

# Academic Affairs Research NEWSLETTER

FALL 2012

Welcome to the Fall edition of the quarterly Research Newsletter for faculty and graduate students at WSU Vancouver. The purpose of the newsletter is to share with the university academic community the accomplishments of our faculty in the publication of books, chapters, journal articles, conference presentation, exhibits, invited lectures, and awards during the previous quarter (April 1 – June 30, 2012). We will announce research project awards and contracts and grants from philanthropic foundations that have been funded in the previous quarter. Periodically, we will include feature articles or matters of interest to the research community as well as honors and awards received by faculty.

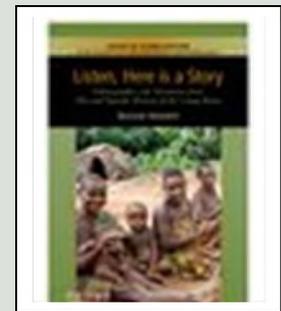
## Books

**Bonnie Hewlett** (Anthropology)

*Listen, Here is a Story: Ethnographic Life Narratives from Aka and Ngandu Women of the Congo Basin.*

New York, New York: Oxford University Press, 2012.

This book offers a glimpse into the lives of contemporary African women of the Congo Basin. The lives of four women; Aka hunter-gatherers and the Ngandu, their farming neighbors, are depicted in their homes, fields, and in the forest. The women provide insights and anecdotes from their experiences as children, adolescents, mothers, wives, and grandmothers.

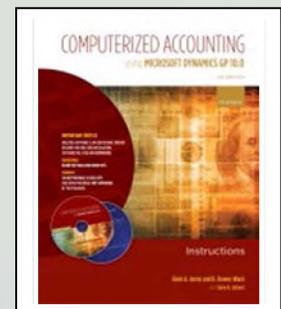


**Claire Latham** (Accounting)

*Computerized Accounting Using Microsoft Dynamics, 6<sup>th</sup> Edition.*

Okemos, Michigan: Armond Dalton Publishers, Inc., 2012.

This book provides a hands-on introduction to commercially available accounting software used in mid-sized companies. Proceeding through the chapters, students learn to use the software through the case project of recording transactions, adjustments, and performing closing procedures. The book emphasizes internal control features to solidify understanding of which controls need to be present to support valid, accurate, and complete accounting information.



## Recent Publications

### Journal Articles and Book Chapters

**Dawn Doutrich** (Nursing)

Doutrich, D., K. Arcus, L. Dekker, I. Spuck, and C. Pollock-Robinson. 2012. "Cultural Safety in New Zealand and the United States: Looking at a Way Forward Together." *Journal of Transcultural Nursing*, 23/2: 143-150. The purpose of this research is to describe the meaning of cultural safety as depicted by nurses in New Zealand and to illustrate the potential for this to inform U.S. nursing education and practice. Interpretive analysis uncovered five themes. Cultural safety considers the perspective of the patient as the norm in contrast to health care. Understanding historical power differences and personal biases can help challenge victim-blaming responses by health care providers. Incorporating these understandings into reflective practice enhances the possibility of safe learning for students and safe patient care.

**Michael Dunn** (Education)

Dunn, M. 2012. "Illustrating Story Plans: Does a Mnemonic Strategy Including Art Media Render More Elaborate Text?" *Journal of Visual Literacy*, 31/1: 93-123. Three fourth-grade students who struggled with writing learned the Ask, Reflect, Text (ART) strategy to help them produce more elaborate narrative story text. After initially asking the questions that specify what should be included in a story, participants used art media as they reflected about their answers. This visual story plan served as a reference for later generating their text. All three students improved with story content, but improving story quality proved to be more of a challenge.

**Dave (Dae-Wook) Kim** (Mechanical Engineering)

Kim, S. Y., D. J. Hennigan, D. Kim, and C. S. Seok. 2012. "Fatigue Enhancement by Interference-Fit in a Pin-Loaded Glass Fibre-Reinforced Plastics Laminate." *Journal of Mechanical Engineering Science*, 226/6: 1437-1446. This paper presents fatigue life enhancement of the pin-loaded glass fibre-reinforced plastics laminates using an innovative interference-fit joining technology. The interference-fit stiffened composite joints have more than 100 times longer fatigue life than the conventional joints.

**Clayton Mosher** (Sociology)

Mosher, Clayton, and Taj Mahon-Haft. "Drugs and Politics." *The Oxford Companion to American Politics*, Ed. David Coates. Oxford University Press, 2012. This article examines the history of drug legislation in the United States, with a particular focus on the political factors involved in regulating drugs.

**Pavithra Narayanan** (English)

Narayanan, P. "Mapping Manipur." *Countering Displacements: The Creativity and Resilience of Indigenous and Refugee-ed Peoples*, Eds. D. Coleman, E. G. Glanville, W. Hasan, and A. Kramer-Hamstra. Alberta, Canada: The University of Alberta Press, 2012, Chapter 5: 115-149. This essay examines conflict-induced displacements and the collective action by the Meira Paibis against the implementation of the Armed Forces Special Powers Act in the North-Eastern Indian state of Manipur within a historical framework of postcolonial struggles.

**Brett Oppegaard** (Creative Media and Digital Culture)

Andrews, C., D. Burseson, K. Dunks, K. Elmore, C. Lambert, B. Oppegaard, E. E. Pohland, D. Saad, J.S. Scherer, R. L. Wery, M. Wesley, and G. Zobel. 2012. "A New Method in User-Centered Design: Collaborative Prototype Design Process (CPDP)." *Journal of Technical Writing and Communication*, 42/2: 123-142. To build upon user-centered design methods, a collaborative and multi-modal approach was used to involve users early in the design process for a website. This article presents the methods and results and addresses the benefits and limitations of the Collaborative Prototype Design Process (CPDP), including ways in which this new method can be implemented. The CPDP is an innovative approach to user-centered website design that emphasizes collaboration, iterative testing, and data-driven design.

**Tahira Probst** (Psychology)

Debus, M. E., T. M. Probst, C. J. König, and M. Kleinmann. 2012. "Catch Me if I Fall! Country-Level Resources in the Job Insecurity-Job Attitudes Link." *Journal of Applied Psychology*, 97/3: 690-698. Using data from 15,200 employees in 24 countries, we found that employees in countries with stronger social safety nets have fewer negative stress reactions to job insecurity.

## Recent Publications *continued*

### Journal Articles and Book Chapters

#### **Tahira Probst** (Psychology)

Graso, M. and T.M. Probst. 2012. "Effect of Consideration of Future Consequences on Quality and Quantity of Job Performance." *Journal of Applied Social Psychology*, 42/6: 1335-1352. This laboratory experiment found that individuals that score high on Consideration of Future Consequences (CFC), a personality construct, produce work of higher quality, while low-CFC participants produce greater quantities of work.

#### **Tahira Probst** (Psychology)

Probst, T.M. "Précarité et sécurité au travail : Comment la peur de perdre son emploi menace la sécurité des salariés" ["Safety and Insecurity: How Fear of Job Loss Can Threaten Employee Safety"]. *Risques psychosociaux, santé et sécurité au travail: Une perspective managériale* [*Psychosocial Risk, Workplace Health and Safety: A Managerial Perspective*], Eds. E. A. de Chatillon, O. Bachelard, and S. Carpentier. Paris, France: Vuibert AGRH, 2012, 135-148. This invited book chapter summarizes (for a French academic audience) the results of my research demonstrating a link between job insecurity and employee safety and health outcomes.

#### **Cheryl Schultz** (School of Biological Sciences)

Schultz, C. B., A. M. A. Franco, and E. E. Crone. 2012. "Response of Butterflies to Structural and Resource Boundaries." *Journal of Animal Ecology*, 81/3: 724-734. This article investigates dispersal behavior of an endangered butterfly, Fender's blue, to understand their movement through current and potential future landscapes. We find that responses to landscape features (woods vs. prairie wildflower habitat) differ between males and females and that the woods are less of a barrier than expected. Our results demonstrate the importance of linking ideas from behavioral and population ecology and will be useful in developing conservation strategies in a landscape dominated by private lands.

#### **Cheryl Schultz** (School of Biological Sciences)

LaBar, C. and C. B. Schultz. 2012. "Investigating the Effects of Grass-Specific Herbicides on Non-Target Butterflies." *Natural Areas Journal*, 32: 177-189. Prairie habitat is highly invaded by

non-native grasses. These grasses threaten populations of rare butterflies. Land managers are keen to use grass-specific herbicides to control the invasive grasses, but knowledge of herbicide effects on butterflies is scarce. We investigate effect of grass-specific herbicides on a suite of native butterflies at a high quality prairie near Olympia, Washington. Despite lack of notable effect on the vegetation at this site, herbicides led to reduced residence time by butterflies, suggesting that residual herbicide effects are detectable for several months after spraying.

#### **Stephen Solovitz** (Mechanical Engineering)

Saffaraval, F., S.A. Solovitz, D. E. Ogden, and L. G. Mastin. 2012. "Impact of Reduced Near-Field Entrainment of Overpressured Volcanic Jets on Plume Development." *Journal of Geophysical Research*, 117: B05209. High resolution experiments are used to show that volcanic jets can entrain approximately 50% less mass than typically assumed, significantly altering the likelihood of plume collapse in large eruptions.

#### **Thomas Tripp** (Business)

Bies, R. J. and T. M. Tripp. "Negotiating the Peace in the Face of Modern Distrust: Dealing with Anger and Revenge in the 21<sup>st</sup> Century Workplace." *The Psychology of Negotiations in the 21<sup>st</sup> Century Workplace: New Challenges and New Solutions*, Eds. B. M. Goldman and D. L. Shapiro. New York, New York: Routledge, 2012, Chapter 7: 181-207.

#### **Wei Xue** (Mechanical Engineering)

Zhao, liheng, A. Hashmi, I. Xu, and W. Xue. 2012. "A Compact Lab-on-a-Chip Nanosensor for Glycerol Detection." *Applied Physics Letters*, 100/24: 243109. This study explores the possibility of using an integrated single-walled carbon nanotubes nanosensor for glycerol detection using a device that enables real-time, in-channel detection of the concentration of static or flowing aqueous glycerol solutions.

## Recent Publications *continued*

### Journal Articles and Book Chapters

**Wei Xue** (Mechanical Engineering) Li, Pengfei, N. Lei, D. A. Sheadel, I. Xu, and W. Xue. 2012. "Integration of Nanosensors into a Sealed Microchannel in a Hybrid Lab-on-a-Chip Device." *Sensors and Actuators B: Chemical*, 166-167: 870-877. This paper reports a novel approach to integrate nanosensors into a lab-on-a-chip device with total elimination of operational errors from the manual bonding process. This lab-on-a-chip device is designed as a platform that can be expanded for more applications. For example, with minimal modifications, the device can be used in chemical sensing, biosensing, and medical research.

## Recent Presentations

### Conference Presentations, Exhibits, Invited Lectures, Awards

**David Chiu** (Computer Science) was the General Chair for the First International Workshop on Power Grid-Friendly Computing, held in conjunction with the IEEE Green Computing Conference (IGCC) in San Jose, California, on June 5-8, 2012.

**David Chiu** (Computer Science) presented "Electric Grid Balancing through Low-Cost Workload Migration" at GreenMetrics 2012, held in conjunction with ACM SIGMETRICS in London on June 11, 2012. He motivated the need for an integration of electric utilities with data centers to enable demand-response in the short term.

**Cynthia Cooper** (School of Molecular Biosciences) was an invited keynote speaker at the AAUW High School Recognition Event on April 28, 2012. Her presentation entitled "Modeling Human Pigmentation with Zebrafish Stripes" included information regarding ongoing research in the lab as well as motivational information to encourage the awardees (all female high school students) to stay interested in math and science.

**Jane Cote** and **Claire Latham** (both Accounting) presented their research study with coauthor **Anne Christensen** (Montana State

University) titled "Is the Defining Issues Test the Right Instrument for Accounting Ethics Research?" at the Western American Accounting Association Annual Meeting in Vancouver, Washington, on April 20, 2012. This study uses meta-analysis to aggregate findings across accounting studies which have employed the Defining Issues Test in ethics research. The results provide insights across commonly employed variables such as ethical choice, ethics instruction, political ideology, accounting experience, gender, GPA, age, and major.

**Jane Cote**, **Claire Latham**, and **Debra Sanders** (all Accounting) presented their research study, "Ethical Financial Reporting Choice: The Influence of Individual Characteristics," at the Western American Accounting Association Annual Meeting in Vancouver, Washington, on April 20, 2012. This study explores the influence that previously identified individual characteristics have in an accounting domain, to make an ethical choice in a financial reporting task.

**Lida Dekker** and **Dawn Doutrich** (both Nursing) presented a poster titled "Responses of RN-BSN Students to Reflective Assignments" at the Western Institutes of Nursing (WIN) Research Conference in Portland, Oregon, on April 18-21, 2012. Outcomes of this mixed methods pilot study suggested that focus groups may be better suited to eliciting students' perceptions about reflection than surveys or individual interviews. A model rubric based on Thorpe, 2004, for evaluating reflective journals had 90% interrater reliability.

**Laurie Drapela** (Public Affairs/Criminal Justice) presented "The Wire, Women, and The Sociological Imagination" at the annual meeting of the Pacific Sociological Association in San Diego, California, on March 24, 2012. This essay is a critique of how female characters are constructed by the male writers/series creators of the HBO crime drama. A version of this presentation will be published in the forthcoming *Crime, Justice, and Politics in the City as Seen through The Wire* (Carolina Academic Press).

## Recent Presentations *continued*

### Conference Presentations, Exhibits, Invited Lectures, Awards

**Michael Dunn** (Education) presented during two poster sessions at the 2012 Council for Exceptional Children Annual Convention in Denver, Colorado, on April 11-14, 2012. The presentations were titled "How Much Intervention and Data is Enough?: Reading Disability Classification in RTI" and "Helping Children with Identified Learning Disabilities in Writing During Story Planning."

**Michael Dunn** (Education) presented a paper, "Comparing Two Story-Writing Mnemonic Strategies: A Randomized Control Trial Study," at the American Educational Research Association Annual Meeting in Vancouver, British Columbia, on April 13-17, 2012.

**Linda Frederiksen and Sue Phelps** (both Library) were invited speakers at the Qualitative and Quantitative Methods in Libraries International Conference in Limerick, Ireland, on May 25, 2012. They presented their research titled "ROI Studies: What is the Real Return?" which investigated the relation of library resources and external grant funding awards.

**Dene Grigar, John Barber, Will Luers, Brett Oppegaard, and Nicholas Schiller** (all Creative Media and Digital Culture) taught a week-long Digital Humanities Summer Institute course, "Creating Digital Humanities Projects for the Mobile Environment," at the University of Victoria in Victoria, Canada, on June 4-8, 2012. The international group of scholars taking the course – from such universities as Yale, Emory, Howard, Michigan, and Toronto – learned about conceptualizing space, coding and programming, and developing mobile architecture, design, and content. The proof-of-concept apps produced included programs for special library collections, literary walks, and teaching foreign languages.

**John Harrison** (School of the Environment) was an invited speaker at the Society for Freshwater Science's summer meeting in Louisville, Kentucky, on May 20-24, 2012, where he presented his work with students **Bridget Deemer** and **Maria Glavin** on "The Role of

Reservoirs and Reservoir Operation in Controlling Water Quality and Greenhouse Gas Production: Examples From a Global Model and a Case Study."

**Tamara Holmlund Nelson and David Slavit** (both Teaching and Learning) gave two presentations at the American Educational Research Association's annual conference in Vancouver, British Columbia, on April 13-17, 2012. With co-author **Angie Deuel**, they presented findings from a cross-case analysis of teachers' uses of and dialogue about student-learning data in collaborative inquiry groups. They also participated in a symposium about data use in schools, presenting their analysis of teachers' engagement in different phases of a collaborative inquiry process in relation to macro- and micro-level factors.

**Daniel Jaffee** (Sociology) presented his research on fair trade as an invited lecturer at the Oregon State University (OSU) Department of Anthropology colloquium, and for the inauguration of the new OSU graduate and undergraduate programs on Food in Culture and Social Justice on June 1, 2012.

**Dave (Dae-Wook) Kim** (Mechanical Engineering) presented at the North American Manufacturing Research Conference on "Tool Wear of Ultra-Hard Coatings in Drilling CFRP" at the University of Notre Dame in South Bend, Indiana, on June 3-8, 2012. He presented the tool wear mechanisms of ultra hard coated drills when drilling aerospace structures.

**Sarah Kooienga and Melody Rasmor** (both Nursing) presented a poster entitled "The Use of Digital Stories in Nurse Practitioner Education" and received an award for Outstanding Poster at the National Organization of Nurse Practitioner Faculty (NONPF) 38<sup>th</sup> Annual Meeting and Conference in Charleston, South Carolina, on April 12-15, 2012.

**Sarah Kooienga** (Nursing) presented a paper entitled "Focused Ethnography: A Methodology for Primary Care" at the Eighth International Congress of Qualitative Inquiry at the University of Illinois in Urbana-Champaign on May 16-19, 2012.

## Recent Presentations *continued*

### Conference Presentations, Exhibits, Invited Lectures, Awards

**Brett Oppegaard** (Creative Media and Digital Culture) presented a paper titled "Mobile Communication and Locative Media" at the International Communication Association preconference in Phoenix, Arizona, on May 23, 2012. His research talk, "Looking into the Past to See Our Future: Mobile Devices as Dynamic Historic Interpretation Tools," shared new methodologies related to mobile content design.

**Pavithra Narayanan** (English) chaired a session on "Social Responsibility and Community Development" and presented a paper, "This Land is Mine: Adivasi Resistance in Kerala and Chhattisgarh (India) Against Corporations and Governments," at the 9<sup>th</sup> International Mining History Congress in Johannesburg, South Africa, on April 17-20, 2012. This paper looks at Adivasi resistance movements against land grabbing and displacement, and explores the history of betrayals, conflicts, and struggles in the Indian tribal districts of Kerala and Chhattisgarh, particularly as it relates to industrial development.

**Sue Peabody** (History) presented her paper, "Race and Freedom: Local and Metropolitan Understandings in Ile Bourbon (La Réunion), 1817," and chaired a session at the French Colonial Historical Society annual meeting in New Orleans, Louisiana, on May 31-June 2, 2012. Her paper analyzed the disparate legal arguments advanced by litigants, lawyers, and magistrates in a slave's lawsuit for freedom.

**Ruth Phillips** (Biological Sciences) and **J. Faber-Hammond** presented "Evidence for Sexually Antagonistic Genes on the Y Chromosome of Pacific Salmon" at the Sixth International Meeting on Vertebrate Sex Determination in Kona, Hawaii, on April 23-27, 2012.

**Ruth Phillips** (Biological Sciences) presented "Genomic Maps in Pacific Salmon" at the First International Conference on Integrative Salmonid Biology in Oslo, Norway, on June 17-21, 2012.

**Tahira Probst** (Psychology) co-chaired two symposia on job insecurity and economic stress and presented two papers and a poster at the European Academy of Occupational Health Psychology conference in Zurich, Switzerland, on April 10-13, 2012.

**Dawn Rondeau** (Nursing) presented a poster entitled "Medical-Legal Competency Curriculum for FNP Students" at the National Organization for Nurse Practitioner Faculty in Charlotte, North Carolina, on April 12-15, 2012. The poster design was completed by Susan Lyons, WSU Spokane, and won a best poster award.

**Yoshie Sano** (Human Development), **Kimberly Greder**, and **Sheila Mammen** presented a paper on the link between health status, health literacy, and internet use among rural low-income mothers at the 15<sup>th</sup> Annual Priester National Extension Health Conference in Washington, D.C., on April 10-12, 2012.

**Carol Siegel** (English) gave a talk entitled "Let a New Gender In?: An American Response to Contemporary Scandinavian Gothicism" on the Film Studies panel at the American Literature Association conference in San Francisco, California, on May 24-27, 2012. The talk, focused on film adaptations of the novel, *Let Me In*, was taken from her chapter forthcoming in *A Companion to American Gothic* (Ed. Charles Crow, Wiley-Blackwell). The chapter compares the American Gothic to the Scandinavian.

**Jie Xu** (Mechanical Engineering) delivered two presentations at the 3<sup>rd</sup> International Conference on Advances in Microfluidics and Nanofluidics in Dalian, China, on May 23-26, 2012. Coauthors include **Wei Xue**, **Xiaolin Chen** (both Mechanical Engineering), and their graduate students. The studies were about novel acoustic microfluidic technologies and a new graphene sensing technology.

**Jie Xu** (Mechanical Engineering) presented his recent studies on microfluidics and nanomaterials at the Nanotech Conference & Expo in Santa Clara, California, on June 18-21, 2012. Together with coauthors **Wei Xue**, **Dave Kim**, **Xiaolin Chen** (all Mechanical Engineering) and graduate students, three oral presentations and one poster presentation were delivered at the conference.

## Funded Research

**Cynthia Cooper**, ADVANCE @ WSU External Mentor Program (NSF) - \$3,950  
*Confocal Analysis of Melanophore Morphology and Interactions*

Project goals are to characterize melanophore shape and interaction changes in multiple pigment cell mutants and to gain additional knowledge in the use of confocal microscopy. This study will allow us to better understand the function of these genes in maintaining normal pigment cell shape and behavior – features that are disrupted during the development of melanoma in humans.

**Cynthia Cooper**, WSU Vancouver Faculty Research Mini-Grant - \$4,800  
*Significance of cAMP/Protein Kinase A Activity in Zebrafish Chromatophore Development*  
These studies will provide additional insight into protein kinase A function by better defining the genetic targets of this signaling pathway in zebrafish silver pigment cells, iridophores. As protein kinase A signaling is already implicated in pigmentation, weight control and aging, a better understanding of how this pathway functions can provide insight into these important physiological processes.

**Brett Oppegaard**, WSU Vancouver Faculty Research Mini-Grant - \$3,994  
*Place-Based News: A New Paradigm*  
“Place-Based News: A New Paradigm” will help to improve journalism through an investigation into the emerging form of media that integrates traditional reporting and production methods with mobile delivery systems. A model of this form of media will be built and examined as part of a larger research agenda, investigating how media environments are affected by net locality, or the idea that society is changing because all information today is located or locatable.

**Yoshie Sano**, Rural Health and Safety Education Competitive Grants Program—National Institute of Food and Agriculture - \$250,062  
*Dissemination of Core Health Messages: Using Community Based Participatory Research to Strengthen the Health of Rural, Low Income Families*  
This collaborative opportunity with the University of Massachusetts Amherst and the

University of Maryland will analyze information from Rural Families Speak about Health project to identify a most effective method to deliver health messages of physical, dental, and nutrition health education for economically and geographically disadvantaged populations.

**Cheryl Schultz**, et al., Strategic Environmental Research Development Program (SERDP) - \$168,369  
*Endangered Butterflies as a Model System for Detecting and Managing Source-Sink Dynamics in Remnant and Restored Habitat on Department of Defense Lands*

Planning to conserve endangered species requires that habitats are high quality habitats (sources), rather than low quality habitats that drain individuals away from health populations (sinks). Of concern, restoration activities for rare species may create short-term sinks on the way to restoring long-term sources. Through a combination of field studies and state-of-the-art quantitative models, the objective of this research is to use three species of endangered butterflies as a model system to rigorously investigate the source-sink dynamics of species being managed on military lands.

**Brian Tissot, Sean Rooney, and Katie Wrubel**, Olympic Coast National Marine Sanctuary - \$10,000  
*Fish Associations with Corals and Sponges in the Sanctuary*  
Deep-sea corals and sponges may provide important habitats for commercial important marine fishes. In this study we are working with the Olympic Coast NMS to extract coral, sponge, and fish information from videotapes taken during submersible dives in order to provide critical data on the associations between these organisms. These data will be an important contribution to a regional effort to define essential fish habitat and improve management of groundfish off the Pacific Coast.

## Funded Research *continued*

**Jie Xu**, TeloVISION - \$10,000

*Development of Microfluidic Filters*

TeloVISION LLC is a life-science company located at the Purdue Research Park in Indiana.

TeloVISION aims to provide physicians and cancer researchers with point-of-care solutions and technologies for rapid and inexpensive cancer diagnosis and therapeutic monitoring. This research award will be used to develop microfluidic filters using micro/nanotechnologies. These tiny filters will feature specially engineered structures and properties with the hope that they can separate cancer cells from blood cells. If successful, this technology can be used for future point-of-care and clinical settings for cancer detection.