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EDUCATION

Indiana University, Bloomington, IN
Ph.D. in Informatics **exp. Dec. 2010**
Dissertation: "Learning-in-use of Interactive Artifacts" (*tentative*)
Advisor: Dr. Martin A. Siegel
GPA: 4.000

Indiana University, Bloomington, IN
M.S. in Human-Computer Interaction **2006**
Thesis: "Barriers to entry: Designing player access in video games"
Advisor: Dr. Jeffrey Bardzell
GPA: 3.972

University of Notre Dame, Notre Dame, IN
B.S. in Computer Science **2004**
Areas of Concentration: Artificial Intelligence, Computer Graphics
Advisor: Dr. Matthias Scheutz
GPA: 3.367

PUBLICATIONS AND PAPERS

Book Chapters & Journal Articles

1. Castronova, E., Bell, M. W., Carlton, M., Cornell, R., Emigh, W., Falk, M., Fatten, M., LaFourest, P., Reynard, J., Robbins, S., Ross, T., Ryan, W., & Starks, R. (2009). A Test of the Law of Demand in a Virtual World: Exploring the Petri Dish Approach to Social Science. *International Journal of Gaming and Computer-Mediated Simulations, 1*(2), 1-16.
2. Castronova, E., Bell, M. W., Cummings, J. J., Emigh, W., Fatten, M., Mishler, N., Ross, T., Ryan, W., & Falk, M. Virtual world Economies: A Case Study of the Economics of Arden. (2009). In D. Heider (Ed.) *Living Virtually* (pp. 165-189). New York: Peter Lang Publishing, Inc.
3. Castronova, E., Cummings, J., Emigh, W., Fatten, M., Mishler, N., Ross, T., & Ryan, W. (2009). Case study: The economics of Arden. In *Special Issue of Critical Studies in Media Communication. 26*(2), 165-179.
4. Castronova, E., Cummings, J., Emigh, W., Fatten, M., Mishler, N., & Ryan, W. (2007). What is a synthetic world? In F. von Borries, S. Walz, U. Brinkmann, M. Böttger, (Eds.). *Space Time Play* (pp. 174-177). Basel, Switzerland: Birkhäuser Publishing.

Conference Publications

1. Thompson, T., Vespagnani, A., Stolterman, E., Ryan, W., Jung, H., & Siegel, M. (under review). Influence of social networks on the adoption and use of new technology.
2. Ryan, W., & Siegel, M. A. (2009). Evaluating interactive entertainment using breakdown: Understanding embodied learning in video games. In *DiGRA 2009*. London, England. Available at DiGRA Digital Libraries.
3. Jung, H., Stolterman, E., Ryan, W., Stroman, T., & Siegel, M. (2008). Toward a framework for ecology of artifacts: How are artifacts interconnected surrounding a personal life? In Proceedings of *5th Nordic Conference on Human-Computer Interaction*. 201-210. Lund, Sweden.
4. Ryan, W., Hazlewood, W. R., & Makice, K. (2008). Twitterspace: Co-development through Twitter to enhance community awareness. In *Proceedings of Participatory Design Conference 2008*, 230-233, Bloomington, IN.
5. Bardzell, J., Bardzell, S., Birchler, C., & Ryan, W. (2007). Double Dribble: Illusionism, mixed reality, and the sports fan experience. In Proceedings of *International Conference on Advances in Computers for Entertainment Technology*. 216-219. Salzburg, Austria.
6. Bardzell, J., Bardzell, S., Briggs, C., Makice, K., Ryan, W., & Weldon, M. (2006). Machinima prototyping: An approach to evaluation. In Proceedings of *4th Nordic Conference on Human-Computer Interaction*. 433-436. Oslo, Norway.
7. Brunette, K., Eisenstadt, M., Pukinskis, E., & Ryan, W. (2005). Meeteetse: social well-being through place attachment. In *Extended Abstracts of Conference on Human Factors in Computing Systems*. 2065-2069. Portland, OR.

Peer Reviewed Posters

1. Ryan, W., Stolterman, E., Siegel, M., Jung, H., Stroman, T., Hazlewood, W. R. (2009). Device ecology mapper: A tool for studying users' ecosystems of interactive artifacts. In *Extended Abstracts of Conference on Human Factors in Computing Systems*, 4327-4332, Boston, MA.
2. Bardzell, S., Bardzell, J., & Ryan, W. (2006). Double Dribble: Mixed reality game design for sports informatics. In *5th International Conference on Entertainment Computing – ICEC*. London.

Peer-reviewed, Non-archived Publications

1. Ryan, W., & Bardzell, J. (2007). Using Player Breakdown as a Lens for Understanding the Development of Literacy in Video Games. In *Games, Learning, and Society*. Madison, WI.
2. Castronova, E., Cummings, J., Emigh, W., Fatten, M., Mishler, N., & Ryan, W. (2007). Understanding Synthetic Economies Through Their Construction. In *2007 Annual Meeting of the Academy of Management* Panel on *Beyond Play: Replicating, Mirroring, and Constituting 'Reality' Through Online Games*. Philadelphia, PA.
3. Ryan, W. (2006). Barriers to entry: Designing player access in video games. In *DIS 2006* Workshop *On the Process of Game Design*. State College, PA.

Invited Talks

1. Ryan, W. (2009). Explorations in sense-making: Interaction Design and technology through a phenomenological perspective. Presented to IIT Institute of Design. Chicago, IL.
2. Ryan, W. (2006). Moving Beyond the Game: The Use of Modding in Machinima. In *Perform.Media*. Bloomington, IN.

Unpublished Reports

1. Stolterman, E., Ryan, W., Jung, H., Thompson, T., Siegel, M., & Wiltse, H. (2010). Ecologies of interactive artifacts: A challenge for HCI research and practice.
2. Ryan, W. (2010). Analyzing factors that influence learning-in-use of interactive artifacts.
3. Ryan W., Hazlewood, W. R., & Stolterman, E. (2009). Breaking the mold: Problem setting through evocative designs.
4. Hazlewood, W. R., Ryan, W., & Makice, K. (2009). Twitterspace: Evaluation of a set of community ambient displays.
5. Bardzell, J., Ryan, W., & Bardzell, S. (2006). Radical game play: The confrontation between machinima platforms and filmmakers.
6. Ryan, W. (2006). Deconstructing the coaching metaphor of fantasy football interfaces.
7. Bardzell, J., Bardzell, S., & Ryan, W. (2006). Virtual events in metaverse worlds: The intersection of interfaces, leisure, commerce, and persistent groups.
8. Bardzell, J., Bardzell, S., & Ryan, W. (2006). The video game tutorial: Narrative, HCI, and virtual learning.

AWARDS & COMPETITIONS

Undergraduate Student Mentorship Position **2009-2010**

- $1000 Award to work with undergraduate to produce original research

"Interact" Artwork **2006**
(http://www.williamryanonline.net/interact/dart.swf)

Exhibitions:

- DART Exhibit
- 33 Collective Gallery Exhibit

Interface Programmer for "Guardians of Kelthas" game project **2005-2006**
(http://www.kelthas.com)

Competitions:

- IDEASFEST 2005: Best Game, People's Choice Awards
- FuturePlay 2005: Competition Finalist
- Slamdance 2006: Gamemaker Competition Finalist

SIGCHI 2005 Student Competition Finalist **2005**

"Meeteetse: social well-being through place attachment"

Undergraduate Dean's List at the University of Notre Dame **2002-2004**

TEACHING EXPERIENCE

Indiana University, Bloomington, IN

Assistant Instructor **2004-Present**

Courses:

- "Human-Computer Interaction" (SP 09 & SP 10, Advanced Undergrad, for Dr. Martin A. Siegel)
- "Introduction to Informatics" (FA 07-SP 10, Freshman, for Matthew Hottell and Nina Onesti)
- "Human-Computer Interaction Theory" (FA 09, Graduate, for Dr. Erik Stolterman)
- "Multimedia Arts & Technology" (FA 05, Advanced Undergrad, for Dr. Jeffrey Bardzell)
- "Computational Music Analysis and Applications" (FA 04, Graduate, for Dr. Christopher Raphael)

Various activities:

lecturing on course topics including design theory, new media theory, and interaction design; generating and collecting minute papers at the end of class; recording class attendance; assist students during in-class assignments; organizing and grading labs; grading assignments and tests; brainstorm activities

Instructor **2008-2009**

Course:

- "Human-Computer Interaction" (SU 08 & 09, Advanced Undergrad)

Various activities:

writing syllabus and creating course structure from scratch with the input of other HCI/d faculty; organizing course both for students who would continue on to graduate school and also those who will go onto other disciplines; generating lectures, discussions, and design problem; generating media examples including Project Runway episode as well as several TED conference talks;

organizing design activities such as: experience prototyping for users with cognitive impairments, installation that teaches kids at a children's museum about design, expanding the brand of Facebook creating a Facebook for families, and design problem designed to help students detach from their first design by disallowing it.

Mentorship **2009-2010**

Students:

- Ohn'Jay Walker (2009, 2010)
- Joseph Miller (2009, 2010)
- Jaclyn Duket (2010)
- Michael Osborne (2010)

Various activities:

guiding students on a problem of interest; organizing activities to help direct them in deciding their approach to the problem; managed student activities and hours; created project management documents such as timelines, lists of deliverables, and lists of goals. In Spring 2010, I was paired with another Ph.D. student William R. Hazlewood to work with a larger research team.

University of Notre Dame, Notre Dame, IN

Teaching Assistant **2002-2003**

Courses:

- "Combinatorial & Sequential Logic Deisgn" (SP 03, Freshman, for Dr. Patrick J. Flynn)
- "Data Structures" (FA 02, Sophomore, for Dr. Jesus A. Izaguirre)
- "Introduction to Informatics" (SP 02, Freshman, for Dr. Matthias Scheutz)

Various activities:

grading group project and individual assignments; updated course website; wrote online quizzes; presented a tutorial on a technology of interest

RESEARCH EXPERIENCE

Indiana University, Bloomington, IN

Research Rotation **2006-Present**

Courses:

- for Dr. Erik Stolterman (FA 07-FA 09, Ecology of Artifacts Research Group)

helping conceptualize, describe, and write research proposal around ecology of interactive artifacts; leading research study to create tool to aid people for collecting ecology data

- for Dr. Edward Castronova (FA 06-SP 07, Arden Research Group)

contributed to design of monetary and fiscal tools for controlling money flow in Arden; designed survey for measuring effects of well-being before and after play in online world

- for Dr. Sasha Barab (FA 06-FA 07, Quest Atlantis Research Group)

contributed to conceptual development of transactive play spaces for students to engage with outside of class time; developed some graphical elements for Quest Atlantis

Research Assistant **2005-2007**

- for Dr. Shaowen Bardzell (FA 06-SU 07, Entertainment Computing Research Group)

Projects:

"Visual analysis of culture in Second Life"

coding profile images according to pre-defined visual categories; constructed simple statistical measures for analysis

"Classroom space design in Second Life"

prototyping 3D Indoor soccer field for sports information technology; pulling data through SportsML format into Second Life

"Instrument for measuring affective response of media"

designing task flow for application and its implementation in Flash

- for Dr. Jeffrey Bardzell (SU 05-SP 06, Entertainment Computing Research Group)

Projects:

"The Virtual Event Aesthetic"

attending virtual events in MMOGs; performing ethnography to describe event, people, and location

"Narratology, Video Game Tutorials, and Their Implications for Design"

helping develop coding schema for understanding narratological aspects of video game tutorials; playing through tutorials, breaking them down according to coding schema

"Amateur Video Game Study"

helping develop a coding schema for developing amateur Flash video games on http://www.newgrounds.com; playing through games, breaking them down according to coding schema

SERVICE

- Reviewer of papers for CHI 2010
- Member of the North Catholic High School Technology Committee for assisting school to develop technology plan 2005, 2008-2009
- Reviewer of papers, notes, and alt.chi for CHI 2009
- Student Volunteer at PDC 2008, Bloomington, IN, October 1-4, 2008
- Reviewer of papers and posters for ACE 2008
- Reviewer of notes, WIP, student research competition, and alt.chi for CHI 2008
- Reviewer of papers for Sandbox Symposium 2007
- Reviewer for Virtual Reality Journal special issue on "VR in the e-Society," 2006
- Student Volunteer for Informatics Goes Global: Methods at a Crossing, Bloomington, IN March 3-5, 2006.

RELATED EXPERIENCE

Information in Place, Inc., Bloomington, IN
Designer (Contract) **2006-2007**

Various Activities:

researching topic area of hazardous materials; developing design document for a serious game for Hazmat training; creating documents to aid in the technical construction of serious game; helping to coordinate mission based training with design of game; helping to situate the game into a course for Hazmat training

Sony Corporation of America, Mt. Pleasant, PA
Production Systems Intern **2003**

Various Activities:

developing two web applications used for "Kaizen" improvements in production methods and for tracking the training of line employees for the Mt. Pleasant location; overseeing all aspects of those projects from Requirements Gathering, Database Design, Application Design, Testing, Documentation, and Training of Users

Fiserv, Inc., Pittsburgh, PA
Intern **2001**

Various Activities:

Assisting development of Standard Bank & Trust, Northside Bank Websites; troubleshooting website for cross-browser compatibility

Dome Designs, Notre Dame, IN
Manager & Developer **2000-2004**

Various Activities:

Developing websites for Asian Globalization Conference, Fusion Literary Website, Notre Dame Review, and Student Government; managing school year of 2004 with net profits for the first time in its history

North Catholic High School, Pittsburgh, PA
Website Developer (Volunteer) **2004**

Various Activities:

Redeveloping website based on user needs and desires; developing main site, as well as news, calendar, and contact list applications from scratch

SKILLS

Methodologies: Phenomenology, Experimental Methods, Data Visualization, Ethnography, Qualitative Methods, Survey Methods, Semiotics, Usability Evaluation, Agent-based Modeling

Programming Languages: C/C++, C#, VB.NET, Java & J#, Lisp, Scheme, MIPS Assembly, Eiffel
Web-Related: PHP, Haxe, XML, Actionscript, LSL, ASP, ASP.NET, DHTML, Javascript, VBScript, CSS
Databases: MySQL, Access Database, SQL Server, Oracle, Lotus Notes
Programs: Visual Studio .NET, Flash, Photoshop, Fireworks, Dreamweaver, Acrobat
3D Modeling: Second Life, Maya
Other: .NET Framework, OpenGL, DirectX, MFC, Windows Socket API, NetLogo

COURSE WORK

Human-Computer Interaction Design

HCI Seminar I & II *Grad (2006-07)*	**HCI Design I & II *Grad (2004-05)***
Prototype Design and Techniques *Grad (2005)*	**Usability & Evaluation Methods *Grad (2004)***

Social Science

Cognitive Approach to Media *Grad (2008)*	**Intro to Research & Statistics *Grad (2006)***
Experimental Methods in Cognitive Science *Grad (2007)*	**Games & Gossip (Modeling Emergent Behavior) *Grad (2005)***
Pedagogy & Professionalism in Informatics *Grad (2007)*	**Ethnography Seminar (8 weeks) *Grad (2004)***
Social Informatics Seminar *Grad (2007)*	**Intro to Informatics (8 weeks) *Grad (2004)***
Virtual Ethnography (Ind. Study) *Grad (2006)*	Growth of the American Nation *(2000)*

Humanities

Philosophy of Cognitive & Information Science *Grad (2007)*	Sacramental Theology *(2002)*
New Media Art Seminar *Grad (2005)*	Intro to Philosophy *(2001)*
New Media & Interactivity *Grad (2005)*	Foundations of Theology *(2001)*
Beginning Irish I & II *(2003-04)*	Renaissance Literature Seminar *(2001)*
Aesthetics & Philosophy of Art *(2002)*	Beginning French I & II *(2000)*

Computer Science & Engineering

Visual Analytics *Grad (2008)*	Theory of Computing *(2003)*
Behavior Based Robotics *(2004)*	Compilers *(2003)*
Biometrics *(2004)*	Computer Architecture I & II *(2002-03)*
Advanced Databases *(2004)*	Data Structures *(2002)*
Artificial Intelligence *(2003)*	Operating Systems *(2002)*
Computer Graphics *(2003)*	Logic Design *(2002)*
Database Concepts *(2003)*	Functional Programming *(2001)*
Algorithms *(2003)*	Programming with C++ *(2001)*

Mathematics

Intro to Numerical Methods *(2003)*	Linear Algebra *(2002)*
Differential Equations *(2003)*	Discrete Mathematics *(2001)*
Probability Theory *(2002)*	Calculus I, II, & III *(2000-01)*

Science & Engineering

Complex Systems *Grad (2006)*	Intro to Engineering I & II *(2000-01)*
Intro to Electrical Networks *(2001)*	General Chemistry I & II *(2000-2001)*
General Physics I & II *(2001)*	

SELF-DIRECTED COURSE WORK

Technical/Design	Theory
Video Game Foundations	Great Ideas of Philosophy *(Great Courses Series)*
Direct X Graphics Programming	Great Ideas of Psychology *(Great Courses Series)*
3D Modeling in Maya	Great Minds of the Western Intellectual Tradition *(Great Courses Series)*
Intro to Network Programming	Theories of Human Development (*Great Courses Series*)
	Understanding the Brain *(Great Courses Series)*
	How to Listen to and Understand Great Music *(Great Courses Series)*