

William N. Ryan  
919 E. 10th St., Bloomington, IN 47408  
812-457-8820  
wnryan@indiana.edu  
<http://www.williamryanonline.net>

---

## 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., LaFourrest, 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. Ryan, W., Hazlewood, W. R., & Stolterman, E. (under review). Breaking the mold: Presenting evocative desing as a method for divergent thought for interaction design.
  2. 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.
  3. 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.
  4. 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.
  5. 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.
  6. 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.
  7. 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.
-

- 
- 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

- Ryan, W., & Siegel, M. (under review). Learning-in-use of interactive artifacts: A longitudinal study analyzing the learning experience.
- 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.
- 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

- 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.
- 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.
- 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

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

#### Unpublished Reports

- Stolterman, E., Ryan, W., Jung, H., Thompson, T., Siegel, M., & Wiltse, H. (2010). Ecologies of interactive artifacts: A challenge for HCI research and practice.
- Hazlewood, W. R., Ryan, W., & Makice, K. (2009). Twitterspace: Evaluation of a set of community ambient displays.
- Bardzell, J., Ryan, W., & Bardzell, S. (2006). Radical game play: The confrontation between machinima platforms and filmmakers.
- Ryan, W. (2006). Deconstructing the coaching metaphor of fantasy football interfaces.
- Bardzell, J., Bardzell, S., & Ryan, W. (2006). Virtual events in metaverse worlds: The intersection of interfaces, leisure, commerce, and persistent groups.
- Bardzell, J., Bardzell, S., & Ryan, W. (2006). The video game tutorial: Narrative, HCI, and virtual learning.

---

#### AWARDS & COMPETITIONS

Undergraduate Student Mentorship Position	<b>2009-2010</b>
- \$1000 Award to work with undergraduate to produce original research	
"Interact" Artwork ( <a href="http://www.williamryanonline.net/interact/dart.swf">http://www.williamryanonline.net/interact/dart.swf</a> )	<b>2006</b>
Exhibitions:	
• DART Exhibit	
• 33 Collective Gallery Exhibit	
Interface Programmer for "Guardians of Kelthas" game project ( <a href="http://www.kelthas.com">http://www.kelthas.com</a> )	<b>2005-2006</b>
Competitions:	
• IDEASFEST 2005: Best Game, People's Choice Awards	
• FuturePlay 2005: Competition Finalist	
• Slamdance 2006: Gamemaker Competition Finalist	
SIGCHI 2005 Student Competition Finalist	<b>2005</b>
"Meeteetse: social well-being through place attachment"	
Undergraduate Dean's List at the University of Notre Dame	<b>2002-2004</b>

---

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 Design" (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 <i>Grad (2006-07)</i> Prototype Design and Techniques <i>Grad (2005)</i>	HCI Design I & II <i>Grad (2004-05)</i> Usability & Evaluation Methods <i>Grad (2004)</i>
--	--

**Social Science**

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

**Humanities**

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

**Computer Science & Engineering**

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

**Mathematics**

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

**Science & Engineering**

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

SELF-DIRECTED COURSE WORK

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