified candidates, distributing invitations for membership, and corresponding with National Office to register new inductees. Initiated and maintained an ongoing clothing drive for a local women's and children's shelter.

HONORS AND AWARDS

- **Rice University Graduate Fellowship**, 2004-present.
  Awarded to Psychology graduate students making satisfactory progress toward the Ph.D.

- **Negotiating the Ideal Faculty Position Workshop**, 2009.
  An NSF-funded workshop for female postdocs and late stage Ph.D. students in Science, Engineering, and Psychology. Of over 1000 applicants from across the nation, only top 70 are selected to attend.

- **Gertrude Maurin Fund**, 2006. $400 to attend Human Factors and Ergonomics Society Annual Meeting

- **McNair Scholarship**, 1999-2003.
  USC's highest-ranking scholarship for out-of-state students, valued at $60,000 (plus tuition reduction) over four years, awarded to top 20 out of state students.

- Graduated **Magna Cum Laude** from USC, **with additional Honors** from the South Carolina Honors College (SCHC), 2003.
  SCHC is a separate college within the University of South Carolina that emphasizes small classes with intensive interaction between students and professors. Students must complete at least 45 credit hours of Honors College courses and a senior thesis in order to graduate with additional Honors.

- **Roger W. Black Award for Psychological Research,** 2003.
  One of only two scholarships awarded annually by the Psychology Department at USC, must be nominated by a faculty member to receive the award.

- **2nd place in division of Social Sciences poster contest**, USC Discovery Day, 2003.
  An annual conference for USC undergraduates from all disciplines to present their research and scholarship.

- **Phi Beta Kappa Society**, inducted in 2002.

- **Derial Jackson Memorial Scholarship** for study in Tours, France, 2002.
  Funding for the USC study abroad program at the Institut de Touraine, awarded based on performance in French courses and overall GPA.

- SCHC **Undergraduate Research Fellowship**, 2001-2002.
  $3000 per year to allow students to work closely on a research project with a mentor in their discipline.

- **Psi Chi**, the National Honor Society in Psychology, inducted in 2001.

- **National Society of Collegiate Scholars**, inducted in 2000.

PROFESSIONAL MEMBERSHIPS
- **Association for Computing Machinery** (ACM), student member, 2005-present.
- **Human Factors and Ergonomics Society** (HFES), student affiliate, 2005-present.
- **Human Factors and Ergonomics Society** (HFES), **Houston Chapter**, student member, 2005-present.

PROFESSIONAL REFERENCES
Michael D. Byrne, Ph. D.
    Associate Professor, Rice University Department of Psychology, 6100 S. Main, MS-25, Houston, TX 77005, 713-348-3770, byrne@rice.edu

Philip T. Kortum, Ph. D.
    Assistant Professor, Rice University Department of Psychology, 6100 S. Main, MS-25, Houston, TX 77005, 713-348-4813, pkortum@rice.edu

David M. Lane, Ph. D.
    Associate Professor, Rice University Department of Psychology, 6100 S. Main, MS-25, Houston, TX 77005, 713-348-3412, lane@rice.edu

Gordon D. Baylis, D. Phil.
    Vice President for Research, Western Kentucky University Office of Sponsored Programs, 301 Potter Hall, 1906 College Heights Blvd. #11026, Bowling Green, KY 42101, 270-745-6733; President of the Western Kentucky University Research Foundation, Inc., 1906 College Heights Blvd #11016, Bowling Green, KY 42101, gordon.baylis@wku.edu

Chris Rorden, Ph. D.
    Director, Georgia State/Georgia Tech Center for Advanced Brain Imaging, 831 Marietta St, Atlanta, GA 30332, 404-385-8619; Professor, Georgia Institute of Technology School of Psychology, 654 Cherry St, Atlanta, GA 30332, 404-385-8621, rorden@gatech.edu