

**A Celebration of Student Achievement • May 2, 2000 • Wellesley College**

**Conference Proceedings**



## The Ruhlman Conference

It gives us great pleasure to welcome you to the 2000 Ruhlman Conference. Made possible by the Barbara Peterson Ruhlman Fund for Interdisciplinary Study, the Ruhlman Conference is intended to foster collaboration among students and faculty across the disciplines and to enhance the intellectual life of the College. The event will provide an opportunity for students, faculty, staff, friends, family, and alumnae to come together in celebration of student achievement.

The conference celebrates intellectual life by sponsoring a communal, public event where students will have an opportunity to present their work to an unusually wide audience. By providing an opportunity for public presentation of what is often a private, isolated activity, the conference will demonstrate that research can be part of the ongoing conversation in a community of scholars.

Attentive to the diversity of student interest and accomplishment, the Ruhlman Conference will include a variety of formats for the presentation of student work: papers, panels, posters, exhibitions, musical and theatrical performances, and readings of original work. Representing the work of over 300 Wellesley students, the 2000 Ruhlman Conference is organized around seven major themes: Cross-Cultural Encounters; Science and Technology; About Wellesley; Life, Literature, and the Arts; Self and Identity; Gender and Sexuality; and Politics: Identity and Change. We encourage you to experience the diversity and richness of student achievement at the conference and wish to express our thanks and congratulations to all students participating in this special event.

### The 2000 Ruhlman Committee

Brigid Cohen

*Class of 2000*

Susan Cohen

*Office of the Class Deans*

Hannah Galvin

*Class of 2001*

Kyle Kauffman

*Economics Department*

Andrea Levitt

*Office of the Dean of the College*

Phyllis McGibbon

*Art Department*

Michèle Respaut

*French Department*

Betsy Stearns

*Conferences and Summer Programs*

Adele Wolfson

*Faculty Director of the Science Center,*

*Department of Chemistry*

Mary Ucci

*Director of the Child Study Center*

### Thematic Overview

<b>Politics: Identity and Change</b>	Responses to Political Upheaval (paper session)	9:30	Pendleton East 105
	Responses to Natural Disaster (exhibition)	9:30	Jewett Arts Center
	Historical Perspectives (paper session)	9:30	Jewett 450
	Politics and Identity (paper session)	11:00	Jewett 450
	The American Political System: Historical, Modern, and Comparative Perspectives (paper session)	11:00	Pendleton East 105
	Public Policy in Massachusetts (paper session)	1:30	Collins Cinema
	Studies in Latin American Politics (paper session)	1:30	Science Center 278
	International Political and Economic Issues (paper session)	3:00	Founders 120
	Issues in Political Philosophy (paper session)	4:30	Pendleton West 105
	<b>Cross-Cultural Encounters</b>	Asian Internship Experiences (panel)	9:30
The Immigrant Experience in America (panel)		9:30	Green Hall 130
Wintersession in India (panel)		11:00	Pendleton West Salon
Strong Unnumbered Women (performance)		11:00	Jewett Auditorium
Religious and Spiritual Expression (paper session)		11:00	Green Hall 330
Through a Cross-Cultural Lens (multimedia)		1:30	Knapp PC Classroom
Issues in Education (paper session)		1:30	Pendleton East 105
Wintersession in Shanghai (panel)		1:30	Library Lecture Room
Living and Learning Abroad (panel)		3:00	Library Lecture Room
Latina Women at Wellesley (panel)		3:00	Science Center 277
Stories of Change (paper session)	4:30	Founders 207	
<b>Science and Technology</b>	Medicinal Plants (panel)	9:30	Science Center 268
	Proteins and Biological Functions (paper session)	9:30	Science Center 278
	Molecules Never Seen in Nature (poster session)	9:30	Science Center Focus
	Art and Science of Multimedia (multimedia)	11:00	Science Center E211
	Effect of Environmental Stress on Cyanobacteria (panel)	11:00	Science Center 277
	Observing the Physical Universe (poster session)	11:00	Science Center Focus
	Current Trends in Immunopathology: The Immune System and You (panel)	1:30	Science Center 277
	Practical and Fun Applications of Computers (paper session)	1:30	Science Center 268
	Computer Animations (exhibition)	1:30	Science Center, Sage Lounge
	Brain and Behavior (paper session)	1:30	Science Center 377
	Cell and Molecular Biology (paper session)	3:00	Science Center 278
	Metals in Chemistry and Biology (paper session)	3:00	Science Center E211



	Biological Responses to Natural and Unnatural Stimuli (poster session)	3:00	Science Center Focus
	Science and Society (paper session)	4:30	Founders 120
	Vomit/Comet (talk and multimedia)	4:30	Science Center 278
<b>About Wellesley</b>	The Landscape and Architecture of Wellesley (panel)	9:30	Library Lecture Room
	Wellesley: The People and the Place (exhibition)	11:00	Jewett Arts Center
	Hannah French: Book Arts at Wellesley College (exhibition)	3:00	Clapp Library Special Collections
	A Famous Graduate (panel)	3:00	Knapp PC Classroom
	Film Visions (film screenings)	4:30	Collins Cinema
	Anomie, Spirituality, and Life Changes (panel)	4:30	Library Lecture Room
<b>Life, Literature, and the Arts</b>	Poetic Visions (paper session)	9:30	Pendleton West 105
	Esthetics Revisited (paper session)	9:30	Jewett 372
	Singing Performance (performance)	9:30	Pendleton West Salon
	Modern Writers (paper session)	11:00	Founders 307
	Striking Comparisons (paper session)	11:00	Founders 207
	Autobiography and Fiction (paper session)	1:30	Founders 120
	Asia: Images and Ideals (paper session)	1:30	Jewett 372
	Harriet Beecher Stowe (panel)	3:00	Pendleton East 105
	Voices in Literature and Medicine (panel)	3:00	Collins Cinema
	Building an Ear (performance)	4:30	Jewett Auditorium
	Art, Architecture, and Life (paper session)	4:30	Jewett 372
<b>Self and Identity</b>	Voice and Connection I (literary readings)	9:30	Davis Museum
	Self Defined by Others (paper session)	9:30	Founders 120
	Voice and Connection II (literary readings)	11:00	Collins Cinema
	Child Development (poster session)	11:00	Science Center Focus
	Matrix and Multiplicity (exhibitions)	1:30	Jewett Arts Center
	Self-Concept and Learning (paper session)	1:30	Founders 207
	Voice and Connection III (literary readings and multimedia)	1:30	Jewett Auditorium
	Children and Relationships (paper session)	3:00	Founders 207
	Nature Writing (literary readings)	3:00	Davis Museum
	Expressions of Self (paper session)	4:30	Founders 307
<b>Gender and Sexuality</b>	Sexuality for Sale: Internet Brides, Child Prostitution, and Asian-American Pornography (paper session)	11:00	Founders 120
	Views of Gender (paper session)	1:30	Founders 307
	Feminist Perspectives (paper session)	3:00	Founders 307
	Looking through a Gendered Lens (exhibition)	4:30	Jewett Arts Center



## Conference Schedule

**8:30 – 9:30 Continental Breakfast**

*Served opposite Jewett Auditorium*

**9:30 – 10:40**

### Politics: Identity and Change

#### **Responses to Political Upheaval (paper session)** *Pendleton East 105*

Chavi Keeney Nana, “Refugee Repatriation and Community Revitalization: Can Microcredit Lending Encourage Social and Economic Reintegration?”

Ayşe Kaya, “Turkish National Identity in Transition? Reflections on Turkish-Armenian Relations”

Elizabeth Siegel, “Religion, Politics, and Power in Israel and the Occupied Territories: Reflections on Hamas and Gush Emunim”

*Suzanne Estelle-Holmer, Presiding*

#### **Responses to Natural Disaster (exhibition)** *Jewett Arts Center*

Haydée C. Brown, “‘Currents of Strength’: The Strategies of Nicaraguan Women in the Wake of Hurricane Mitch”

#### **Historical Perspectives (paper session)** *Jewett 450*

Ayfer Ali, “Turkish and Muslim Minority Women’s Experience of the Bulgarian Rebirth Process (1984-1990)”

Nondini Naqui, “The Changing Face of the African American Community in Portland, Maine: An Ethnographic Study from 1865 to the Present”

Lisa Woodson, “Saving the Forest for the Trees: Autonomy, Freedom, and the History of Environmental Protection in Karelia, Northern Russia”

*Beth Blankley, Presiding*

### Cross-Cultural Encounters

#### **Asian Internship Experiences (panel)** *Science Center 277*

Cynthia Eldridge, Malinda Lee, Ting Ni, and Kristin Olson, “Summer Days in Hong Kong”

#### **The Immigrant Experience in America (panel)** *Green Hall 130*

Clarissa Kearns, Jana Kiser, Laura Murray, Lauren Peters, Claudia Ramirez, Christine Thompson, Amalia Walton, and Iris Yee, “The Contemporary Immigrant Experience”

### Science and Technology

#### **Medicinal Plants (panel)** *Science Center 268*

Valerie Antoine, Rosalie Elder, Sonya Funaro-Soto, Bernice Hwang, and Lesley Wood, “Medicinal Plants: Do They Keep Their Promises?”

#### **Proteins and Biological Functions (paper session)** *Science Center 278*

Noëlle Paffett-Lugassy, “The Localization of a Chondroitin Sulfotransferase in the Mouse Central Nervous System: *In Situ* Hybridization”

Sarah McGinnis, “The Localization of a Chondroitin Sulfotransferase in the Mouse Central Nervous System: RT-PCR and Southern Blot Analysis”

Barbara B. Jurim, Erin E. Lunde, and Lisa J. McReynolds, “Why Cells are not Floppy Bags: The Importance of the Actin Cytoskeleton”

*Cindy Zia, Presiding*

**Molecules Never Seen in Nature (poster session)** *Science Center Focus*

Sarah Popek, "Synthesis and Characterization of a 12-residue Endothiopeptide"

Anita Tsai, "Synthesis of a Thioamide Inhibitor of EP 24.15"

Yoori Lee, "Direct Cyanation of 4-Phenyl-[1,2,4]-Triazole Using Electrophilic Cyanating Agents"

Gabriela Reubins, "A New Class of Crystals with Saturated Hydrogen Bonding"

Jane Mars, "Growth and Characterization of Polycomponent Crystals"

Lisa Wittenhagen, "Synthesis of a Xanthosine Analog through C3 Triazole Substituted Intermediates"

Nancy Kesek, "Synthesis of 3-Benzyl Carbazate-4-Phenyl-[1,2,6]-Triazole"

**About Wellesley****The Landscape and Architecture of Wellesley (panel)** *Library Lecture Room*

Keifsen H. Schleifer, Alexis Dinniman, Ellery E. Foutch, and Alexandra R. Palmer, "Do You See What I See?: Building the Body of Wellesley"

**Life, Literature,  
and the Arts****Poetic Visions (paper session)** *Pendleton West 105*

Natalie Biggs, "Emily Dickinson's 'Dark' Sublime: Deconstructing the Woman Poet as 'Other'"

Meghan Hinchey, "Divine Ravishment: Paradise Lost and Sublime Theory"

Lia Shimada, "'Wilderness of the Body': Nature, Humanity, and the Creation of Art in the Poetry of Mary Oliver"

*Ann Warner, Presiding***Esthetics Revisited (paper session)** *Jewett 372*

Brigid Cohen, "Late Serialism: Public and Private Discourse in the Music of Boulez and Babbitt"

Devika Maulik, "Celluloid Shakespeare: A Survey of Sex, Politics, and Rock 'N Roll in the Twentieth Century"

**Singing Performance (performance)** *Pendleton West Salon*

Hillary Bernstein, Jazz Performance

**Self and Identity****Voice and Connection I (literary readings)** *Davis Museum*

Anindita Basu, "Collection of Poems"

Beth Lebwohl, "The Life Just Next to Ours"

Kim Dahl, "Poems"

*Amy Delamaide, Presiding***Self Defined by Others (paper session)** *Founders 120*

Eleni Apostolakis, "The Impostor Phenomenon: Revealing the Self through the Screen"

Natka Bianchini, "Charles Horton Cooley's Looking-Glass Self in Shakespeare's *The Taming of the Shrew*"

Kerstin Blomquist, "Acne: Self-Consciousness, Body-Esteem, and Self-Esteem"

*Joan Moore, Presiding***10:40 – 11:00 Break***Continental breakfast served opposite Jewett Auditorium*

11:00 – 12:10

**Politics: Identity  
and Change****Politics and Identity (paper session)** *Jewett 450*

Carly Grisham, "The Construction of Flemish National Consciousness in Belgium"

Erika Kitzmiller, "Italians and the Jews: Racial Laws and Occupation"

Iris Pilika, "A Sociological Comparison on the Ethnic Identity of the Arberesh Communities in Italy and Greece"

Alessandra Vecchi and Amanda Dickerson, "Africa in Boston: Volunteering at the Somali Development Center"

*Caitlin Conboy, Presiding***The American Political System: Historical, Modern, and Comparative Perspectives  
(paper session)** *Pendleton East 105*

Julia K. Rosenstock, "'Four Score and Seven Years Ago...': The Legacy and Memory of the American Revolution"

Sally Ashe, "British Devolution and American Federalism: A Comparative Look"

Jennifer L. Tucker, "The Internet and Political Campaigns"

*Jaime Danehy, Presiding***Cross-Cultural  
Encounters****Wintersession in India (panel)** *Pendleton West Salon*

Miriam Berkowitz, Ellen Cho, Rachel Greenberger, Judy Haverland, Sarah Holladay, Tara

Ramanathan, Rudina Seseri, Hilary Soderland, Rachel Stern, Marisa Van Saanen, and Elizabeth Walsh, "Grassroots Development and the Gandhian Legacy"

**Strong Unnumbered Women (performance)** *Jewett Auditorium*

Pauline Yasuda, Stacey Bubolz, Christine Valeo, Lauryn Sasso, Erika Reinfeld, and Jenny Caplan

**Religious and Spiritual Expression (paper session)** *Green Hall 330*

Alexis Guild, "Silence, the Language of the Holy"

Kelly Gearhart, "Catching Butterflies"

**Science and Technology****Art and Science of Multimedia (multimedia)** *Science Center E211*

Katherine Perino and Alyssa Tang, "Flamenco: el cante, el baile, y el toque"

Cathi Kwon and Hye-Hyun An, "KPop Café"

Frances Hsieh and Rosanna Wan, "Secrets of a Chinese Grandmother: Origins of Chinese Holidays"

Lena Lo and Judy Yeh, "House of Eternity"

Rachel Lomasky and Katherine Megquier, "Persuasion"

Sheila Vyas and Nirali Patel, "Language of Color"

Diana Fong and Andrea Lehmann, "BLINK: A Lesson in the Cognitive Science of Perception"

Lai Lee Chau and Demerease Salter, "What's Up: An Introduction to Astronomy"

**Effect of Environmental Stress on Cyanobacteria (panel)** *Science Center 277*

Sungyon Bang, "Chloramphenicol Stress"

Alissa Brown and Melissa Morris, "Antibiotic Stress"

Nora Erickson, "Light Stress"

Maliha Farooq and Wendy Chow, "Growth Measurement"

Jean Huang, "Acid Stress"

Lea Medeiros, "Low Nitrogen Stress"

Myla R. Morales, "High Temperature Stress"

**Observing the Physical Universe (poster session)** *Science Center Focus*

Sarah A. Miller, "Role of the Iron-Oxy Substitution in Igneous Allanite-Epidote"  
 Logan Hennessey, "Hubble Space Telescope Observations of the Eclipsing Binary Star VV Cephei"  
 Alceste Bonanos, "WIMPs and MACHOs in the Galactic Halo"  
 Binta R. Beard, Kathryn C. Claiborn, Rosalie A. Elder, Barbra E. Goyanes, Elana T. Hayasaka,  
 Jeanne L. Hsu, Deborah A. Jakubowski, Allison K. Marshall, Margaret D. Scheffler,  
 Stephanie A. Schur, Natasha M. Teutsch, and Elizabeth M. Wolkovich, "Molecules and  
 Morphology: Phylogeny of the Arthropoda"

**About Wellesley****Wellesley: The People and the Place (exhibition)** *Jewett Arts Center*

Kathryn Moll, "Memorial to Room 112"  
 Cynthia Eldridge and Jiasuey Hsu, "Being Wellesley Specific"

**Life, Literature,  
and the Arts****Modern Writers (paper session)** *Founders 307*

Seoyoon Sandra Chu, "Qui est là? The Discourse of Displacement, Exile, and Home in Jean Rhys'  
*Voyage in the Dark* and *Wide Sargasso Sea*"  
 Lydia Middleton, "Emphasizing the Other Hurston: A Study of *Jonah's Gourd Vine* and *Moses, Man of  
 the Mountain* in Relation to *Their Eyes Were Watching God*"  
 Genevieve Haas, "Conceptions of Free Will in the Works of John Irving and Kurt Vonnegut"  
 Laura Ann Pechacek, "Comment dire «Je»: Paradox and the Narrative in Assia Djebar's  
 Autobiographical Fiction"  
 Lauren Brignone, *Presiding*

**Striking Comparisons (paper session)** *Founders 207*

Heidi Shin, "The Depiction of Social Class Mobility through the Use of Language and Landscape in  
 E.M. Forster's *Howard's End*, Kazuo Ishiguro's *Remains of the Day*, and Hanif Kureishi's  
*Buddha of Suburbia*"  
 Elizabeth W. Son, "Ethnic Impostors?: Impersonating the Other in William Styron's *The Confessions  
 of Nat Turner*, Robert Olen Butler's *A Good Scent from a Strange Mountain*, and Anna Deavere  
 Smith's *Fires in the Mirror*"  
 Cindy Kang, "Rimbaud and Van Gogh: A Correspondence between Poetry and Painting"  
 Jennifer Coogan and Robyn A. Sklar, "NC-17: A Cross-Cultural Examination of Sexual Taboo  
 in Cinema"  
 Barbara Langworthy, *Presiding*

**Self and Identity****Voice and Connection II (literary readings)** *Collins Cinema*

Yasmeen Golzar, "Paper Doll Dreams"  
 Katharine Freeman and Yiwen (Karyn) Lu, "K<sup>2</sup>: Reflections"  
 Jennifer Shim, "Dark Gifts: Legacies of a Young Girl"  
 Corrina Moucheraud, *Presiding*

**Child Development (poster session)** *Science Center Focus*

Seema Arora and Payal Bansal, "Birth Order, Self-Esteem, and Conformity in Preschool Children"  
 Katherine Hagadorn and Maria Madrigal, "The Relationship between Gesture and Popularity in  
 Preschool Children"  
 Helen MacDonald and Janise Kim, "The Effect of Time Spent with Father on Sex-Role Flexibility in  
 Preschool Girls"

Katherine A. Linsenmeier and Jeanine M.S. Yost, "Will William Play with Dolls? The Effects of a Story that Challenges Gender Stereotypes on Preschoolers' Toy Play"

Colleen A. MacDonald, "Do Discrepancies between Children's and Parents' Reports of Partner Violence Contribute to Children's Reports of Anxiety?"

## Gender and Sexuality

**Sexuality for Sale: Internet Brides, Child Prostitution, and Asian-American Pornography**  
(paper session) Founders 120

Alisa Keene, "e-Brides: The Booming, Unregulated, and Lucrative Business of Internet Wives"

Laura Murray, "Deconstructing the 'Development' of Child Prostitution in Costa Rica"

Holly Uyemoto, "'What's a Nice Girl Like You Doing in an Anal Movie?': Asian/Asian-American Representations in Pornography"

*Theresa Tribble, Presiding*

12:10 – 1:30 Lunch

All members of the Wellesley College Community are invited to have lunch on Severance Green (In the event of rain, lunch will be served in the residence halls)

1:30 – 2:40

## Politics: Identity and Change

**Public Policy in Massachusetts (paper session)** Pendleton West 105

Jennifer Abernathy, "School Desegregation in the Boston Area: A History"

Jessica Hardie, "Discourse of Rights and Responsibility: Desegregating the Boston Public Schools"

Caroline Sung, "The Evolution of Youth Activism in Community Development and Youth-Serving Organizations"

Sola A. Adelowo, "Survey of Four Massachusetts Title X Grantee Agencies' Family Planning Services to Low-Income Women, Adolescents, and Racial/Ethnic Minority Groups"

*Theresa Lund, Presiding*

**Studies in Latin American Politics (paper session)** Science Center 278

Jennifer Josten, "A Shout on the Wall: The Development and Use of the Poster in Revolutionary Cuba, 1959-1971"

Melanie Krebs, "A People on Display: Tourism as a Development Strategy for Peruvian Campesino Communities"

Elizabeth Walker, "Beyond Borders: General Augusto Pinochet and the Norms of International Law"

*Michelle Lapointe, Presiding*

## Cross-Cultural Encounters

**Through a Cross-Cultural Lens (multimedia)** Knapp PC Classroom

Cheryl Ching, Chung-hao Chien, Julie Hartle, and Shirley Hwang, "A Survey of Perceptions between Mainland China and the United States"

**Issues in Education (paper session)** Pendleton East 105

Joanne Y. Lee, "LIMITED OPPORTUNITIES: A Historical, Economic, and Social Analysis of Korea's Education System"

Julia J. Lee, "Religion in the Public Schools: Analyzing the Separation of Church and State in America's Education System"

Elizabeth Walsh, "Charter Schools: All Hype or a New and Improved Strategy for Equitable and Efficient School Finance?"

*Sarah Penyack, Presiding*

**Wintersession in Shanghai (panel)** *Library Lecture Room*

Lydia Chan, Ngoc-Diep To, Lydia Park, Shing-Yi Wang, Chi Phan, and Cynthia Yang, "Perceptions of Shanghai, Before and After"

**Science and Technology****Current Trends in Immunopathology: The Immune System and You (panel)** *Science Center 277*

Johanne Auerbock, Yoori Lee, Erin E. Lunde, Allison K. Marshall, Crystal Watson, and Lisa Wittenhagen, "When Your Body Turns against You: Disorders of the Immune System"

**Computer Animations (exhibition)** *Science Center, Sage Lounge*

Lin Hsu and Cindy Jung, "Why Did the Chicken Cross the Table? And Other Computer Animations"

**Practical and Fun Applications of Computers (paper session)** *Science Center 268*

Kirsten Chevalier, "Clustering for Fun and Profit"

Anindita Basu, "Interactive Storytelling Toys"

Hefei Wang, "A Software Tool for Calculating First and Follow Sets"

*Karen Hutchison, Presiding*

**Brain and Behavior (paper session)** *Science Center 377*

Evelyn L. Bricklin, "Do Ecological Factors Influence the Evolution of the Neural Pathway for Olfaction?"

Sheila Ravendhran, "Location, Location, Location... Animal Models of Dyslexia Lesion Location and Effects on Neuron Size"

Clara Keabian, "Laugh Away Your Cravings: The Effects of Nitrous Oxide Exposure on Alcohol Consumption in High Alcohol Drinking and Alcohol Preferring Rats"

Jessica Kirby, "Nitric Oxide Production in the Brain of the Lobster *Homarus americanus* during Larval Development"

*Margi Chan, Presiding*

**Life, Literature, and the Arts****Autobiography and Fiction (paper session)** *Founders 120*

Susan Corkery, "Ahab, Bartleby, and Melville: Character Parallels and Autobiographical Themes"

Margaret Samu, "Reveries of Childhood: The Idyllic Memories of Chateaubriand and Oblomov"

Zelideth Maria Rivas, "A Page of Madness: Cinematic Techniques in the Literary Works of Yokomitsu Riichi"

*Audrey Smith, Presiding*

**Asia: Images and Ideals (paper session)** *Jewett 372*

Sonal Khullar, "Engendering India: The Tropes of Maya and Mata in Rushdie's *Midnight's Children*"

Rachel Spaulding Greenberger, "The Beggarmaster as an Archetypal Horror in Rohinton Mistry's *A Fine Balance*"

Pui Yan Li, "The Romantic Period of Cantonese Opera in Hong Kong: Tang Di-sheng (1917-1959) and the Seen Fung Ming Troupe (1956-1972)"

Elly Ham, "China's 'Sexual Awakening': Understanding the Erotic Tradition during the Ming Dynasty (1368-1644)"

*Charlene Wang, Presiding*

**Self and Identity****Matrix and Multiplicity (exhibitions)** *Jewett Arts Center*

Sophie D. Lee, "Work in Progress: A (Self) Portrait of Women's Work"

Danielle Hall, "Earl Grey with Lemon, Decaf Darjeeling, and Hibiscus Flower Pot: An Introspection through Tea"

Cate Brandt, "Loss and Distance: Empathizing with the Kosovar Experience"

Margaret Urban, "With That Wonderment which is the Birth-Act of Philosophy, I Suddenly Start to Query the Familiar"

Tracie Lee, "Elusive Boundaries"

Erica Goetz, "Time Change"

Marlene Kuhn, "Outside of Normal"

Cassandra Johnson, "Portal"

Florencia Garcia, "Home Sweet Home"

**Self-Concept and Learning (paper session)** *Founders 207*

Rebecca Sanborn, "Academic Self-Concepts of Preschool Children"

Laura Segelke-Bradford, "The Correlation between Personality Traits and Exchange Students' Levels of Immersion"

Katherine A. Linsenmeier, "Wellesley Students' Attitudes Towards Mathematics"

*Albina Thakkar, Presiding*

**Voice and Connection III (literary readings and multimedia)** *Jewett Auditorium*

Chrisanne Souza, "Of Water" (poetry)

Anna Raphael, "Eclectic Electric Poems" (poetry)

Johanne Blain, "MURDerER" (multimedia)

*Jamie Levine, Presiding*

**Gender and Sexuality****Views of Gender (paper session)** *Founders 307*

Deborah F. Milstein and P.H. Michelle Tsai, "Moon, Menses, Madness: Menstruation in Myth, Culture, and Politics"

Casey Olm-Shipman, "Tom Girls and Nancy Boys: Preschool Children's Reactions to Gender Stereotypes"

*Erika Reinfeld, Presiding*

**2:40 – 3:00 Break**

*Refreshments available in Jewett (opposite the Auditorium), the Davis Museum (Lobby), the Science Center (Lounge) and Pendleton East (Political Science Lounge)*

**3:00 – 4:10**

**Politics: Identity and Change****International Political and Economic Issues (paper session)** *Founders 120*

Bouchra Aquil, "Dumping or Protection? A Reevaluation of the Case of Turkish Steel Rebar before the International Trade Commission"

Natalya Kaydash, "Causes and Consequences of the Russian Financial and Economic Crisis, 1998"

Ayfer Ali, "Economics and Olympic Medals"

Tracey Dominick, "Financial Structure, Investment, and Growth"

*Diva Singh, Presiding*

**Cross-Cultural Encounters****Living and Learning Abroad (panel)** *Library Lecture Room*

Sarah Coradetti, "Relationship between a Petro-chemical Complex, Surrounding Communities, and the Pollution of Lake Maracaibo, Venezuela"

Sarah Coradetti, "River Water, Holy Water—Current Conceptions of Nepal's Bagmati and Her Waters"

Brooke Devenney, "Estimating Stocking Rates of Resident Livestock at the Ngong Hills Forest Reserve"

Kristin Looney, "Tutorial in Contemporary Women's Issues in China, Summer, 1999"

**Latina Women at Wellesley (panel)** *Science Center 277*

Maria Celeste Alvarado, "In Their Own Words: Portraits of Latina Identity"

**Science and Technology****Cell and Molecular Biology (paper session)** *Science Center 278*

Karen Sautter, "The Immunogenicity of Murine Immature Dendritic Cells Expressing DNA-Vaccine-Encoded Polypeptides of the Rauscher Leukemia Virus"

Hillary Bernstein, "Study of the Wnt Cancer Pathway"

Tina Chen, "Cell Cycle and E Protein Regulation"

*Shelley Walsh, Presiding*

**Metals in Chemistry and Biology (paper session)** *Science Center E211*

Jennifer Williams, "Anomalous Photophysical Behavior of the Uranyl Ion"

Barbara B. Jurim, Nancy Kesek, and Iris Kuo, "Biological Toxicity of Heavy Metals"

**Biological Responses to Natural and Unnatural Stimuli (poster session)** *Science Center Focus*

Jennifer Vazquez, "Electron Microscopy of Rat Lungs as Affected by Adrenaline Blocking Drugs"

Fong (Fawn) Cheng, Michelle Iniguez, and Khadija H. Mani, "Proteases in Cyanobacteria"

Christine Guth, "Stability and Binding of Ligand to Endopeptidase 24.15"

Dawn Joyce, "Effect of Calcium on Structure of Endopeptidase 24.15"

April Bonnie Chang, "Does a Change in Finger Temperature Precede a Migraine Attack?"

Diane Birmingham, Jessica Brommelhoff, and Sheila Ravendhran, "Rhythms of the Night: Circadian Rhythms in the Leech"

Liz Cope and Jean Huang, "Vernal Pool Conservation"

**About Wellesley****Hannah French: Book Arts at Wellesley College (exhibition)** *Clapp Library Special Collections*

Alexis R. Dinniman, "'Preservative of All Arts': Hannah French and the Art of the Book at Wellesley College"

**A Famous Graduate (panel)** *Knapp PC Classroom*

Alice Tzou and Jennifer Downing, "Bridging Three Centuries: Mayling Soong (Class of '17)"

**Life, Literature,  
and the Arts****Harriet Beecher Stowe (panel)** *Pendleton East 105*Lauren Zykorie, "Racial Myopia in Stowe's Characterization of Negroes in *Uncle Tom's Cabin*"Lydia Chan, "George Harris and Colonization in *Uncle Tom's Cabin*"Dawne Thorne, "Slave Insurrection, God, and Dred in Harriet Beecher Stowe's *Dred: A Tale of Great Dismal Swamp*"**Voices in Literature and Medicine (panel)** *Collins Cinema*

Maria Almond, "'Til Death Do Us Part: A Doctor's Two Loves"

Hannah K. Galvin, "Solving the Mystery: Diagnosis and Literary Analysis as Art"

Katrin Sadigh, "The Self of Madness: From the Inside"

**Self and Identity****Children and Relationships (paper session)** *Founders 207*

Anneliese Bass, "Young Children's Concepts of Close Relationships"

Emily M. Hansen, "Perceived Mutuality between Parents and Their Preschool Children"

**Nature Writing (literary readings)** *Davis Museum*

Auben Van Meter, Elizabeth Campbell, and Stephanie Kyriazis, "Nature Writing"

**Gender and Sexuality****Feminist Perspectives (paper session)** *Founders 307*

Kathryn Ward, "Feminist Sociosexual Orientation"

Jennifer Kiest, "Gender Imbalances in Attitudes and Practices of Housework and Child Care by MIT Sloan School of Management Students"

Jennifer Schurer, "Unpacking the PAQ: A Reanalysis of the Personal Attributes Questionnaire after 25 Years of Social Change"

Yael D. Sherman, "Reconstituting Feminism: Women of Color in the 1970s and 1980s"

*Kirsten Chevalier, Presiding***4:10 – 4:30 Break***Refreshments available in Jewett (opposite the Auditorium), the Davis Museum (Lobby), the Science Center (Lounge) and Pendleton East (Political Science Lounge)***4:30 – 5:40****Politics: Identity  
and Change****Issues in Political Philosophy (paper session)** *Collins Cinema*

Sarah P. Fishleder, "A Contemporary Interpretation of Marxism"

Anne Openshaw, "The Concept of Sovereignty in an International Community: A Philosophical Analysis"

Mélody Saint-Saëns, "Women and Democratization: Allies or Antagonists? A Comparison of Spain and Argentina"

Katherine Graf, "Albert Speer: Moral Responsibility in a Totalitarian Regime"

*Lydia Chan, Presiding*

**Cross-Cultural Encounters****Stories of Change (paper session)** *Founders 207*

Stephanie Lueckel and Jean Poe, "Silent Speaking: Memory and Voice in Women's Lives"

Jane A. Gwira, "Health Care Professionals: Reversing the Brain Drain"

Hilary Johnson, "'I Feel a Little Discombobulated': Reflections on a Week in India"

*Valentine Edgar, Presiding***Science and Technology****Science and Society (paper session)** *Founders 120*

Jennifer V. Gillcrist, "Privacy and the Genetic Age"

Valerie Antoine, "Voodoo Medicine and Survival: A Look at Haiti's Traditional Healing System"

Judith Scott, "Reading between the Genes: The Human Genome Project in Popular Discourse"

*Hannah Galvin, Presiding***Vomit/Comet (talk and multimedia)** *Science Center 278*

Allison Dupuy, Kathryn Odiorne, Jennifer Ross, and Rebecca Wilson, "Wellesley's 'Vomit Comet'

Team Experience 2000: Group Investigating Rotating Liquids Under Space Conditions **just wanna have Fluids Under No-gravity** (G.I.R.L.S. just wanna have F.U.N.)"**About Wellesley****Film Visions (film screenings)** *Collins Cinema*

Kristen Boney, Monica Della Croce, Alyssa England, Stephanie Harre, Brooke Iglehart, and Kristina Lawyer, "Gendered Violence"

Yuiko Yasuda, "20"

**Anomie, Spirituality, and Life Changes (panel)** *Library Lecture Room*

Sola A. Adelowo, Natka Bianchini, Ayn Cavicchi, Dena Citron, Karina Coombs, Sarah Gottesman, and Iris Yee, "Anomie and Higher Education"

**Life, Literature, and the Arts****Building an Ear (performance)** *Jewett Auditorium*

Brigid Cohen, "A Performance of Student Compositions and Classic 20th-Century Repertoire"

Eliza Heaton, Julie L. Lee, Julia S. Lee, Anna Koteff, and Randy Wong, "Schubert's Trout Quintet"

**Art, Architecture and Life (paper session)** *Jewett 372*

Laura C. Widmar, "Transcending Divisions: The United States-Mexico Border and Its Impact upon a Growing Artistic Movement in Mata Ortiz, Chihuahua, Mexico"

Caroline Hellman, "Frank Lloyd Wright and Distinct Usonia"

Tracey Dominick, "Economics and Style: The Usonian Automatic Style as Exemplified by the Pappas House"

*Eleftheria Keans, Presiding*



**Self and Identity**

**Expressions of Self (paper session) Founders 307**

Elizabeth David, "The Influence of Mood States on the Perception of Emotion"

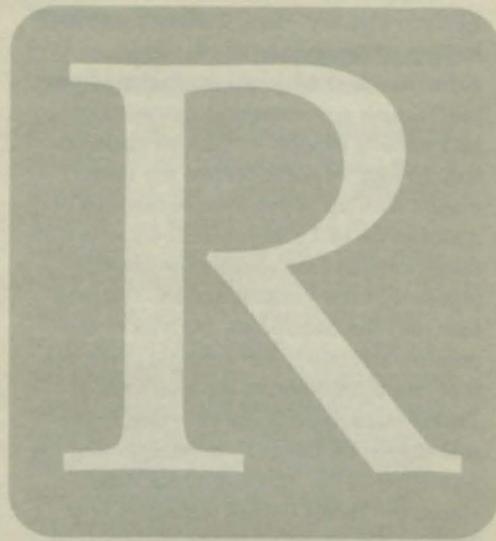
Erin Pahlke, "The Impact of Acculturative Stress on the Development of Possible Selves"

*Shannon Smith, Presiding*

**Gender and Sexuality**

**Looking through a Gendered Lens (exhibition) Jewett Arts Center**

E. Ashley Reichheld, "Looking through a Gender Lens: Self-Perception and Performance"



## Abstracts

9:30 -10:40

**Politics: Identity and Change****Responses to Political Upheaval****Refugee Repatriation and Community Revitalization: Can Microcredit Lending Encourage Social and Economic Reintegration?***Chavi Keeney Nana, International Relations and German Language and Literature '00*ADVISOR: *Craig N. Murphy, Political Science and International Relations*

The frequency and magnitude of refugee flows produced by ethnic conflict in the post-Cold War period have forced the international community to reconsider its consistent rejection of repatriation as a viable solution to forced migration. If repatriation is to be successful, returning refugees must be reintegrated into communities torn by internecine warfare. Simultaneously, these communities must be socially rehabilitated and economically revitalized. Microcredit lending programs operate on the concept that community participation can be used to achieve economic self-sufficiency. Three repatriation programs established for the former Yugoslavia have incorporated lending schemes as a reintegration tool, and are evaluated on their ability to aid returnees and communities in postconflict rehabilitation and reconstruction.

**Turkish National Identity in Transition? Reflections on Turkish-Armenian Relations***Ayse Kaya, Political Science '00*ADVISOR: *Joel Krieger, Political Science*

In my thesis I investigate two primary subjects, nationalism and Turkey. First, I examine theories on nationalism and nation formation. Turkey represents the second focus of the thesis. I have chosen Turkey not only because I am Turkish, but also because different theories of nationalism can be applied to the emergence, growth, and future visions of the Turkish

national identity. Here, Turkey's denial of killings of Armenians in 1915 and Armenia's insistence on an apology from the Turkish government provide insights into various aspects of Turkish nationalism. In light of these points, my thesis begins with an application of theories of nationalism to Turkey. It follows with how the Armenian case reveals the identity problem of the Turkish nation. This will lead into the concluding analysis of the possible structural and internal pressures that might impinge on the character of Turkish nationalism. By referring to the role played by the 1915 massacres and the formation of the Turkic Central Asian states, the thesis overall examines how Turkish-Armenian relations today reveal important characteristics of the Turkish national identity. (Research supported by a Schiff Fellowship)

**Religion, Politics, and Power in Israel and the Occupied Territories: Reflections on Hamas and Gush Emunim***Elizabeth Siegel, Religion '00*ADVISOR: *Barbara Geller, Religion*

Hamas and Gush Emunim, a Palestinian Islamic and an Israeli Jewish group, respectively, are each struggling to shape both the future identity of their communities and the outcome of the ongoing Israeli-Palestinian peace process. Each group has been popularly described by the controversial and ambiguous label of "fundamentalist". However, on close examination this designation proves to be both inadequate and imprecise. Nevertheless, a comparison of the roots, ideologies, goals, and methods of Hamas and Gush Emunim sheds light on their similarities and differences and also on the changing relationship between religion and politics, specifically the introduction of the very use of modernity to counter modernity. Their conceptions of the ideal state and philosophies of coexistence are especially important in contributing to the challenges of the peace process.

**Responses to Natural Disaster****'Currents of Strength': The Strategies of Nicaraguan Women in the Wake of Hurricane Mitch***Haydée Chinyere Brown, Latin American Studies '00*ADVISORS: *Lorraine E. Roses, Spanish and Martina Königer, Biological Sciences*

In July 1979, the Sandinista National Liberation Front (FSLN) seized control of the Nicaraguan government. The FSLN introduced methods of collective organization and broad-based democratic community participation to attack the national problem of poverty. Health care is an area in which Sandinista policy was most effective, as it converted many Nicaraguan people into actors of their own political and physical fates. Despite the September 1990 electoral defeat, examination of contemporary Nicaraguan society suggests that the FSLN is still an important actor in Nicaragua. The response to the devastating visit of Hurricane Mitch from October 22nd to November 1st of 1998 is one indication of the Sandinista legacy. Women in Hurricane Mitch camps refused to be victims and staked out a role in shaping their own political fates. The presentation uses interviews collected in refugee camps to illustrate how women drew upon Sandinista models for popular participation and formed community-based collectives to organize relief efforts.

**Historical Perspectives****Turkish and Muslim Minority Women's Experience of the Bulgarian Rebirth Process (1984-1990)***Ayfer Ali '02*ADVISOR: *Lidwien Kapteijns, History*

The "Re-Birth" Process is an euphemistic name given by the Bulgarian government to a set of policies that severely discriminated against the Muslim Bulgarian population of Turkish descent, which has lived in the country since the 16th century, when Bulgaria was under Ottoman rule.

The series of oppressive acts included the forceful changing of the names of all Turkish and Muslim people into Slavic Christian names, religious persecution, the destruction of health and other administrative records, and the expulsion of about 300,000 people from the country in the summer of 1989. This policy of active discrimination lasted from 1984 until the fall of the Communist regime in 1990, and women have been specifically targeted. Examples of oppression aimed at women include job dismissals, forceful separation from their families, group rapes, arrests, torture, and tearing of traditional clothing from women's bodies in public. The paper will analyze identity issues across generations of women resulting from the rebirth process and will also discuss the choices that these women have, as well as their exclusion from the agenda of both Bulgarian and Turkish feminist women. The paper is based on personal experience and summer research in Bulgaria and Turkey, supported by a Barnett Miller research grant.

**The Changing Face of the African American Community in Portland, Maine: An Ethnographic Study from 1865 to the Present**

*Nondini Alia Naqui '02*  
 ADVISOR: *Anastasia Karakasidou, Anthropology*

This project is based upon updated ethnographic fieldwork concerning the African American community in the Munjoy Hill section of Portland, Maine. The quantitative piece of the research is made up of the compilation and statistical analysis of the 1880 and 1920 census data, and general information from 1989 and 1950. Using Excel, I analyzed the age ranges, gender statistics, street distribution, and employment of the residents of the Munjoy Hill area in order to determine the migration patterns. The qualitative part of the research includes an examination of historical newspaper articles, black and white photography, and interviews of residents and members of the African American community. A theoretical section including analysis of the qualitative and quantitative data using anthropological theory will be in the conclusion of the paper.

**Saving the Forest for the Trees: Autonomy, Freedom, and the History of Environmental Protection in Karelia, Northern Russia**

*Lisa Woodson, Russian Area Studies '00*  
 ADVISOR: *Paul Josephson, History*

By the 1970s, Soviet industrialization had stamped its environmental legacy on the landscape of the Autonomous Republic of Karelia: vast forests vanished from the countryside, and snow fell mixed with black soot in the cities. Despite the repression of free speech in the Soviet Union, a brave group of biologists and foresters joined together to try to change environmental policies and encourage the study of ecology. In the late 1980s, the scientists' efforts yielded fruit as glasnost carried their environmental warnings out of closed laboratories and into general consciousness. After the collapse of the Soviet Union, many social organizations, gifted in raising public commotion, focused their attention on environmental safety while the voices of the scientists who pioneered ecological research nearly disappeared amid the "green fever". Today, environmental management is often led, not by science and scientific principles of ecology, but by social demand. (Research in Karelia supported by a Schiff Fellowship)

**Cross-Cultural Encounters**

**Asian Internship Experiences**

**Summer Days in Hong Kong**

*Cynthia Eldridge, Biology and Art History '00, Malinda Lee, Political Science '01, Ting Ni, Political Science and Chinese Studies '00, Kristin Olson, English '00*  
 ADVISOR: *William Joseph, Political Science*

As it grows out of its position as a British colony and assumes its new role within China, Hong Kong is in a dynamic state of transition. We propose to discuss how the changes at work there permeate Hong Kong culture. In our summer as Elisabeth Luce Moore '24 Wellesley-Yenching Interns, we explored current issues in environmental science, politics, the arts, and educational technology. Cynthia will discuss how the Pearl River Estuary

Pollution Project, a joint environmental research project between Hong Kong and mainland China, exposes the challenges facing Hong Kong in cleaning up its environment. Malinda will discuss Hong Kong's unfolding political identity as it takes part in an unprecedented one-country-two systems framework. Ting will discuss how Hong Kong is attempting to further develop its own distinct cultural identity through the arts, and Kristin will present a multimedia exploration of the summer experience as a whole. (Sponsored by a grant from the Luce Foundation)

**The Immigrant Experience in America**

**The Contemporary Immigrant Experience**

*Clarissa Kearns, Latin American Studies '00, Jana Kiser, Peace and Justice Studies '00, Laura Murray, Women's Studies and Political Science '00, Lauren Peters, American Studies D4, Claudia Ramirez, Latin American Studies and Psychology '00, Christine Thompson, Latin American Studies '01, Amalia Walton, International Relations '00, Iris Yee, Sociology '01*  
 ADVISOR: *Peggy Levitt, Sociology*

When Adam and Eve left the garden of Eden, they became the world's first immigrants. Since then, men and women have been moving around the globe and bringing disparate cultures into contact with each other. This panel presents findings from original research conducted by students on a range of topics dealing with migration. Each student defined her own question, devised her own research methodology, carried out her own research project, and analyzed her data. Our studies cover a range of topics including ethnic entrepreneurship, ethnic churches, and transnational migration.

## Science and Technology

### Medicinal Plants

#### Medicinal Plants: Do They Keep Their Promises?

Valerie Antoine, *Biological Sciences '01*,  
Rosalie Elder, *Biological Sciences '02*,  
Sonya Maria Funaro-Soto, *Anthropology '00*,  
Bernice Hwang, *Environmental Science '01*,  
and Lesley Wood, *Biological Sciences D3*

ADVISOR: Martina Königer, *Biological Sciences*

As part of a lab project in plant biology (BISC 207), we tested the anti-microbial properties of extracts from ten different plant species with supposed medicinal properties. The microbes that were used included usually benign bacteria such as *Staphylococcus aureus* and *Escherichia coli*, as well as potentially harmful microbes such as *Staphylococcus epidermis*, *Salmonella typhimurium*, and *Candida albicans*. Our results showed that the ability of the extracts to inhibit microbial growth was influenced by:

- (1) the quality of the starting material (fresh samples; samples dried in the sun or shade; samples obtained from a store)
- (2) the plant part, and
- (3) the extraction method (extractions using cold water, hot water, or alcohol; essential oils obtained from a store)

Several plant species showed no anti-microbial properties even if the extracts were prepared according to the recommendations in books on medicinal plants or if commercial extracts were used.

### Proteins and Biological Functions

#### The Localization of a Chondroitin Sulfotransferase in the Mouse Central Nervous System: *In Situ* Hybridization

Noëlle Paffett-Lugassy, *Biological Sciences '00*

ADVISOR: Mary Nastuk and Marjory Levey, *Biological Sciences*

Proteoglycans comprise a class of molecules characterized by a protein core with covalently linked sidechains of repeating disaccharides known as glycosaminogly-

can (GAG) chains. Chondroitin sulfate proteoglycans (CSPGs) are a category of proteoglycans that influence neural development and plasticity throughout adult life. The degree of GAG sidechain sulfation may influence the functions of the proteoglycans to which they are attached. The sulfation of GAG sugar residues is catalyzed by sulfotransferases, and the analysis of these enzymes contributes to understanding proteoglycan function. Chondroitin sulfotransferase (CST) is involved in the modification of certain CSPGs of the CNS. The anatomical localization of the enzyme is unknown; thus, my current work is geared towards assessing the levels of CST mRNA expression within the CNS of early postnatal and adult mice. I am using *in situ* hybridization to determine the localization of CST mRNA, as well as immunohistochemical procedures to localize the CST enzyme. (Supported by a Beckman Fellowship)

#### The Localization of a Chondroitin Sulfotransferase in the Mouse Central Nervous System: RT-PCR and Southern Blot Analysis

Sarah McGinnis, *Psychobiology '00*

ADVISOR: Marjory Levey and Mary Nastuk, *Biological Sciences*

Understanding synapse formation and maintenance in the nervous system requires the characterization of component molecules. Chondroitin sulfate proteoglycans (CSPGs) are a heterogeneous class of molecules containing a protein core linked to one or more glycosaminoglycan (GAG) sidechains. Sulfation of these sidechains may influence CSPG function. Chondroitin sulfotransferases (CSTs) are the enzymes responsible for sulfating CSPG sidechains and may regulate CSPG activity. This project focuses on CST expression in the mouse central nervous system during different developmental stages and maturity using reverse transcriptase-polymerase chain reaction (RT-PCR) and Southern blot analysis. Initial results have demonstrated CST expression in the adult mouse cortex and olfactory bulb. Further studies will focus on CST expression in early postnatal development, as well as a more detailed analysis in other brain regions and spinal cord.

These studies should provide insight into the role of CSPGs in synapse formation and maintenance in the developing and mature nervous system.

#### Why Cells Are Not Floppy Bags: The Importance of the Actin Cytoskeleton

Barbara B. Jurim, *Biological Chemistry '00*, Erin E. Lunde, *Biological Sciences '00*, and Lisa J. McReynolds, *Biological Chemistry '00*

ADVISOR: T. Kaye Peterman, *Biological Sciences*

The cytoskeleton has been referred to as the "bones and muscles" of the cell: providing structural integrity and enabling cell motility. The cytoskeleton is made up of many proteins, one of which is actin. Actin can exist as a single unit or can be strung together to form long, functional filaments. The resulting meshwork of filamentous actin is essential for many cellular processes, including cell movement, cell growth, and cell division. Actin-binding proteins assist in actin's various cellular functions. While many actin binding proteins have been identified and characterized in mammalian cells, little is known about these proteins in plant cells. Recently, our laboratory isolated a novel plant actin-binding protein, called ADB-At1. ADB-At1, the subject of these studies, is thought to be a link between the actin cytoskeleton and the plant plasma membrane. Our findings on the molecular genetics, structure, and function of this protein will be presented.

### Molecules Never Seen in Nature

#### Synthesis and Characterization of a 12-residue Endothiopeptide

Sarah Popek, *Neuroscience '00*

ADVISOR: Julia Miwa, *Chemistry*

A thioamide was inserted into a 12-residue peptide previously shown to adopt b-hairpin structure. The insertion of the thioamide was accomplished through the use of a thioacylating reagent concomitant with solid phase peptide synthesis. It was hypothesized that this substitution would strengthen the hydrogen bonding, which is the basis of secondary structure formation. A sulfur substitution on an amide has been shown to increase the acidity of

the hydrogen bonded to the alpha nitrogen, on the order of 1 to 3 pKa units. The effect of the modified hydrogen bonding on the secondary structure of the peptide was investigated by measuring the population of peptide in b-hairpin formation as compared to the population in random coil. These results were compared to previous work with the unmodified peptide. 2D-NMR was used to analyze the hydrogen bonding between atoms on each strand of the structure, while CD was used to evaluate the ratio of folded peptide to random coil.

#### Synthesis of a Thioamide Inhibitor of EP 24.15

Anita Tsai, Chemistry '00  
ADVISOR: Julia Miwa, Chemistry

Cpp-Ala-Ala-Tyr-PABA is an effective in vitro inhibitor of EP 24.15, a thiol-dependent metalloproteinase; however, this inhibitor fails in living systems as it is cleaved at the Ala-Tyr amide bond by neutral endopeptidase. As a result of this cleavage, our understanding of the role of EP 24.15 in living systems is limited. To strengthen the amide bond and prevent cleavage, the oxygen was replaced with a sulfur creating a thioamide variant, Cpp-A-Ala-Tyr-PABA. As other variations of the inhibitor, such as varying amino acid side chains or non-peptide based inhibition have failed up to this point, the synthetic design of structurally similar but chemically different inhibitors and substrates provides a promising avenue of research for future work in biological chemistry. (In collaboration with Ian Mangion, Harvard '01)

#### Direct Cyanation of 4-Phenyl-[1,2,4]-Triazole Using Electrophilic Cyanating Agents

Yoori Lee, Chemistry '00  
ADVISOR: David Haines, Chemistry

6-Aminoimidazo-[2,3-c]-triazole may be viewed as an adenine analog. The synthesis of the model analog, 6-amino-3-phenylimidazo-[2,3-c]-triazole was conceived to proceed through the intermediate 3-cyano-4-phenyl-[1,2,4]-triazole. Various synthetic strategies resulted in the addition of the cyano substituent at the 3 position of the triazole ring. The most

effective of these involved direct cyanation with an electrophilic cyanating agent. Our studies demonstrate that the intermediate cation of phenyltriazole, generated from reaction with cyanogen bromide, in which the cyano group is bonded to one of the nitrogens of the triazole ring, is susceptible to nucleophilic attack at C-3. If the bromide from cyanogen bromide is not removed, the major product is bromophenyltriazole, while the removal of the bromide ion allows for rearrangement of the cyano group to the C-3 position. Alternatively, excess cyanide added to the reaction acts as a nucleophile, attacking C-3 and causing subsequent loss of HCN.

#### A New Class of Crystals with Saturated Hydrogen Bonding

Gabriela Reubins '03  
ADVISOR: James H. Loehlin, Chemistry

The structure of ice is the ideal hydrogen-bonded material. Every oxygen atom is hydrogen bonded to 4 adjacent molecules, by donating hydrogens to make 2 hydrogen bonds and accepting 2 others from neighboring molecules. It is thus the prototypical saturated-hydrogen-bonded (SHB) crystal, in which every donor hydrogen and every acceptor site is used. Recently, equimolar alcohol-amine crystals were recognized as belonging to the SHB family, with a complementary arrangement of -OH groups providing 1 donor and 2 acceptors and -NH<sub>2</sub> groups with 1 acceptor and 2 donors. We have been investigating a third possible class of SHB materials. Secondary amines have a single donor and acceptor on each =NH group which might form a new SHB class. We have searched the Cambridge Structural Database for published structures with this feature and are now determining the structure of piperazine, likely the first structure in this class.

#### Growth and Characterization of Polycomponent Crystals

Jane A. Mars '02  
ADVISOR: James H. Loehlin, Chemistry

This research is an attempt to use the unique hydrogen-bond properties of equimolar alcohol-amine compounds to grow crystals which are not likely to be obtainable using ordinary growth tech-

niques. We are attempting to use alternating layers of diamines and diols to produce new materials. We have built a vacuum chamber containing molecular ovens which apply the component compounds in the desired order as molecular beams. The beams are designed to deposit a repeating pattern of single layers of a series of compounds on a suitable growth surface. The presentation will give a detailed description of the approach and explain the apparatus design. A progress report on various aspects of the experiments performed to date will be included.

#### Synthesis of a Xanthosine Analog through C3 Triazole Substituted Intermediates

Lisa Wittenhagen, Biological Chemistry '00  
ADVISOR: David Haines, Chemistry

3-Deaza-5-aza-9-phenylxanthine is a model xanthosine analog that will be used to determine a strategy for the synthesis of the desired xanthosine analog, 3-deaza-5-azaxanthosine. The challenge in the synthesis of the model analog has been the creation of a carbon-carbon bond at the C3 position of the triazole ring. Although the carbanion of 4-phenyl-1,2,4-triazole results in a decomposition to N-phenyl cyanamide, the anion of 3-methyl-4-phenyl-[1,2,4]-triazole is more stable. Reaction of the anion with ethyl chloroformate results in the formation of 3-carbethoxymethyl-4-phenyl-[1,2,4]-triazole. Current research is investigating the synthesis of 3-allyl-4-phenyl-[1,2,4]-triazole. The use of 3-allyl-4-phenyl-[1,2,4]-triazole in our experiments may lead to formation of the desired analog. (Research supported by a NSF REU Grant)

#### Synthesis of 3-Benzyl Carbazate - 4-Phenyl-[1,2,6]-Triazole

Nancy Kesek, Biological Chemistry '00  
ADVISOR: David Haines, Chemistry

Because adenosine and purine ribonucleosides have wide ranging biological activity, considerable effort has been invested in the research of nucleosides and their analogs for their potential therapeutic utility. Some of the most notable investigations have centered around nucleoside drug design aimed at combating viruses and cancerous tumors. The ultimate goal

of this research is to synthesize one such analog, the adenosine analog 2-amino-7- $\beta$ -D-ribofuranosyl-[1,2,4]-triazolo-(4,3-b)-triazole, which we hope will express anti-tumor and antiviral properties.

### About Wellesley

#### The Landscape and Architecture of Wellesley

##### "Do You See What I See?": Building the Body of Wellesley

Alexis R. Dinniman, *Art History '00*

Ellery E. Foutch, *Art History '00*

Alexandra R. Palmer, *Art History '00*

Keifsen H. Schleifer, *Architecture '01*

ADVISOR: Peter Fergusson and James O'Gorman, *Art*

Henry Fowle Durant's vision of a college built specifically for the education of women came to fruition with the opening of Wellesley College in September, 1875. Throughout the years, perceptions of women and the ideals of women's education have changed; these developing philosophies are reflected in the varied architecture of the Wellesley campus. From concerns regarding students' health and academic potential to the changing attitudes towards social lives and the formation of societies, the landscape and architecture of Wellesley College not only create aesthetic beauty, but they also conform to common notions about women. In the 125 years since its opening, Wellesley has expanded both its educational outlook and its architecture to create a beautiful campus that maintains the integrity of Mr. Durant's original intellectual purpose.

### Life, Literature, and the Arts

#### Poetic Visions

##### Emily Dickinson's "Dark" Sublime: Deconstructing the Woman Poet as "Other"

Natalie Biggs, *English and Russian '00*

ADVISOR: James Noggle, *English*

In her extended body of work, Emily Dickinson demonstrates an adherence to

the heritage of the sublime, even though her exact location in this sublime tradition remains elusive. The poetry of Dickinson appears to testify, both stylistically and thematically, to the tradition of the masculine sublime established by Longinus. Although she in many ways fulfills the Longinian definition of the sublime, Dickinson's characteristic "purification" of language, her self-destructive internalization of the split between self and other, and her opposition to the traditional masculine sense of the sublime, demonstrate her departure from the classic text of Longinus. Further, Dickinson differs from the more self-assured masculine sublime poets, Emerson and Wordsworth, in her relentless and repetitive deconstruction of herself and her relation to power. Yet this very self-destructive element in Dickinson functions subversively: she questions and condemns herself in order to commemorate herself. For while Dickinson may not attain accolades within the tradition of the masculine sublime, she uses its form to destroy her own image and, by doing so, to dramatize her immortality. Indeed, the poetry of Emily Dickinson achieves dual sublime success: by recognizably participating in the tradition of Longinus, she remains a valid voice in the sublime tradition while she subtly changes it from within.

##### Divine Ravishment: Paradise Lost and Sublime Theory

Meghan Hinchey, *English '00*

ADVISOR: James Noggle, *English*

A subject common to mystic religious writing, the desired/feared entry of a god into the closely human sphere (be it mental or physical) encapsulates the essence of a "sublime experience." Though mystical in theory, this trope has a long and venerable place in literature, from classical times onward. But what does this mean, exactly? Why is such a negative term, tantamount to 'rape,' sometimes used to describe the ultimate in positive, religious rapture? This presentation explores the implications of the gendered sublime, at its heart sustaining a close reading of passages from Milton's *Paradise Lost*, set in the context of 18th century

Sublime theorists whose ideas grew and developed out of a close familiarity with Milton's work.

##### "Wilderness of the Body": Nature, Humanity, and the Creation of Art in the Poetry of Mary Oliver

Lia Shimada, *English and Environmental Science '00*

ADVISOR: Alison Hickey, *English*

The contemporary poet Mary Oliver redefines "nature poetry" through her conception of a vibrant, complex world of interconnected natural elements. My paper will explore the human questions of Oliver's poetry. What does it mean to be human in the overarching natural world? How does Oliver weigh the desire to belong to nature's community against the sobering knowledge that to be human is, at some level, to be an outsider? How does she render her perception of the human place in the natural world, and where—and in what capacities—can a human being claim a home in such a world? I will look at the ways in which the emergence of human language, through themes of origin, birth, sex, death, and metamorphosis, creates an art of poetry that binds the human figure to the natural world.

#### Esthetics Revisited

##### Late Serialism: Public and Private Discourse in the Music of Boulez and Babbitt

Brigid Cohen, *Music '00*

ADVISOR: Martin Brody, *Music*

My thesis explores developments in serial composition after 1960 through a consideration of works by Pierre Boulez and Milton Babbitt. Serialism, a method of composition based on the ordering of compositional elements, became a unifying focus of attention for composers during the years immediately following World War II. Many composers recognized in serialism a potential to revolutionize Western musical culture. By 1965, however, serialism's revolutionary promise remained largely unfulfilled. Serial composers operated within a problematic cultural framework that undermined their claim to legitimacy. An ever-increasing

plurality of musical influences, such as indeterminacy, improvisation, world music, and minimalism, weakened serial composers' sense of a unified historical imperative. In addition, the growing prestige of popular music led many to question traditional hierarchies of popular and elite, jeopardizing this critical distinction in avant-garde theory. Widespread disillusionment with Cold War politics gradually replaced much of the post-war "ground zero" cultural optimism of the 1950s, which had fueled the serial revival. My thesis addresses how serial composers pursued a civic engagement in this environment and how this engagement shaped the development of their serial thought. I ultimately seek to demonstrate that even those idioms that seem most private and adamant may, in fact, yield substantial public meaning.

#### **Celluloid Shakespeare: A Survey of Sex, Politics, and Rock 'N Roll in the Twentieth Century**

*Devika Maulik, English '00*  
 ADVISOR: *Yu Jin Ko, English*

This project explores the process of adapting Shakespeare's plays for film. Recently, directors use soundtracks, stars, political analogies, and allusions to film genres when translating the playwright's text onto the silver screen. Some critics may feel this eagerness to popularize Shakespeare's plays may actually veer away from the true literary spirit of the playwright. On the other hand, film proves to be the best medium by which to slough off the academic stuffiness associated with Shakespeare and expose or even rejuvenate his mass appeal. After all, Peter Brook did say that "if you extract the mental impression made by Shakespearean strategy of images, you would get a piece of pop collage..." Basically, I argue that such popular, modern analogies and styles used by film directors are necessary in maintaining Shakespeare's universal appeal, especially in an age when the common aesthetic sense is being changed drastically by technology and consumer culture.

#### **Singing Performance**

##### **Jazz Performance**

*Hillary Bernstein, Latin American Studies '00, accompanist Paul Barringer*  
 ADVISOR: *Paul Barringer, Music*

#### **Self and Identity**

##### **Voice and Connection I**

##### **Collection of Poems**

*Anindita Basu, Computer Science and English '00*  
 ADVISOR: *Frank Bidart, English*

My thesis is to write a collection of poetry, which I have not officially named yet, but affectionately call "First Blood." When I started the work, I was afraid of blank pages. The first blood was the first stroke of ink on the page, the first step towards filling it. The phrase also invokes dark imagery—bleeding a kill, hunting, sacrificing something...a self...drawing on yourself, your own blood, to create...thus also creating a self.

The collection attempts to explore aspects of a self, liminal and complex though it may be. In looking at many parts of the self, the fractured pieces of losing a father figure, trying to rewrite the past and relating mythological stories that resonate with me, what whole emerges?

##### **The Life Just Next to Ours**

*Beth Lebowhl, English '00*  
 ADVISOR: *Lawrence Rosenwald, English*

This presentation will consist of a reading of original poetry of several years' work, based on pieces I have written both inside and outside of an academic setting. My material deals primarily but not exclusively with the pressures of growth, the development of self, music, expression through words, scientific discovery, sexuality, family, and friendship. I have been most heavily influenced in my writing by Pablo Neruda and various African-American poets, but especially by the rhythm and beauty of conversation and of its serendipity and melody.

#### **Poems**

*Kim Dahl, English and Psychology '00*  
 ADVISOR: *Frank Bidart, English*

I will read a poetry selection from my creative writing thesis. In my thesis, I explore issues of identity, desire, and the intersection between these issues and the poetic process. Some issues include: exploring being a women writer attempting to create her own work in a genre where many of her influences are male ("Mother Tongue"), the reproduction of female identity by male artists ("Visiting the Museum of Fine Arts, Boston") and exploring sexual identity ("Research Methods," "Rope," and "Steady"). While I have attempted to go beyond my own subjective experiences, many of these poems do draw on my own experiences at Wellesley and abroad.

#### **Self Defined by Others**

##### **The Impostor Phenomenon: Revealing the Self through the Screen**

*Eleni Apostolakis, Psychology '00*  
 ADVISOR: *Julie K. Norem, Psychology*

Impostors believe that their success is due to charm, luck, or error. They fear being discovered as "frauds" and try to hide their true selves. This study focuses on how impostor feelings affect interpersonal communication, specifically voice and self-disclosure. Voice is the willingness to present one's opinions and beliefs, and self-disclosure is the willingness to share personal information about the self. Participants filled out measures of their levels of voice, self-concept clarity, and the impostor phenomenon. Then they did self-disclosure activities, with either a peer or authority figure as their audience. Finally, they answered questions about how much they felt they had disclosed and how authentic they felt in their responses. People with high impostor feelings were expected to exhibit lower levels of voice and self-disclosure and to feel less authentic in their responses.



**Charles Horton Cooley's Looking-Glass Self in Shakespeare's *The Taming of the Shrew***

Natka Bianchini, *Sociology '00*

ADVISOR: Susan Silbey, *Sociology*

*The Taming of the Shrew* as a text challenges its reader to see beyond its inherent sexism and misogyny. As a director at the Shakespeare Society, I wanted to bring the play to the Wellesley campus in a way that framed Shakespeare's story in a new light. I decided to use sociologist Charles Horton Cooley's concept of the "looking-glass self" as the interpretive framework for this production. His theory suggests that your sense of self is constructed not only by how you see yourself, but also by how others see you and by your perception of how others see you. During the rehearsal process, I worked to incorporate the theme of the looking-glass self in everything from the set, to the blocking, to the way the actors interpreted their characters. After the play was performed, I combined all the elements of the process: my research on Cooley and the play itself, the rehearsal process, and the performances, into a final paper which was inscribed on a zip disk using digitized video clips from a taped performance of the play to illustrate the themes.

**Acne: Self-Consciousness, Body-Esteem, and Self-Esteem**

Kerstin Blomquist, *Psychology and French '00*

ADVISOR: R. Steven Schiavo, *Psychology*

This thesis research study investigates the impact of past and present experiences with facial acne on the self-consciousness, body-esteem, and self-esteem of women between the ages of eighteen and twenty-four years. Participants complete a questionnaire based on their own experiences with acne. According to McGuire's theory of distinctiveness, the saliency of the participant's facial acne is evaluated in terms of the individual's self-consciousness. It is hypothesized that participants with past and present cases of acne are more self-conscious and have lower body-esteem and lower self-esteem than participants who have never experienced acne. The relationships between the participant-rated severity, duration, and distinctiveness of the facial acne with regard to their effect on the individual's personality characteristics are examined. This study also investigates how the personality trait of self-consciousness mediates the relationship between acne and the state of self-consciousness, body-esteem, and self-esteem.

11:00 – 12:10

**Politics: Identity and Change****Politics and Identity****The Construction of Flemish National Consciousness in Belgium***Carly Grisham, Peace and Justice Studies D3*ADVISOR: *Candelario Saenz, Anthropology*

Linguistic conflict between Dutch-speaking Flemings and French-speaking Walloons has been construed as the catalyst of Flemish nationalism. However, the language conflict in the Belgian context, while significant, must be understood as one of many factors involved in a much larger process. The threat of cultural domination, social inequality, economic competition, and territorial expansion were the predominant mobilizing forces of Flemish national and ethnic identity. It was around a shared language that this conception of identity coalesced, in essence transforming “a linguistic prise de conscience into an ethnic we-feeling” (R.E.M. Irving, *The Flemings and Walloons of Belgium*).

An examination of the evolution of the Flemish movement in Belgium from 1788 reveals the dynamic, diachronic nature of the process that constructs ethnic identity and national consciousness. It also demonstrates how language functions as a meaningful symbol with the “capacity for generating imagined communities, building in effect particular solidarities” (Benedict Anderson, *Imagined Communities*).

**Italians and the Jews: Racial Laws and Occupation***Erika Kitzmiller, History and Italian '00*  
ADVISOR: *Sergio Parussa, Italian and William Hitchcock, History*

Italian Jews and French, Greek, and Croatian Jews residing in Italian zones of occupation experienced a unique situation during World War II. In 1938, the Fascist government passed their version of anti-Semitic Racial Laws. Mussolini’s government passed these laws without any pres-

sure from Hitler. Italians did not actively protest these laws, yet they devised various methods to mitigate the harsh effects of this horrific legislation. Italian Jews were subject to laws that made them second-class citizens, yet they did not face the danger of deportations until German occupation in 1943. However, the Italians did actively protest anti-Semitic legislation in the occupied zones of France, Greece, and Croatia. This research addresses the question as to why Italians did not resist similar legislation within their own country, yet when this anti-Semitic legislation was transported and the danger of German deportation was heightened, these same Italians not only protected their own Jewish countrymen, but they also helped foreign Jews in their zones of occupation.

**A Sociological Comparison on the Ethnic Identity of the Arberesh Communities in Italy and Greece***Iris Pilika, Sociology and Political Science '00*ADVISOR: *Susan Silbey, Sociology and Anastasia Karakasidou, Anthropology*

This presentation will examine and compare how the Albanian speaking communities in Italy (Italo-Arberesh) and Greece (Arvanites) manage their dual and sometimes contradictory national and ethnic identifications. It will also examine how the different socio-historical forms of urbanization, industrialization, and migration have favored or discouraged the maintenance of a socio-cultural identity that differs from that of the country in which these communities reside.

**Africa in Boston: Volunteering at the Somali Development Center***Alessandra Vecchi, Economics and French '00 and Amanda Dickerson, English and History '00*ADVISOR: *Lidwien Kapteijns, History*

The Somali Development Center is located in Jamaica Plain, Boston and serves a growing population of Somali families in the greater Boston area. Many of these Somalis, numbering between four and five

thousand, are immigrants and refugees who have fled the political unrest and violent turmoil that began in 1991 with civil warfare and the subsequent collapse of Said Barre’s dictatorial regime. A group of Wellesley students formed in fall 1998 to volunteer as after-school tutors for children in grades K-12. In the last two years, the group’s efforts have expanded to include participation in adult ESL, Koran school, and the newly formed mentoring program. Through personal anecdotes and pictures, our presentation will reflect on both our learning experiences in this still impoverished African Muslim community, as well as the unique challenges faced by Somalis in the U.S.

**The American Political System: Historical, Modern, and Comparative Perspectives****“Four Score and Seven Years Ago...”: The Legacy and Memory of the American Revolution***Julia Kate Rosenstock, History '00*  
ADVISOR: *Nathaniel Sheidley, History*

In the aftermath of the bloodiest, most important and most terrible battle in American history, Abraham Lincoln journeyed to the battlefield and intoned over the thousands of dead, “Four score and seven years ago...” In so doing, he claimed the legacy of the American Revolution for the Union cause and entered himself into a tradition of reinterpreting the Revolution that itself was four score and seven years old. Generations of Americans have continually reinterpreted the Revolution to fit the political situation of the present and further personal and party agendas. Why and how have people imagined the Revolution, and what can this tell us about historical memory and myth? How do the changing interpretations reflect on the changing realities of the interpreters? Answers to these questions are revealed in the writings of three generations of the Adams family of Massachusetts and the Lee family of Virginia. (Research supported by a Schiff Fellowship)

### British Devolution and American Federalism: A Comparative Look

Sally Ashe, *Political Science '00*

ADVISOR: Joel Krieger, *Political Science*

The Labour government elected in 1997 has brought sweeping constitutional and organizational changes to the British government. One of the main changes is the establishment of several devolved bodies of government. The Scottish Parliament is one of these bodies, and the establishment of such a body for Scotland has been a long time in coming. The new regional governments in the United Kingdom bring up a new round of comparisons to the American federalist example. A brief look at the historical context in both cases is followed by an examination of how two policy issues, education and welfare reform, are being handled in the power-sharing arrangements that exist in America and the United Kingdom. The policy examinations are followed by comparison of the systems of government and predictions about where the Scottish Parliament will go from here.

### The Internet and Political Campaigns

Jennifer Tucker '02

ADVISOR: Marion Just, *Political Science*

In our modern society, people are becoming more dependent on the Internet for everything from checking today's news to learning about politics. Although the Internet community is becoming more diverse, the Internet is still a tool for the more educated and the wealthier citizens. As it becomes more significant in different life areas, the gap between those who have access to this technology and those that do not will become more consequential. I have been involved in a study that considered how people use the Internet for political purposes. The data are drawn from experiments held during municipal elections in two racially diverse cities, Baltimore and Philadelphia. Subjects, who were representative citizens of each city, came to a research facility and were directed to view certain political web sites. Administrators gathered qualitative data, in the form of participants' reactions to their on-line session in focus groups, as well as quantitative data, in the form of

surveys taken before and after the on-line session. In processing these data, the study will determine just how everyday people use the Internet in low visibility elections. Also, I will present the relative Internet experience of participants in regard to specific factors, such as interest in politics, cynicism, and the need for cognition and control.

## Cross-Cultural Encounters

### Wintersession in India

#### Grassroots Development and the Gandhian Legacy

Miriam Berkowitz, *Political Science and Peace and Justice Studies '01*, Ellen Cho, *Sociology and Peace and Justice Studies '00*, Rachel Greenberger, *English '00*, Judy Haverland, *Peace and Justice Studies D4*, Sarah Holladay, *Political Science '00*, Tara Ramanathan '01, Rudina Seseri, *International Relations and Economics '00*, Hilary Soderland, *History and Anthropology '01*, Rachel Stern, *International Relations '01*, Marisa Van Saanen, *Peace and Justice Studies '01*, and Elizabeth Walsh, *Peace and Justice Studies '00*

ADVISOR: Sally Merry, *Anthropology and Victor Kazanjian, Peace and Justice*

Eleven students explored grassroots development initiatives inspired by Gandhian principles during a three-week study tour of India. Traveling from Mumbai to Delhi to Varnassi, the group studied various approaches to development and issues of ethnicity, nationalism, and inequality in India today. The panel will discuss some of the major issues the group studied and share insights and illustrations.

### Strong Unnumbered Women

#### Strong Unnumbered Women: A Theatrical Retrospective

Pauline Yasuda, *English '00*, Stacey Bubolz, *Physics '00*, Christine Valeo, *English '01*, Lauryn Sasso, *English and Theatre Studies '00*, Erika Reinfeld, *Astronomy and Theatre Studies '01*, and Jenny Caplan, *Religion '01*

ADVISOR: Nora Hussey, *Theatre Studies* and Jeannie Munroe, *Musical Director*

The theatrical community at Wellesley, which is both culturally and vocationally diverse in composition, presents a retrospective of the work created in the 1999-2000 season. This piece, which is orchestrated with the assistance of director, Nora Hussey, choreographer, Katie Griswold, and musical director, Jeanne Munroe, represents the many issues, cultures, and individuals that were brought to life in the theatrical realm during the season. As in the very successful performances of the past three years, the emphasis will be on the essence of theatre, which is the relationship between audience and actor. The title stems from a theme consistent in many of the works performed throughout the year. We present a multifaceted group of women as they overcome and indeed triumph over a variety of challenging circumstances. The issues and ideas confronted provide an alternately touching, funny, and insightful look at immigration, mother loss, and the bonds of sisterhood.

### Religious and Spiritual Expression

#### Silence, the Language of the Holy

Alexis Guild, '03

ADVISOR: T. James Koderia, *Religion*

The practice and study of religion has become too loaded with words. Academics and students alike have been choked by the restriction of words. We must go back to silence as a way to communicate with the holy. In both the Jewish and Buddhist religions, silence is the ultimate communion with the holy. But one cannot simply begin communication with silence. The holiest silence is that silence which has already gone through verbal prose and verse. Through an analysis of the communal silence inherent in the Jewish and Buddhist religions, it will be shown that silence is universal. Silence is a way for every religion—Jewish, Buddhist, Hindi, Christian, Islamic and others—to unite and communicate together with the sacred and the holy.

## Catching Butterflies

*Kelly Gearhart, Religion '00*

Advisor: *T. James Kodera, Religion*

How do we understand human nature? What are our human aspirations and fears? How do we understand that which is of greatest value? What are our cultural expressions of faith, belief, and religion? Do their presence or absence serve as indicators of cultural decay? Who are we and where are we going? How does it all end up? What happens next? Through the words and voices of authors and thinkers throughout history and the people around me today, I have collected information and viewpoints on the possible answers to some of life's questions. The authors include people such as Douglas Adams, His Holiness the Dalai Lama, Sigmund Freud, Carl Jung, Maurice Merleau-Ponty, Ayn Rand, and Tom Robbins, among others. The people include friends, family members, and colleagues — all dear to my heart. Based upon the positions of these various members of the human race, I have compiled a text that describes the curiosities, fears, hopes, dreams, loves, anxieties, and lives of these people. These perspectives, as expressed through their words, have offered me a glimpse into the nature of the human soul. I hope that I have been able to translate that experience into the words, phrases, and ideas of this work.

## Science and Technology

### Art and Science of Multimedia

#### Flamenco: el cante, el baile, y el toque

*Katherine Perino, Computer Science '01  
and Alyssa Tang, Art '01*

Advisor: *Takis Metaxas, Computer Science  
and Naomi Ribner, Art*

The purpose of our project is to get the user interested in Flamenco by showcasing some of the best examples of music and dance in this genre and by introducing them to some of the history and terminology associated with this art. We include specific descriptions of the different types of dance, distinguishing between a Gypsy and non-Gypsy Flamenco style,

excerpts of Federico García Lorca's gitano themed poetry, discussion of "el duende" (the crazed moments of flamenco genius), a little information on several famous singers and guitarists (Paco de Lucia, Camaron de la Isla, Fernanda de Utrera, Paco Pena), origins and meaning of some terminology (jaleos, bulerías, picado, etc.), and more.

#### KPop Café

*Cathi Kwon, Economics '01 and Hye-Hyun An, Computer Science '01*

Advisor: *Takis Metaxas, Computer Science  
and Naomi Ribner, Art*

We have set up (a virtual) interactive Korean pop-music café where you can sample and learn about Korean popular music. This interactive program targets the teens-at-heart who enjoy dance, rock, rap/R&B, or ballads and want to explore music of a different country. At the café, you can listen to songs from a jukebox, flip through a magazine, sing karaoke, or interact with the band and other people in the café. KPop Café has a relaxing atmosphere and great music.

#### Secrets of a Chinese Grandmother: Origins of Chinese Holidays

*Frances Hsieh, Psychobiology and Chinese Studies '00 and Rosanna Wan '02*

Advisor: *Takis Metaxas, Computer Science  
and Naomi Ribner, Art*

Our project uses new media to introduce the legends and tales of various traditional Chinese holidays. When you first view our project, you are immersed in the living room of a Chinese grandmother. As you explore her living room, and touch (with a click of the mouse) different objects in the room, Grandmother either tells you a story about a particular holiday, or you start a game. The stories told include the origin of the twelve Chinese zodiacs, the Dragon Boat races, and the mid-Autumn Festival.

#### House of Eternity

*Lena Lo, Chinese '01 and Judy Yeh,  
Cognitive Science and Art '00*

Advisor: *Takis Metaxas, Computer Science  
and Naomi Ribner, Art*

Playing against the clock, the user, through taking on the role of Rina, must

fulfill the two missions that have been intended in this adventure game. Rina is dared to enter a haunted mansion. She has to stay the entire night and can only leave when it is sunrise. This is her initial mission, but the haunted mansion holds another mission for her. A spellbook which she finds once she enters the mansion entices her to an immortality spell. However, through gathering the items needed to perform the spell, Rina will slowly find that casting the spell may not be such a good idea. There are three paintings which lead to other worlds Rina may access in her attempt to gather the items. It is through the interaction with people in these paintings that she learns the mystery behind the haunted mansion and hopefully succeeds in fulfilling her other mission.

#### Persuasion

*Rachel Lomasky, Computer Science '01  
and Katherine Megquier, Geology '01*

Advisor: *Takis Metaxas, Computer Science  
and Naomi Ribner, Art*

Come experience World War II propaganda, as if you were living through the war. Featuring posters, photographs, and music of the era. No previous knowledge necessary!

#### Language of Color

*Sheila Vyas '01 and Niral Patel,  
Computer Science and Architecture '01*

Advisor: *Takis Metaxas, Computer Science  
and Naomi Ribner, Art*

We discuss the emotional and psychological effects that color can have in our everyday lives. The project is divided into five sections: color therapy, color in music, color in literature, color in interior design, and color in dreams.

#### BLINK: A Lesson in the Cognitive Science of Perception

*Diana Fong, Computer Science and  
Economics '01 and Andrea Lehmann '01*  
Advisor: *Takis Metaxas, Computer Science  
and Naomi Ribner, Art*

An interactive CD-ROM geared toward the undergraduate interested in the fascinating intellectual frontier of cognitive science and, more specifically, what is currently understood about how we see

and understand our world. Our multimedia piece is a highly interactive and visual experience which includes games, animation, and cognitive tests of the user's perceptions that illustrate particular theories or paradigms relevant to the study of perception.

#### **What's Up: An Introduction to Astronomy**

*Lai Lee Chau, English '00 and Demerese Salter, Physics and Astronomy '00*  
ADVISOR: *Takis Metaxas, Computer Science and Naomi Ribner, Art*

We have written entertaining/educational CD-ROM for children ages 7-10. Our project aims to give children a fun, educational, and interactive introduction to astronomy. The user learns basic astronomy facts as s/he explores various rooms and items in an observatory. Facts are presented through a simulated slide show, games, tour of the constellations, and telescope observations.

#### **Effect of Environmental Stress on Cyanobacteria**

##### **Chloramphenicol Stress**

*Sungyon Bang, Biological Chemistry '00*  
ADVISOR: *Mary M. Allen, Biological Sciences and Nancy H. Kolodny, Chemistry*

Cyanobacteria make up the largest group of photosynthetic prokaryotes. Cyanobacteria have existed for at least 2.5 billion years and have survived by evolving through the changing times. It has been speculated that one of the reasons for this amazing survival is due to cyanobacteria's ability to store materials needed for their existence. Nitrogen is stored as cyanophycin (CGP) and phycobilisomes, carbon is stored as polyglucose and poly- $\beta$ -hydroxybutyrate, and phosphate is stored as polyphosphate. My presentation focuses on the synthesis and degradation of CGP, a co-polymer made up of the amino acids arginine and aspartic acid under chloramphenicol stress, studied by proton NMR spectroscopy. (Research supported by a Schiff Fellowship and NSF grant MCB-978609)

##### **Antibiotic Stress**

*Alissa Brown '02 and Melissa Morris '02*  
ADVISOR: *Mary M. Allen, Biological Sciences*

Cyanobacteria produce polyphosphate when they are starved for sulfur, in the presence of excess phosphate. In order to determine if any other inhibitor of protein synthesis would also increase the amount of polyphosphate within the cells, the cyanobacterium, *Synechocystis sp.* strain PCC 6803, was grown in the presence of two different protein synthesis inhibitors. The inhibitors used were Rifampicin and Chlortetracycline, which inhibit the transcription and translation of RNA, respectively, in Gram negative bacteria. Several different concentrations of each inhibitor are being tested in hopes of finding the concentration that would make the cyanobacterium enter stationary phase at a faster rate than normal. Once the correct concentrations are found, both for Rifampicin and Chlortetracycline, the cells will be grown to a high concentration and NMR spectroscopy will be used to determine the presence or absence of polyphosphate in these cultures. (Research supported by the Howard Hughes Medical Institute grant to Wellesley College)

##### **Light Stress**

*Nora Erickson, Biochemistry '00, Simmons College*  
ADVISOR: *Mary M. Allen, Biological Sciences and Nancy H. Kolodny, Chemistry*

Cyanobacteria produce a nitrogen storage molecule, cyanophycin, under different stresses other than nitrogen starvation. The concentration of cyanophycin was followed when cyanobacteria were grown under the stress of low light and later moved to no stress conditions. 15N was added to the media when the cells were stressed to observe whether the nitrogen incorporated into cyanophycin was from the media (15N) or from proteins degraded in the cell (14N). The differences between 15N and 14N were observed using proton NMR spectroscopy and showed that the cyanobacteria incorporate nitrogen into cyanophycin from both the media and degraded proteins. It was also observed that the concentration of

cyanophycin could be followed using NMR spectroscopy instead of the previously used chemical assays. (Supported by Biology NSF REU grant DBI-9732414 and NSF grant MCB-978609.)

##### **Growth Measurement**

*Maliha Farooq '02 and Wendy Chow '03*  
ADVISOR: *Mary M. Allen, Biological Sciences*

When carrying out research on the effect of environmental stress on cell growth, it often becomes necessary to measure their growth using various analyses, including optical density, dry cell weight, and cell concentration. Our purpose in these experiments is to quantify these growth measurements and to find a numerical relationship between these parameters. Through our results we hope to be able to take a single measurement and use it to calculate the values of the other parameters. We intend to quantify these relationships for cells grown in normal, stress-free environments, as well as for cells grown in high/low light and high/low pH. (Research supported by Wellesley's NSF Award for the Integration of Research and Education and by Wellesley's Howard Hughes Medical Institute grant)

##### **Acid Stress**

*Jean Huang, Biological Sciences '01*  
ADVISOR: *Mary M. Allen, Biological Sciences*

Cyanobacteria thrive in medium around pH 8. In this project, experiments were performed in order to study how the cyanobacterium *Synechocystis sp.* strain PCC 6308 responds to acid stress ranging from pH 6-1. Cell growth, pigmentation, increase in supernatant pH and granule formation by acid shocked cells were studied. These experiments indicate that cyanobacteria respond in a number of physiological ways when exposed to acidic pH stress. (Research supported by the Beckman Scholars Program)

##### **Low Nitrogen Stress**

*Lea Medeiros, Chemistry '00*  
ADVISOR: *Nancy Kolodny, Chemistry and Mary M. Allen, Biological Sciences*

Cyanobacteria store nitrogen in the form of a polymer called cyanophycin granule

polypeptide (cyanophycin). Cyanophycin, produced by the cell in times of environmental stress, is degraded under conditions of nitrogen starvation, as nitrogen stored in the polymer becomes required for crucial metabolic processes.

Cyanophycin production is then resumed upon reintroduction of nitrogen to the cells. To determine whether degraded, intracellular proteins or extracellular media provided the nitrogen for cyanophycin, intracellular proteins were labeled with  $^{14}\text{N}$  while extracellular media was labeled with  $^{15}\text{N}$ .  $^1\text{H}$  NMR spectroscopy was used to distinguish between cyanophycin composed of  $^{14}\text{N}$  and cyanophycin composed of  $^{15}\text{N}$ . Studies to date have found cyanophycin molecules with  $^{14}\text{N}$  and  $^{15}\text{N}$  45 minutes after reintroduction of nitrogen to starved cells. These results demonstrate that both degraded proteins and extracellular media are nitrogen sources for cyanophycin. (Research supported by a Schiff Fellowship and NSF grant MCB-978609)

### High Temperature Stress

*Myla R. Morales, Biological Sciences '00*  
ADVISOR: *Mary M. Allen, Biological Sciences*

The goal of this research was to develop a two dimensional mini gel electrophoresis system for the isolation of cyanobacterial stress polypeptides. Increased detection of putative heat shock polypeptides was obtained utilizing isoelectric focusing and SDS PAGE, followed by the use of three staining methods — Coomassie blue, Gelcode® Blue, and silver stain. Heat shock was induced by transferring the cells from 35°C to 45°C for 30 minutes and 50 minutes. Two dimensional gel electrophoresis revealed at least two putative heat shock polypeptides, a basic one at 30 kDa and an acidic one at 3 kDa. The 30 kDa polypeptide was isolated and used for the preparation of antibodies. The antibody was used as a probe to detect comparable polypeptides synthesized in cyanobacteria undergoing other environmental stresses, such as a change in pH.

## Observing the Physical Universe

### Role of the Iron-Oxy Substitution in Igneous Allanite-Epidote

*Sarah Miller, Geology '00*  
ADVISOR: *Jim Besancon, Geology*

A pegmatitic allanite with bulk composition:

$\text{Ca}_{1.11}(\text{La}_{0.22}\text{Ce}_{0.1}\text{Nd}_{0.01}\text{Pr}_{0.03}\text{Th}_{0.02})$   
 $(\text{Fe}^{2+}_{0.87}\text{Fe}^{3+}_{0.42}\text{Mg}_{0.05}\text{Mn}_{0.06}\text{Ti}_{0.06})$   
 $\text{Al}_{1.63}\text{Si}_{2.98}\text{O}_{12}(\text{OH}_{1.12})$  was used to study the iron-oxy substitution,  $\text{Fe}^{2+} + \text{OH}^- = \text{Fe}^{3+} + \text{O}^{2-} + 1/2\text{H}_2$  (1), in allanites. This research examined the feasibility of relating the  $\text{OH}^-$  content of igneous allanite to the water content of the melt from which it crystallized. An experimental framework was established to determine  $f\text{H}_2$  (effective partial pressure of hydrogen) of the sample as a function of ferric/ferrous iron content and temperature at the time of crystallization. By estimating  $f\text{O}_2$  independently, the activity product of water can be derived and the water content of the melt then determined. The evidence also suggests that REE incorporation into the allanite crystal structure is controlled by the iron-oxy substitution mechanism. Such work could lead to the development of a geohygrometer and increase understanding of volatiles in melts and mechanisms of volcanism. (Research supported by Wellesley-in-Washington summer stipend and NSF REU.)

### Hubble Space Telescope Observations of the Eclipsing Binary Star VV Cephei

*Logan Helen Hennessey, Astronomy '00*  
ADVISOR: *Wendy Hagen Bauer, Astronomy*

Over the past year I have had the unique opportunity to work with Dr. Bauer and study Hubble Space Telescope observations of the eclipsing binary star system VV Cephei. A series of fourteen observations of the red-supergiant-hot dwarf binary star system were obtained by the STIS (Space Telescope Imaging Spectrograph) between November 1997 (during totality) and December 1998 (during egress). During an independent study in spring of 1999, I developed computer programs to measure the continuum trends within the system's complex and varying ultraviolet spectrum. During the fall of 1999, I continued my study by writing programs to

monitor the emission features and the changes in their radial-velocities and line strengths. Further analysis of these observations will hopefully yield a better understanding of VV Cephei, specifically information about atmosphere and mass loss of the primary star, and the distribution of matter being accreted onto the disk of the companion star. (Research supported by NASA)

### WIMPs and MACHOs in the Galactic Halo

*Alceste Bonanos, Astronomy and Physics '00*  
ADVISOR: *Kim McLeod, Astronomy*

The nature of galactic dark matter is one of the big questions still left to be answered in astronomy. Luminous matter alone cannot explain the flat rotation curves in galaxies; thus nonluminous matter in the galactic halo is believed to exist. Candidates for this dark matter are WIMPs (weakly interactive massive particles) and MACHOs (massive compact halo objects). The purpose of this project is to search for MACHOs in a one square degree field in Sextans, by looking for motions of stars in the galactic halo with respect to the stars in the disk and galaxies in the background. We are comparing two sets of data, taken ten years apart, and so far have analyzed a subset of the data. Our ultimate goal is to determine whether MACHOs, in the form of old white dwarfs, can in fact make up the dark matter.

### Molecules and Morphology: Phylogeny of the Arthropoda (BISC 202)

*Binta R. Beard '02, Kathryn C. Claiborn '02, Rosalie A. Elder '02, Barbra E. Goyanes '01, Elana T. Hayasaka '02, Jeanne L. Hsu '02, Deborah A. Jakubowski, Biological Sciences and History '00, Allison K. Marshall, Biological Sciences '00, Margaret D. Scheffler, Biological Sciences and History '00, Stephanie A. Schur, Paleobiology '01, Natasha M. Teutsch '02, and Elizabeth M. Wolkovich '02*  
ADVISOR: *Emily A. Buchholtz, Biological Sciences*

Arthropods are the most numerous of earth's animals, both living and fossil: almost one million species have been described and as many as 30 million more

are estimated to be undescribed. Morphological and molecular analyses provide two independent data sets with which to construct predictions of genealogical relationships among living and fossil species. Data were collected from the examination of external morphology and from the sequencing of ITS or Intervening Transcribed Sequences of the highly conserved molecule ribosomal DNA (rDNA). Both data sets were analyzed using cladistic techniques. Recentness of common ancestry and identity of sister groups were then predicted for the species independently chosen and analyzed by each student in BISC 202. The use of two different data sets with different biases improves the ability to resolve phylogenetic relationships.

### About Wellesley

#### Wellesley: The People and the Place II

##### Memorial to Room 112

Kathryn Moll, *Architecture '00*  
 ADVISOR: Judith Black, Art

In 1935 Pendleton was opened as the new chemistry, physics, and psychology facility on the Wellesley campus. The local newspapers marveled at its modern amenities: "Between the two wings is an auditorium, seating about 400...which will be equipped with a motorized blackboard, light-proof shades, projection screens, a fume hood for chemical experiments and science lecture tables," reported the *Boston Morning Globe* in 1934. Today, the site is used primarily as a shortcut between the east and west wings of Pendleton. Even so, the pending demolition has elicited an emotional response from students and faculty. Controversy is clear in the testimonials chalked on the classroom's slate blackboards, the beginnings of a make-shift memorial.

The memorial/alter concept will be explored as a tool for presenting documentary photographs and artifacts (which include student notes and ink wells found in the lecture hall). In broader terms, this installation exhibit will investigate the idea of change and renewal on the Wellesley campus.

### Being Wellesley Specific

Jiasuey Hsu, *Philosophy and Environmental Studies '00* and  
 Cynthia Eldridge, *Biology and Art History '00*

ADVISOR: Judith Black, Art

As graduating Wellesley seniors, our mixed-media installation explores "Wellesley culture." What is Wellesley culture? Who is shaping this culture - students, administration, alumnae? Is there really one Wellesley culture? What does it mean to be a part or a product of this culture? After four years of shaping and being shaped by it, our installation reflects and questions how our individual identities struggle with(in) Wellesley culture.

### Life, Literature, and the Arts

#### Modern Writers

##### Qui est là? The Discourse of Displacement, Exile, and Home in Jean Rhys' *Voyage in the Dark* and *Wide Sargasso Sea*

Seoyoon Sandy Chu, *English '00*  
 ADVISOR: Maria Davidis and  
 Margaret Cezair-Thompson, English

"The trouble is I have plenty to say. Not only that, but I am bound to say it." (From Jean Rhys's unfinished autobiography, *Smile, Please*, p.133) Classified as a modern British novelist, but recognized as a West Indian writer, Jean Rhys hands her reader much more than, as Ford Madox Ford quotes, "the Antilles with its sea and sky." Through her writing, Rhys introduces a new voice, arising from the post-emancipation through the new plantocracy era, that challenges past and current theories on colonial, postcolonial, and modern literature. That new voice comes from the "out-caste" white Creole woman. Not English white and not West Indian black, they exist caught in between, uncertain of their history, nationality, and identity. Rhys, then, questions whether previous boundaries can continue to definitely "place" these uniquely situated women. In her two distinct yet parallel novels, *Voyage in the Dark* and *Wide Sargasso Sea*, written thirty-two years

later, Jean Rhys has written what she felt "bound to say" about her West Indian home through the lips of the white Creole woman.

##### Emphasizing the Other Hurston: A Study of *Jonah's Gourd Vine* and *Moses, Man of the Mountain* in Relation to *Their Eyes Were Watching God*

Lydia Middleton, *English '00*  
 ADVISOR: William Cain, English

Zora Neale Hurston is most famous for her third novel, *Their Eyes Were Watching God*, presently a key text in African-American literary and cultural studies. While this novel has made appearances in numerous scholarly bibliographies and literary criticisms, her other novels are rarely taught or written about. Her first novel, *Jonah's Gourd Vine*, shares thematic elements with *Their Eyes Were Watching God* that demonstrate Hurston's development as a novelist in her portrayal of Janie and John Buddy. Through their progression, Hurston suggests much about the restrictive and judgmental nature of the Black community. Similarly, *Moses, Man of the Mountain*, continues these themes and rewrites the Biblical Hebrew nation as Black America in the postslavery era. Through the character of Moses, Hurston continues the story of a great leader that she began in *Jonah's Gourd Vine* and the quest for identity within *Their Eyes Were Watching God*. (Research supported by a Schiff Fellowship)

##### Conceptions of Free Will in the Works of John Irving and Kurt Vonnegut, Jr.

Genevieve Haas, *English '00*  
 ADVISOR: Kathleen Brogan, English

In my thesis, I examine the concept of man's possession of free will and his subsequent moral accountability for his actions as explored by Kurt Vonnegut, Jr. and his one-time protégé, John Irving. Both authors return to this theme again and again in their respective bodies of work, each with a recurrent thematic approach. While Vonnegut applies the metaphor of man as a machine, Irving suggests that man is, instead, essentially animal. The repercussions this holds for man's free will, or lack of it, are explored in many contexts by both authors. The spheres, war and religion, provide height-

ened contexts in which each author explores the potential for ownership of action. Each tries to reconcile his ideas about volition with man's capacity for weakness and greatness, love and brutality, good and evil. Also important to my thesis is the degree to which each author is able to export his world view to the reader and what the reader takes from the novels about himself and mankind. My work draws from philosophy and religious texts as can illuminate these two examples of the contemporary novelist. At the Ruhlman Conference, I will be speaking specifically about the comparisons and contrasts that can be drawn between Vonnegut's use of machines and Irving's use of animals in his early novels to illustrate man's failure to achieve a higher state of being. I will be drawing not only from my own writings on the subject but from Irving's personal response to my work. I will be reading from chapters three and four of my thesis.

#### **Comment dire «Je»: Paradox and the Narrative in Assia Djebar's Autobiographical Fiction**

Laura Ann Pechacek, *English and French '00*  
 ADVISOR: Anjali Prabhu, *French*

My study concerns the underlying role of écriture, or the act of writing, in Assia Djebar's autobiographical fiction and, more specifically, the narration of these works. Several issues are to be considered: post-colonial writing, women's voices, and critical approaches to reading Algerian literature. Most writing in French by Algerians is in some part taken as a response to European perspectives, with or without the author's intention. In Djebar's case, the danger of such an analysis is a factor because she deliberately incorporates Western perceptions into her writing. In fact, her narrators seem to reinforce certain ideas that are typically Western regarding the Oriental woman. I will examine Djebar's strategic use of several perspectives, including the Occidental, that create tension, and end up questioning their validity. This tension characterizes the texts, and the seemingly paradoxical narrative draws the reader to actively engage in creating a credible discourse.

#### **Striking Comparisons**

##### **The Depiction of Social Class Mobility through the Use of Language and Landscape in E.M. Forster's *Howards End*, Kazuo Ishiguro's *The Remains of the Day*, and Hanif Kureishi's *Buddha of Suburbia***

Heidi Shin, *English '00*  
 ADVISOR: Maria Davidis, *English*

Our present day notion of Englishness is defined by, among other things, the sense of a rigid social class system, tea and crumpets, refined accents, and great country houses. This image, however, fails to account for the demographic, ideological, and cultural changes resulting from two devastating global wars and a decline of the British empire during the past century. Such disruptions have caused a restructuring of classes and the mobility between them, but such changes are not often recognized by the public. In my paper, I explore the depiction of social class mobility in twentieth-century England, as evidenced through the use of language and the description of landscape in contemporary British fiction. Specifically, my analysis focuses on three works: E.M. Forster's *Howards End*, Kazuo Ishiguro's *The Remains of the Day*, and Hanif Kureishi's *Buddha of Suburbia*. I study the ways in which speech acts as one of the most obvious markers of social class in literature, and the subsequent social rules that govern speech propriety within and between the classes. My research includes a study of the characters in these novels and their language use in relation to their physical location as well as how they use language to speak about the English landscape. I also discuss the role of the great English country house, and how its acquisition and its cultural associations have determined who is considered and permitted to define the notion of Englishness. Finally, I ask how ethnic hybridity is depicted in the characters of these works and how the ethnicity of the writers themselves determines the measure of "Englishness" of their novels.

##### **Ethnic Impostors?: Impersonating the Other in William Styron's *The Confessions of Nat Turner*, Robert Olen Butler's *A Good Scent from a Strange Mountain*, and Anna Deavere Smith's *Fires in the Mirror***

Elizabeth W. Son, *English '00*  
 ADVISOR: Lawrence Rosenwald, *English*

How does a writer impersonate another ethnicity? How does one assess the success or failure of such a work? What are the implications of assuming the first-person voice of a member of another ethnicity? Does the writer have the authority to do so? Who can be the judge of this? With these questions in mind, I am focusing my thesis research on William Styron's *The Confessions of Nat Turner* (1966), Robert Olen Butler's *A Good Scent from a Strange Mountain* (1992), and Anna Deavere Smith's *Fires in the Mirror* (1993). These works deal with the different aspects of ethnic impersonations: the dangers of stereotypical representations; the performance dimension of impersonations; power dynamics related to race, class, and gender; questions of authenticity and responsibility; and the confines of history. As I explore impersonated ethnicity, I am looking at how this controversial phenomenon reflects upon the complex identity struggles in multiethnic America. (Research supported by a 1999 Multicultural Summer Research Grant)

#### **Rimbaud and Van Gogh: A Correspondence between Poetry and Painting**

Cindy Kang, *French and Art History '02*  
 ADVISOR: Michèle Respaud, *French*

Arthur Rimbaud and Vincent Van Gogh were both visionary artists of nineteenth century France whose lives and work have become legendary. Neither one knew the other, however, the early poems of Rimbaud and the paintings of Van Gogh exhibit a remarkable correspondence in both theme and structure. Specifically, I will compare Rimbaud's *Sensation* with Van Gogh's *Wheatfield with Cypress*, as well as *Roman* by Rimbaud and *Sidewalk Café, Evening* by Van Gogh. The sexualization of nature, the symbolic possibilities of color, and a meticulous attention to composition characterize the works of

both artists. Above all, Rimbaud and Van Gogh possessed the ability to transform ordinary scenes into extraordinary worlds radiating with life and emotion. Vibrant colors, textures of paint, sounds of words, and ingenious images work together to engage all five senses and transport the reader and spectator into the unique worlds of the artists.

### NC-17 : A Cross-Cultural Examination of Sexual Taboo in Cinema

*Jennifer Coogan, Comparative Literature '00 and Robyn A. Sklarén, Film and Media Studies '00*

ADVISOR: Vernon Shetley, English

Why is it in America that a love scene between two men often warrants an R or even NC-17 rating while a mercilessly violent film can sometimes pass with a rating of PG-13? In different cultures, social mores dictate limits of acceptable sexuality. Cinema challenges such limits. By examining similar themes (homoeroticism, infidelity, obsession, prostitution, etc.) in films from various countries, we can see how cultures differ in their idea of what is depraved, deviant, unfit for viewing, and what is an artistic representation of human sexuality. This topic, by nature of its explicitness, gets right to the heart of a nation's values, not only in its regard to sex, but to a whole host of social, political, and moral issues. Our project makes use of a variety of film pairs such as *Ossessione* and *The Postman Always Rings Twice*, Almodovar's *High Heels* and *Imitation of Life*, *La Cage Aux Folles* and *The Birdcage*.

## Self and Identity

### Voice and Connection II

#### Paper Doll Dreams

*Yasmeen Golzar, English '00*  
ADVISOR: Marilyn Sides, English

My collection of short stories focuses on the experiences of Indian and Indian-American women. A woman re-evaluates her own marriage as she is about to meet her daughter's black lover, and another younger woman is suddenly thrust into

the Indian marriage market after her mother places a matrimonial ad in a national magazine. A woman is forced to reflect upon the consequences of her beloved grandmother's failing health. Another dreams of escaping the dreariness of her small Arkansan hometown to pursue the glitz of Bollywood, India's film industry. Through their stories we negotiate the bumpy terrain of cultural expectations, preserving ethnic identity while questioning conformity, family relationships, regrets, loss, love, and second chances.

#### K<sup>2</sup>: Reflections

*Katharine Freeman, American Studies '02 and Yiwen (Karyn) Lu, English '01*  
ADVISOR: Lawrence Rosenwald, English

One is an immigrant from mainland China, the other grew up surrounded by the cornfields of Iowa. One can't wear white in her hair, the other has dyed her hair every color except for white. One grew up watching *Perfect Strangers*, the other doesn't know who Balki is. One can eat a gallon of ice cream in one sitting, the other didn't know that ice cream goes in the freezer. One rings in the New Year in January, the other in February. One is a Monkey, the other is a Cancer. One had a guppy named Guppy, the other had a three-legged cat named Grace. Yet within, surrounding, and inseparable from their stories is also the story of how they came to write them.

#### Dark Gifts: Legacies of a Young Girl

*Jennifer Shim, '02*  
ADVISOR: Alexandra Johnson, Writing

In the midst of darkness sometimes bears the gift of life, hope, passion, and dreams. This is a meditation on the life that I have come to know. Dark gifts they are gifts that come from darkness. This is a legacy of my life and how it has been strangely destined to become a doctor even before I could understand the profession. This is a reflection on what has led me to my path of medicine. The passion, the dream, inspired by a brother who is paraplegic, a mother and father who know only how to love and protect, and myself who understood my family even before I understood

myself. Gifts can sometimes bear darkness, but in my life it is in the darkness that I have found a gift.

### Child Development

#### Birth Order, Self-Esteem, and Conformity in Preschool Children

*Seema Arora, Psychology '00 and Payal Bansal, Psychobiology '00*  
ADVISOR: David Pillemer, Psychology

The relationships between birth order, self-esteem, and conformity were examined in a sample of 31 preschool children attending a small, private laboratory preschool. The hypothesis was that first-born and only children would exhibit lower levels of self-esteem and higher levels of conformity than would middle and last-born children. Self-esteem was assessed by a modified version of the Harter & Pike (1984) Pictorial Scale of Perceived Confidence and Social Acceptance for Young Children, and by teachers' ratings. The Starkweather Social Conformity Test Revised (Goldsmith, 1997) was modified to measure conformity. Results indicated few significant findings related to birth order. However, strong gender differences were observed. Girls exhibited lower levels of self-esteem and a higher tendency to conform than did boys.

#### The Relationship between Gesture and Popularity in Preschool Children

*Katherine Hagadorn, Psychology and Italian '00 and Maria Madrigal, Education '00*  
ADVISOR: David Pillemer, Psychology

This study looked at the relationship between gestural ability and popularity in preschool-aged children. Thirty children, 15 girls and 15 boys, were tested using gesture production and gesture comprehension measures. Teacher's ratings were used to assess popularity. We expected to find age differences on both the gesture production and gesture comprehension tasks, and a positive correlation between gestural ability and popularity. Results showed that children had more difficulty with the gesture production task than with the gesture comprehension task. There were no statistically significant age differ-

ences for either of the two tasks. In the middle group, there was some evidence for a relationship between scores on the gesture production task and popularity ratings.

### **The Effect of Time Spent with Father on Sex-Role Flexibility in Preschool Girls**

*Janise Kim, Psychology '01 and Helen MacDonald, Psychology and English '01*  
ADVISOR: David Pillemer, Psychology

It is widely known that the quality of parent-child interactions significantly affects the child's development. Frequently, research on parent-child dynamics has centered on father-son, mother-son, or mother-daughter relationships. Little research has examined the forces within father-daughter relationships. This study examined the effects of time spent with father on sex-role flexibility in preschool girls. Time fathers and daughters spent together was assessed through a parent questionnaire. To assess sex-role flexibility, we used a toy-preference task in which children were asked to indicate their preference for a stereotypically masculine toy, a stereotypically feminine toy, or both toys. We used a teacher assessment based on the Bem Sex-Role Inventory (BSRI; Bem, 1974). The teacher assessment of sex-role flexibility evaluated masculine and feminine qualities for each child. Correlational analyses indicated a negative relationship between time spent with father and feminine qualities.

### **Will William Play with Dolls? The Effects of a Story that Challenges Gender Stereotypes on Preschoolers' Toy Play**

*Katherine A. Linsenmeier, Psychology '00 and Jeanine M. S. Yost, Psychology and French '00*  
ADVISOR: David Pillemer, Psychology

Thirty preschoolers (15 boys and 15 girls) were read either *The Very Little Boy* by Phyllis Krasilovsky or *William's Doll* by Charlotte Zolotow. The first story is about a boy who takes part in stereotypically masculine and gender neutral activities, while the second story is about a boy who wants to play with a doll. Each child was

then shown two masculine, two feminine, and two neutral toys and allowed to play; chosen toys were recorded. The children were also asked to rank their favorite toys, and their doll play in the classroom was observed. Boys who heard a gender stereotype challenging story were more likely to play with non-masculine toys than were boys who heard a traditional story. This finding is in accordance with social learning theory, which suggests that children's stereotypes about gender can be influenced by the images of gender which they see around them.

### **Do Discrepancies between Children's and Parents' Reports of Partner Violence Contribute to Children's Reports of Anxiety?**

*Colleen A. MacDonald, Psychology '00*  
ADVISOR: Linda Williams, Stone Center, Vera Mouradian, Stone Center, Patricia Hashima, Stone Center and David Pillemer, Psychology

Witnessing domestic violence and/or community violence has negative effects on children, including externalizing (aggressive) and internalizing (anxious) behaviors and the development of psychopathology. Some researchers have suggested that discrepancies between children's and parents' reports of community violence are linked to children's decreased functioning and heightened anxiety. However, this issue of reporting discrepancy has not been the focus of any study on the impact of domestic violence on children. The present study attempted to address that issue. Discrepancies between parents' and children's reports of partner violence were studied, and an examination of whether such discrepancies are associated with children's lowered functioning, specifically in terms of their anxiety, was conducted. Due to some evidence in the literature for greater agreement between mothers' and sons' reports of partner violence than between mothers' and daughters' reports, gender differences among the children were also taken into account. (Research supported by the Class of '67 Internship)

## Gender and Sexuality

### **Sexuality for Sale: Internet Brides, Child Prostitution, and Asian-American Pornography**

#### **e-Brides: The Booming, Unregulated, and Lucrative Business of Internet Wives**

*Alisa M. Keene, Psychology and Women's Studies '00*

ADVISOR: Elena Creef, Women's Studies

Although the practice of finding a foreign bride from one's homeland is not new and still continues to this day, a great proportion of today's foreign brides are the product of the booming, unregulated, and lucrative mail-order bride industry. In my presentation, I review how the advent of "e-business" has brought the "pen pal wife" industry to a new level of productivity, and examine the contextual pillars that e-Bride business success depends upon (in terms of foreign economical status, stereotypes, and gender constructions, relations, and roles). The study primarily focuses on Asian foreign brides. A review of the male and female participants is also investigated. The findings are clear: the e-Bride business is a sales industry of ethnic, gender roles, and cultural stereotypes; and the "pen pal wife" process and business is not only degrading to women, but places them in high domestic violence and psychological risk situations, and is used to fulfill and affirm the fantasy of the submissive and exotic Asian woman.

### Deconstructing the "Development" of Child Prostitution in Costa Rica

Laura Murray, *Political Science and Women's Studies '00*

ADVISOR: Elena Creef, *Women's Studies*

Broken down in three parts, this paper is based on fieldwork and original research conducted in San Jose, Costa Rica, during the winter and spring of 1999 with sexually exploited girls. Connections between economic and social development of the country are juxtaposed against perceived increases in child prostitution and crime. Although often framed as an international issue and highly connected to tourism, my fieldwork pointed to the basis of the problem as being in poor, isolated communities with high rates of sexual abuse in the family. Gender roles in the girls' families, the program with which I worked, and in the societal networks that facilitated child prostitution are examined as ways in which the responsibility for, existence of, and termination of child prostitution rested entirely with women.

### "What's a Nice Girl Like You Doing in an Anal Movie?": Asian/Asian-American Representations in Pornography

Holly Uyemoto, *Women's Studies '00*

ADVISOR: Elena Creef, *Women's Studies*

Annabel Chong is a twenty-something feminist of Singaporean descent who graduated from the University of Southern California with a 3.7 G.P.A. Her future aspirations include graduate study. The subject of a recent documentary film entitled, "Sex: The Annabel Chong Story," she achieved her initial fame starring in "The World's Biggest Gangbang"—the best-selling porn video of all time. She's the self-proclaimed "Anal Queen," the initiator of her meteoric stardom in porno, and the articulate defender of her own career choices. Refusing to be stereotyped by cinematic subjection, resistant to the "language of recovery" that insists on making her self-esteem an issue, and self-conscious of the dichotomies that she embodies, Chong is an anomaly in her profes-

sion. Is her success a third wave feminist epiphenomenon? A reclamation of the objectified body of a sex worker? Is this a spin on self-exploitation or neo-empowerment? What did she major in at USC? The idea that Chong would assess her options and pursue porno stardom is contrary to everything that people think they know about educated young women of Asian descent. But isn't feminism supposed to be about the expansion of options? Chong's self-representation and the controversies that surround her are explored with the idea that there is an important feminist inquiry at stake in the analysis.

1:30 – 2:40

**Politics: Identity and Change****Public Policy in Massachusetts****School Desegregation in the Boston Area: A History***Jennifer Abernathy, Spanish '00*  
ADVISOR: *Barbara Beatty, Education*

This project, entitled, "School Desegregation in the Boston Area," focuses on the social and political history of Boston's public school busing system, examining its effects, consequences, and current state. It will address the following questions: how and why busing was implemented; who has been affected by it, and their reactions and opinions; what, if anything, has it accomplished; and finally, what place does it hold in the Boston public school system of today and of the future.

I will first focus briefly upon the early history of school desegregation, presenting the local and national court rulings that preceded the implementation of desegregation by busing in Boston. Secondly, I will discuss the actual implementation of the system: who and where were the communities involved, what were their reactions to the system, and what were the local and national responses.

Thirdly, I will examine the effect of the social and demographic changes that took place in the school system from the late 1970s through the 1990s. The presentation will address the growth of the Latino and Asian populations in Boston, "white flight" into the surrounding suburbs, and the current ethnic makeup of Boston's schools. Finally, I will discuss the current dismantling of busing in Boston, the anti-desegregation rulings that preceded it, and local reactions to the July decision. I will conclude by considering the implications and possible consequences of this and other rulings like it across the nation.

**Discourse of Rights and Responsibility: Desegregating the Boston Public Schools***Jessica Hardie, Conflict and Social Change '00*  
ADVISOR: *Susan Silbey, Sociology*

In 1974, Federal Judge Garrity decided *Morgan v. Hennigan* and found the Boston School Committee and superintendent responsible for segregating the city schools. The judge ordered desegregation for Boston schools to commence that September. A year later, the U.S. Human Rights Commission came to Boston to provide a forum for citizens to recount their experiences with desegregation. The transcripts of these hearings revealed three recurring accounts. The first viewed the court as initiating problems in Boston and described desegregation as a class issue between suburban residents and working-class citizens in Boston. The second account described the situation as a race issue and identified desegregation as a historic problem resolved by the decision. Finally, the third account described obedience to the law as necessary for security and the preservation of the state. (Research supported by a Student Research Grant from the Office of the Dean of the College)

**The Evolution of Youth Activism in Community Development and Youth-Serving Organizations***Caroline Sung, Urban Studies and Public Policy '00*  
ADVISOR: *Barbara Beatty, Education*

According to a 1997 report called *What Americans Really Think about the Next Generation*, the three adjectives "rude, irresponsible, and wild" came to the minds of two-thirds of Americans first when thinking about today's teenagers. Throughout history, however, and through my own interactions, experiences, and studies of adolescents, these "wild" youth have initiated and made significant strides in improving their respective neigh-

borhoods. This research paper examines the historical development of youth-service organizations and youth activism in community development from the 1960s to the present. Moving from the national to the local level, the second half focuses on youth service in Boston. Through interviews and site visits, I survey several youth-serving organizations in Boston and study local models of youth engaged in community development. (Supported by the Office of the Dean of the College's Student Research Grant)

**Survey of Four Massachusetts Title X Grantee Agencies' Family Planning Services to Low-Income Women, Adolescents, and Racial/Ethnic Minority Groups***Sola A. Adelowo, Sociology '00*  
ADVISOR: *Jacqueline P. Fields, Wellesley Center for Research on Women*

The Title X program was enacted by Congress in 1970 "to provide individuals the information and means to exercise personal choice in determining the number and spacing of their children." Priority has been placed on reaching hard-to-reach populations, such as low-income women and adolescents as a means to eliminate racial disparities in access to health care. Through a competitive process, agencies are granted funds to provide comprehensive reproductive health and family planning services to all clients regardless of their ability to pay. The purpose of this survey is to evaluate the performance of the four Massachusetts Title X Grantee Agencies by measuring the extent of family planning service coverage to low-income women, adolescents, and racial/ethnic minority groups. The report will focus on the level of the population being served at each clinic site as measured against the number of women of reproductive age in the respective areas. The final analysis will be used by regional offices in the development of an allocation methodology and the establishment of a best practice model.

## Studies in Latin American Politics

### A Shout on the Wall: The Development and Use of the Poster in Revolutionary Cuba, 1959-1971

Jennifer Josten, *Latin American Studies and Art History '00*

ADVISOR: James Oles, *Art History and Lois Wasserspring, Political Science*

The Cuban Revolution since 1959 has required the mobilization of the masses to achieve its goals of societal transformation. The medium of the poster was developed in post-Revolutionary Cuba to act as a critical means of communication between revolutionary institutions and the Cuban people. Examples of revolutionary poster production are analyzed as tools for the expression of Cuban political and cultural policies during three phases: 1959-62, the formative period for revolutionary institutions, characterized by the search for a distinctive graphic language; 1963-66, when the poster movement evolved to include the participation of painters and more interconnections between political and cultural designs; and 1967-71, the period of greatest effervescence of poster production, inspired by nationalist and internationalist trends in art and policy. The study of this thematically and stylistically diverse cultural production demonstrates the independent character of the Cuban Revolution between 1959 and 1971, as leaders sought a unique path to the achievement of socialist goals. (Research supported by a Barnett Miller Fellowship and a Schiff Fellowship)

### A People on Display: Tourism as a Development Strategy for Peruvian Campesino Communities

Melanie L. Krebs, *Latin American Studies '00*

ADVISOR: Peggy Levitt, *Sociology*

Peruvian peasant communities, who have historically been located near the bottom of the social hierarchy, have been excluded from power and have remained poor. With the growth of tourist activity in Peru, some communities now find that they can market their perceived "backwardness" as

a tourist attraction. Because communities need this income, they have entered the tourist market, bringing them into direct competition with more experienced and better equipped entrepreneurs and travel agencies. In this paper I will present the finding from my thesis that investigates the power dynamics behind the ethnic tourist industry. I study if and under what conditions tourism can be a viable development strategy for peasant communities. My research explores race and class relations, the contemporary political context that structures the tourist industry, and how these shape peasant communities' ability to reap the benefits of ethnic tourism.

### Beyond Borders: General Augusto Pinochet and the Norms of International Law

Elizabeth Walker, *Latin American Studies '00*

ADVISOR: Lorraine Roses, *Spanish*

In October 1998 General Augusto Pinochet, former leader of Chile, was arrested in London on charges of crimes against humanity. The case brought against Pinochet by Spanish Judge, Baltasar Garzón has shaken the foundations of international legal practice. Under conventional international law, Pinochet's status and the location of the alleged crimes would render Spain's charges unacceptable. The changing perspective of the international legal system, however, has permitted Spain to take an unconventional path—that of universal jurisdiction. The principle of universal jurisdiction asserts that because certain crimes are universally condemned and are considered a threat not only to the citizens of a particular nation but to all humanity, jurisdiction over such crimes is likewise universal. The use of this largely unprecedented assault against a former head of state has prompted an outpouring of questions as to its implications. It is a step towards redefining the direction of international law.

## Cross-Cultural Encounters

### Through a Cross-Cultural Lens

#### A Survey of Perceptions between Mainland China and the United States

Chung-hao Chien, *Computer Science '00*, Cheryl Ching, *English '00*, Julie Hartle, *Chinese Studies '00* and Shirley Hwang, *Political Science and Chinese '00*

ADVISOR: Ann Huss, *Chinese*

Is the sharing and transfer of information enabled by current technology, shattering the (existing) boundaries between cultures and societies? Expounding on the topics introduced in Chinese 145, "China": Ways of Looking, we will attempt to reveal the blurring of national boundaries, in particular between the United States and Mainland China. To demonstrate the existence of human commonalities between these two "diverse" cultures, we have synthesized each country's presentation of current events, movies, tourism, and product advertising into an interactive multimedia presentation to be accompanied by discussion.

### Issues in Education

#### LIMITED OPPORTUNITIES: A Historical, Economic, and Social Analysis of Korea's Education System

Joanne Y. Lee, *English '00*

ADVISOR: Barbara Beatty, *Education*

Due to the economic crash of 1997, Korea faces many changes and challenges; however, one area where Korea repeatedly demonstrates success is in education. How is Korea able to claim the highest literacy rates and the highest scores on the Third International Math and Science Survey (TIMSS) despite its modest educational fund? Through a historical, economic, and social analysis of Korea's education system, this question and others are investigated. Issues such as the disparity between urban and suburban provinces and the influence of Confucian values of collectivism and loyalty will be also dis-

cussed. Observations in Korea's public schools, interviews with Korean schoolteachers, administrators, and parents help provide a more insightful perspective into Korea's present educational success and questions surrounding its future.

**Religion in the Public Schools:  
Analyzing the Separation of Church and  
State in America's Education System**

*Julia J. Lee, Economics and Urban  
Studies '00*

ADVISOR: *Barbara Beatty, Education*

Religion in the schools is one of the most contentious issues in American education. The First Amendment guarantees that the government will not create an established church and prohibits the government from enacting laws that impinge on any individual's practice of religion. Many of the controversies surrounding religion in the schools have found their way into the courtroom, and laws and court decisions have come to shape the patterns of the school day. I will examine significant legal cases that have defined the contours of the law on issues involving religion in the schools and summarize case law in the major areas of controversy. The bulk of my research will then focus on the latest development of controversy: public support for church-affiliated schools through voucher and school choice initiatives. I will present case studies of the two largest existing voucher programs in Cleveland and Milwaukee.

**Charter Schools: All Hype or a New and  
Improved Strategy for Equitable and  
Efficient School Finance?**

*Elizabeth Walsh, Peace and Justice  
Studies '00*

ADVISOR: *Corrine Taylor, Economics*

Over the past few years, charter schools—public schools that are run by community groups, nongovernmental organizations/nonprofit organizations, and for-profit groups through a contract or charter with the local or state government—have emerged as a hot topic in education policy debates. Progressives support them

because they give power and opportunity to teachers, communities, and populations who aren't well-served by existing schools. Conservatives see them as a much-needed type of school choice and competition. Critics worry that they drain funds from preexisting, struggling public schools and integrationists are concerned about schools that cater to a particular community or sex. Ideologies and theories abound in literature about charter schools, but empirical research has been limited. How are charter schools funded? Whom do they serve? Do they represent an efficient and equitable approach to public school finance? Join a critical dialogue on these complex, important questions about the direction of American public education.

**Wintersession in Shanghai**

**Perceptions of Shanghai, Before  
and After**

*Lydia Chan, English and Chinese Studies '01, Shing-Yi Wang, Economics and Chinese Studies '01, Chi Phan, Psychology and Chinese Studies '00, Cynthia Yang, Economics and Chinese Studies '00, Lydia Park, Biological Sciences '00 and Ngoc-Diep To, International Relations and Chinese '00*

ADVISOR: *Dai Chen, Chinese*

This past January, six Wellesley students journeyed to Shanghai for two weeks and witnessed firsthand the changing face of modern day China. From the sights they saw and the people they met, these four seniors and two juniors gained a new appreciation for the dynamic city and for China as well. Based on their experiences, this presentation will discuss how their perceptions of China were altered after the eye-opening trip and how their views may reflect the way many Americans currently regard the country. Topics to be presented include the architecture of Shanghai, food, religion, and shopping, in addition to the Chinese's own views on Americans.

**Science and Technology**

**Current Trends in  
Immunopathology: The Immune  
System and You**

**When Your Body Turns against You:  
Disorders of the Immune System**

*Allison K. Marshall, Biological Sciences '00, Lisa Wittenhagen, Biological Chemistry and Psychology '00, Erin E. Lunde, Biological Sciences and Women Studies '00, Crystal Watson, Biological Sciences '00, Johanne Auerbock, Biological Sciences and English '00 and Yoori Lee, Chemistry '00*

ADVISOR: *Beverly Blazar, Biological Sciences*

The body undergoes constant attack from the environment that threatens its well-being. Over time, the body has developed a complex immune system, which provides protection against foreign pathogens and agents. However, certain conditions can cause this system to turn against itself, creating an immune disorder with usually debilitating consequences. Disorders, including stress and immunity, asthma, AIDS, arthritis, toxic shock syndrome (TSS), and transplant rejection will be discussed. Our focus will be on the current research being performed to characterize the symptoms, to pinpoint causative agents, and to develop potential treatments for these immune disorders. This research was conducted independently and synthesized over the course of the BISC 314 Immunology class.

**Practical and Fun Applications of  
Computers**

**Clustering for Fun and Profit**

*Kirsten Chevalier, Computer Science '01*  
ADVISOR: *Randy Shull, Computer Science*

Given a set of data points, how do you determine which points fall into clusters (that is, groups of points that are close together, implying relatedness)? This problem, known as clustering, frequently arises in artificial intelligence and machine learning. In this talk, I describe an example of an application for cluster-

ing, as well as one previous algorithm to solve this problem. Then I explain each step of the algorithm, and finally, show that it produces accurate results and runs in time linear in the size of the data set. (Research supported by an NSF REU grant)

### Interactive Storytelling Toys

*Anindita Basu, Computer Science and English '00*

ADVISOR: *Jennifer Stephan, Computer Science*

Children frequently tell stories and role-play. As with most forms of play, these activities form a large part in child development, from acquiring and practicing language skills to better understanding themselves and preparing for future roles. Children have always been attracted to plush toys because they are anthropomorphic, but cuddly. This makes the stuffed animal a natural story-evoking interface.

My thesis is to build an interactive plush toy that encourages storytelling in children by letting them create characters with stories for the toy. Children record a script for their toy's character and a set of stories that the toy "knows." They can then interact with the toy, which plays the first part of the script and waits for a response, then returns with the next scripted statement. It finally asks the child for a story and returns the most relevant story from the set of stories that the toy "knows." (Research supported by MIT Media Lab)

### A Software Tool for Calculating First and Follow Sets

*Hefei Wang, Computer Science and Math '00*

ADVISOR: *Takis Metaxas, Computer Science*

The calculation of the FIRST and FOLLOW sets are central in the development of any compiler, and they are extensively studied in every course that discusses the issues related to compiler construction.

Calculating these sets for the symbols of a grammar is typically the first step in the development of parsers, both bottom-up and top-down. Algorithms for calculating them are known since the 1960s. Even though these algorithms are easy for a computer to execute, it is rather difficult for humans, including students, to under-

stand, visualize, and follow. We believe that we can improve the situation with the help of a graph theoretical approach which we introduce in our project. The algorithms we present have the advantage of being derived directly from the definition of the FIRST and FOLLOW sets, simplifying their conceptual complexity. Moreover, the graphs make it straightforward to answer questions like "why x appears on the FOLLOW set of y" which would be difficult using the traditional algorithms. The animation and visualization package we are currently implementing in Java is expected to further help the understanding of these concepts.

### Computer Animations

#### Why Did the Chicken Cross the Table? And Other Computer Animations

*Lin Hsu, Computer Science '01 and Cindy Jung, Computer Science '01*

ADVISOR: *Constance Royden, Computer Science*

*Never Late to Dinner* is a short animation depicting the adventures of Bobo, an animated chicken that was programmed in C using OpenGL libraries. We will present an exhibition of this and several other final projects of the CS307 Computer Graphics class. The animations consist of an interactive Rubik's cube that can solve itself, a pet fish that blows bubbles and swims, a simulated driving terrain, and more! The animations make use of graphics techniques such as 3D object rendering, lighting, shading, texture mapping, object and camera motions as well as user interfaces. Come talk to the creators to learn about shading techniques, interactive development, and scene production.

### Brain and Behavior

#### Do Ecological Factors Influence the Evolution of the Neural Pathway for Olfaction?

*Evelyn L. Bricklin, Biological Sciences '00*  
ADVISOR: *Barbara Beltz, Biological Sciences*

The olfactory structures of vertebrate and invertebrate species are separated into distinct clumps of neuropil called glomeruli where chemosensory neurons carrying information about the environment

synapse with second order neurons. We have shown in the decapod crustaceans that the number of glomeruli within the olfactory lobe is characteristic for each species but varies widely between species, and that phylogenetic factors influence the numbers of glomeruli. We are now testing whether an organism's lifestyle is correlated with the size and number of olfactory glomeruli in closely related species that have divergent lifestyles: genetically blind vs. sighted crayfish, and crayfish living in fast-moving streams vs. stagnant waters. These will define whether differences in olfactory needs correlate with differences in the structure of the olfactory centers. This would be expected if evolutionary pressures have selected for increased glomerular numbers in those species where a more elaborate olfactory sense would have provided a selective advantage.

#### Location, Location, Location... Animal Models of Dyslexia: Lesion Location and Effects on Neuron Size

*Sheila Ravendhran, Neuroscience '00*

ON CAMPUS ADVISOR: *Margaret Keane, Psychology*

OFF CAMPUS ADVISOR: *Glenn Rosen, Ph.D.*

Induction of microgyria to the cerebral cortex of rats mimics anomalies exhibited in dyslexic brains. Microgyria may be induced by surgery at early infancy and subsequently results in later behavior deficits involving auditory processing. These deficits in audition are congruent to processing deficits also observed in dyslexic children. Previous studies have examined the effects of lesions to the parietal, frontal, and occipital cortices on the MGN (the main auditory relay station of the thalamus) of animals. This study includes temporally lesioned animals in the experiment. Animals were lesioned with a freezing probe and microgyria were induced in all four cortices. Sham animals received surgery with no freezing probe and were employed as controls. Differences in cell size, as a function of lesioning, between sexes are expected, as indicated in previous studies. Caudal lesions to the brains may produce more significant effects than rostral lesions.

### Laugh Away Your Cravings: The Effects of Nitrous Oxide Exposure on Alcohol Consumption in High Alcohol Drinking and Alcohol Preferring Rats

Clara Kebabian, *Neuroscience '00*

ADVISOR: Margaret Keane, *Psychology*

Nitrous oxide (N<sub>2</sub>O) has been used successfully in treating post-withdrawal craving in alcoholic humans, aiding in their continued abstinence. We sought to establish an appropriate animal model to study the effectiveness of N<sub>2</sub>O induced drinking suppression. Rats underwent a limited access condition; one hour each day they had access to either water or ethanol. The highest alcohol-consuming rats were selected from each strain and exposed for various durations to a N<sub>2</sub>O mixture or pure oxygen. These exposures occurred every four days, scheduled to end one hour before a limited access condition. Consistent with earlier results, exposure to N<sub>2</sub>O suppressed alcohol consumption in rats in a dose-dependent manner. This result confirms the effectiveness of N<sub>2</sub>O in selectively suppressing alcohol drinking, establishing a rat model appropriate for use in studying the basic mechanisms underlying this effect. (Research supported by an NSF grant through the Center for the Integrative Study of Animal Behavior, Indiana University-Bloomington)

### Nitric Oxide Production in the Brain of the Lobster *Homarus americanus* during Larval Development

Jessica Kirby, *Biology '00*

ADVISOR: Barbara Beltz, *Biological Sciences* and Jeremy Sullivan, *Biological Sciences*

Nitric oxide (NO) is a free radical associated with synaptogenesis, neuronal refinement, and cell death during development in a variety of vertebrate and invertebrate species. A previous study on lobsters showed the presence of an enzyme that produces nitric oxide, nitric oxide synthase (NOS), in specific brain regions during larval life of *Homarus americanus*. We are focusing specifically on the role of NO in synaptogenesis in the accessory and olfactory lobes in developing lobsters. We are asking whether the period of glomerular formation, which we believe is correlated with synaptogenesis, coincides with the

time when NO labeling is seen. Brains and nerve cords from embryos and all larval stages were labeled for NOS and examined. Preliminary results suggest that NOS labeling does occur at the predicted times of synaptogenesis.

## Life, Literature, and the Arts

### Autobiography and Fiction

#### Ahab, Bartleby, and Melville: Character Parallels and Autobiographical Themes

Susan Corkery, *English '00*

ADVISOR: William Cain, *English*

Herman Melville's novel *Moby-Dick* and his short story "Bartleby, the Scrivener: A Story of Wall-Street" share certain themes important to Melville that provide insight into his profound psychology. Ahab from *Moby-Dick* and Bartleby are staunch in their ways of living and in their refusal to accommodate others. While both characters are distinct individuals within their context and in comparison to each other, they share traits with Melville himself, such as the desire for self-assertion. Melville enjoyed early success in his literary career with his travel romances, but then faced commercial failure with the later novels, above all *Moby-Dick*, that brimmed with larger, more abstract, and elusive ideas. "Bartleby, the Scrivener" is Melville's response to the failures of his most ambitious books and his assertion to his reading public that he "prefers not to" write the popular travel romances but works that are driven by his inner voice or higher power.

#### Reveries of Childhood: The Idyllic Memories of Chateaubriand and Oblomov

Margaret Samu, *Art History and French '01*

ADVISOR: Thomas Hodge, *Russian and Nathalie Rogers, French*

While a person's upbringing shapes his character and his world view, his adult experiences also shape his memories of childhood. Two nineteenth-century texts which draw on the protagonist's memories in this way are François René de

Chateaubriand's *Mémoires d'outre-tombe* (1848-50) and Ivan Goncharov's *Oblomov* (1859). In each work the writer creates an idyllic vision of childhood that contains both autobiographical and fictional elements. The early years of both protagonists are characterized by an isolation from society on a remote country estate, a desire to commune with nature, and a sense of timeless continuity. Despite these similarities, the boys' family relationships prepare them differently for adult life; Chateaubriand's sense of alienation from his parents prepares him for the harsh realities of the world, while the overprotection Oblomov receives from his family prevents him from fitting into society as an adult. Both men come of age in worlds marked by upheaval and change, Chateaubriand in post-Revolutionary France and Oblomov in Russia after the Decembrist Uprising. It is the early lives of Chateaubriand and Oblomov that determine how they deal with those changes and interact with the world around them.

#### A Page of Madness: Cinematic Techniques in the Literary Works of Yokomitsu Riichi

Zelideth Maria Rivas, *Japanese '00*

ADVISOR: Carolyn Morley, *Japanese*

During the 1920's there was a group of writers in Japan known as the *Shinkankakuha* (Neo-Sensationalist Group) spearheaded by the young writer Yokomitsu Riichi. This group of writers, influenced by the emergence of film as a new form of media, attempted to create stories that used scenic, camera-like shots and descriptive characterizations rather than a first person narrative to make the text come alive for the reader. Although Yokomitsu is best known for his innovative literature, the theories of the *Shinkankakuha* group are best represented by Kinugasa Teinosuke's 1926 film, *Kurutta Ippeiiji* (*A Page of Madness*) in which they collaborated. Throughout this film, the camera works with a disjointed narrative to thread the film together without relying on spoken language. An analysis of the film reveals many similarities with the surrealist films of Europe, such as those of Buñuel.

## Asia: Images and Ideals

### Engendering India: The Tropes of Maya and Mata in Rushdie's *Midnight's Children*

Sonal Khullar, *Comparative Literature '00*  
ADVISOR: Margery Sabin, *English*

How are we to understand the profusion of women in Salman Rushdie's *Midnight's Children* (1981) and their apparently marginal role in the imagined nation? Several scholars have noted Rushdie's attempt to write India, or narrate nation, in terms that render his narratives curiously misogynistic. By identifying specifically Indian and gendered idioms at work in the novel, I find that Rushdie's production of masculinity is far from secure and indeed rests on a pervasive male anxiety about female power. The politics and the aesthetics of that masculinity are mediated by feminine tropes – of maya (the principle of illusion) and mata (the figure of the mother).

*Midnight's Children*, then, reveals a complicated negotiation of nationhood and national subjectivity that is made possible by and through women. (Research supported by the Barnette Miller Fund for International Studies and the Office of Equal Opportunity and Multicultural Planning)

### The Beggarmaster as an Archetypal Horror in Rohinton Mistry's *A Fine Balance*

Rachel Spaulding Greenberger, *English '00*  
ADVISOR: Margery Sabin, *English*

The Beggarmaster in Rohinton Mistry's *A Fine Balance* is a key component in Mistry's representation of urban Indian life. A tremendous industry in Bombay, beggary, in the eyes of many foreigners (and Indians too), represents the most horrific aspect of urban Indian society. Mistry confronts this reality by the character of Beggarmaster, a terrifying man who without remorse collects and mutilates people for his trade. An Indian diasporic writer living in Canada, Mistry problematizes this figure. At first, Beggarmaster could be seen as a devil incarnate. But Mistry breaks down this limited villain-mold. Through narrative circumstances, Mistry shows Beggarmaster demonstrating love and loyalty to the legless Shankar.

The Beggarmaster invites further thought on India's begging industry and its notorious tactics. Even in the case of a beggar-master, can any human be truly and completely *inhuman*? Beggarmaster is merely one of Mistry's multiple examples of the accessible humanity within the horrors of Bombay society.

### The Romantic Period of Cantonese Opera in Hong Kong: Tang Di-sheng (1917-1959) and the Seen Fung Ming Troupe (1956-1972)

Pui Yan Li, *Chinese '00*  
ADVISOR: Sherry Mou, *Chinese*

Tang Di-sheng (1917-1959) is considered to be the most celebrated and influential playwright in the modern history of Cantonese opera. Tang's works are rich in language, music, character portrayal, and story line. His joining with the Seen Fung Ming Troupe in 1956 marked a new era in Cantonese opera. His adaptations of romantic tales of the fair maiden and talented scholar (*Caizijiaren*) of the Yuan (1271-1368 AD) and Ming (1368-1644 AD) dynasties remain to be the most popular Cantonese operas in Hong Kong to this day. His *Tale of the Purple Hairpin* has been considered a masterpiece since its debut by the Seen Fung Ming Troupe in 1957. Although Tang Di-sheng died in 1959, Seen Fung Ming Troupe devoted its career to Tang's operas for the next two decades, setting new standards and styles that are followed by many until now.

### China's "Sexual Awakening": Understanding the Erotic Tradition During the Ming Dynasty (1368-1644)

Elly Ham, *Chinese '00*  
ADVISOR: Ann Huss, *Chinese*

In recent years, scholars have used the term *qingyu juexing* (sexual awakening) to describe the philosophical atmosphere of China's penultimate dynasty. This description counters the general belief that China, despite its huge population, has always been an asexual, antierotic society. Towards the end of the Ming, a plethora of erotic fiction and color prints appeared in the artistic circles of Southern China, specifically in the regions south of the Yangtze River. Representative works of Chinese fiction from this period, including

the (in)famous novel *The Golden Lotus*, short stories from Feng Menglong's *Sanyan* collection, as well as erotic art prints will be examined in the context of *qingyu juexing* and crucial points in Ming dynastic history. (Research supported by a Schiff Fellowship and a Student Research Grant from Wellesley College)

## Self and Identity

### Matrix and Multiplicity

#### Work in Progress: A (Self) Portrait of Women's Work

Sophie Lee, *Studio Art and French Cultural Studies '00*  
ADVISOR: Phyllis McGibbon, *Studio Art*

Many generations of women have told their personal and family histories through the medium of the quilt, although quilting has only recently been recognized as a valid form of artistic expression. The images of women's hands at work were photographs taken of relatives and friends in Poland, working with their hands while knitting, pickling, playing the piano, in massage, etc. The photographs were then printed in black on a grey-toned paper using waterless lithography plates. A second layer was added in color relief using hand carved Sintra plates, and then the prints were laid out in multiples to echo the colorful and dynamic patterns in quilts.

#### Earl Grey with Lemon, Decaf Darjeeling, and Hibiscus Flower Pot: An Introspection through Tea

Danielle Hall, *Studio Art '00*  
ADVISOR: Sheila Gallagher, *Studio Art*

All I wanted was a cup of tea. Tea is a universal beverage, consumed by people from India to the United States for centuries. It provides warmth, comfort, energy, relaxation, and to me, a moment of pause during the day. And beginning in the fall of '99, tea and tea bags became a recurring theme not just in my life but in my artwork. Under the guidance of Sheila Gallagher, my advisor, I began to examine the links between this everyday object and its potential as a descriptive tool of the

self and a method for introspection. Self portraits? Social commentary? Psychological obsession? I don't know: all I wanted was a cup of tea.

### Loss and Distance: Empathizing with the Kosovar Experience

*Cate Brandt, Studio Art '00*

ADVISOR: *Phyllis McGibbon, Studio Art*

These works were prompted by reports of events that occurred last year in Kosovo. They are a personal meditation on the idea of genocide and its effects on everyday life, specifically motherhood, issues of control, and loss. Using various media, both sculptural and two-dimensional, like the artist Christian Boltanski, "I am trying to understand the agonizing question of how such an atrocity, at odds with the basic notions of humanity, could have occurred." I am exploring what it would be like to be unable to protect one's children, or to lose one's home as a result of ethnic bias. In doing so, I hope to encourage my viewers to reconsider their own daily lives as well as their relation to these tragic events.

### With That Wonderment Which Is the Birth-Act of Philosophy, I Suddenly Start to Query the Familiar

*Margaret Urban, Studio Art '00*

ADVISOR: *Phyllis McGibbon, Studio Art*

Crows and ravens are enemies of men or allies, creators or destroyers. They bring good luck or bad luck. They are beautiful or repulsive. They occupy prominent positions in the mythology of many different cultures. And today, even with our modern eyes, they maintain some of their mystery and power. It is difficult for us to see a crow or a raven as a bird and nothing more. We do not view them passively; instead, they provoke an immediate emotional response. This reaction is rooted in our cultural history, in our personal history, and colors our perception of them. This same subjectivity also filters our view of the world around us. Crows and ravens are simply an illustration of this reality. They allow for an exploration of the subjectivity of perception through a body of artwork.

### Elusive Boundaries

*Tracie Lee, Studio Art '00*

ADVISOR: *Bunny Harvey, Studio Art*

I see this project as a series of discoveries, not only about the formal and physical aspects of painting and drawing, but about the personal meaning behind the term "Chinese American." Over the past year, I have found that there are no easy, prepackaged answers or a single huge revelation for these issues; rather, it is an accumulation of small realizations over time that changes my concepts about art and who I am. I draw my inspiration from a number of sources, from classical Chinese scroll paintings to modern abstract painting to photos and newsclippings from my childhood. Cultural and personal boundaries are not concrete and immobile, but instead shift and collapse when examined and confronted; I am searching for those boundaries in order to manipulate them into something new — a synthesis of these discoveries.

### Time Change

*Erica Goetz, Studio Art '01*

ADVISOR: *Robert Schelling, Studio Art and Phyllis McGibbon, Studio Art*

This series of bronzes and prints explores patterns of growth and change in the natural world and in the industrialized world. Order and chaos appear and disappear in great harmony all around us and within us — such as in the things we cannot create sprouting up from the ground, the proportions and operations of our own bodies, and the structures we build imitating the natural world. Patterns and systemized growth cultivate the organic, explaining, yet still confounding, the rhyme and reason behind nature. All around us there is pure chaos in how the world grows and changes, but looking further there is a perfect order underneath — sustaining the spiral, the geometry, and the dynamism of change. Time keeps the rhythm within this series, within how we understand the world, in an endless cyclic movement and concurrently in a unified cosmic whole. But where does the timeline move and just how does the time change?

### Outside of Normal

*Marlene Kuhn, Studio Art '00*

ADVISOR: *Bunny Harvey, Studio Art*

My project is an autobiographical multimedia introspective examining past and present emotions regarding experiences in the hospital — both as the sibling of a terminally ill child, as the daughter of parents who have a terminally ill son and as the bone marrow donor who silently saved his life. My art addresses the intense emotions and pain associated with all aspects of the ordeal, including personal reflections as well as general expressions for the countless others who have been, and are now in this situation. I have searched for a way to honestly and appropriately convey my feelings and after much exploration, frustration, and uncertainty have now entered into the production of paper prayers. This symbolic format, used on World AIDS Day in the Boston area, and found traditionally in Buddhist prayer flags, allows me to incorporate emotional associations related to these incarnations of the prayers into my work, such as faith, acknowledgment of disease, support, and love. The exploration of different methods of expression through composition and a wide range of materials in my paper prayers, combined with an interactive installation involving the same themes, will synthesize and make sense of the myriad feelings regarding my own experience. The goal of this exhibit is to connect with those people who have been swallowed by the living nightmare of the hospital and illness, yet also to bring consciousness of this other world, so outside of normal, to those that had no idea that it exists.

### Portal

*Cassandra Johnson, Studio Art '00*

ADVISOR: *Phyllis McGibbon, Studio Art*

*Portal* is a sculptural book consisting of 52 tri-colored, folding tiles/pages that form a larger mandala-like pattern of overlapping and interlocking circles within a square. Along with the obscured text, the repeating forms and colors are meant to evoke a sense of mystery and an array of many

possible meanings within the piece and its permutations. The work explores themes such as: implicit versus explicit richness; map-like or puzzle-like structures; “reading” multiple layers of information; sacred art in a personal context; and the way in which the artist and/or viewer chooses to enter and experience the work.

### “Home Sweet Home”

*Florencia Garcia, Studio Art '00*

ADVISOR: *Sheila Gallagher, Studio Art*

home\1hom\n. 1 a: a family's place of residence: DOMICILE b: HOUSE 2: the social unit formed by a family living together 3 a: a congenial environment b: HABITAT 4 a: a place of origin b: HEAD-QUARTERS adj. – at home 1 a: relaxed and comfortable; at ease b: in harmony with the surroundings 2: on familiar ground: KNOWLEDGEABLE.

One can never go “home” unless home exists within. Through all the external forces of change, the sense of home provides an essential foundation for the construction of the self. This project explores images of homes I have lived in as well as places I have visited, all of which contain emotional significance. The images have been transferred and drawn onto plastered bricks using various media including charcoal, pencil, and ink

### Self-Concept and Learning

#### Academic Self-Concepts of Preschool Children

*Rebecca Sanborn, Psychology and Art History '00*

ADVISOR: *Beth A. Hennessey, Psychology*

Academic self-concepts and feelings about going to kindergarten were studied in children who will be entering kindergarten next fall. Study participants were drawn from the Wellesley College Child Study Center and the Wellesley Community Children's Center. The children were asked questions about activities they do in preschool and activities they will do in kindergarten. They answered these items by placing one of four faces on a paper doll they had colored to look like themselves. In addition, they were asked open-ended questions regarding what they

thought kindergarten would be like and what they would do there. Researchers have assumed that children younger than age eight have not yet formed an academic self-concept. However, the preschoolers whom I interviewed gave a wide variety of answers to my questions, suggesting they do not all think the same and that they have, in fact, developed distinct ideas about school and their place in it.

#### The Correlation between Personality Traits and Exchange Students' Levels of Immersion

*Laura Segelke-Bradford, French and Psychology '00*

ADVISOR: *Sabine Raffy, French*

During recent years, interest in the processes and effects of international educational exchanges has been growing tremendously. Part of this increase in interest is due to the fact that participation in educational exchange programs has risen to an all-time high of almost 100,000 American students studying abroad in the 1996/1997 school year. With more Americans going abroad than ever before, and with a corresponding increase in foreign students entering the United States, the importance of ensuring the success of educational exchange programs cannot be understated. However, there seems to be a growing consensus among educators and researchers that these programs are not accomplishing their intended goal(s). One way of evaluating whether or not students will experience a high level of immersion, and whether or not study-abroad programs are accomplishing their goals, is by measuring the correlation between personality traits and level of immersion. The results of this study will be discussed, as well as other possible mitigating factors, including length of stay abroad and housing conditions.

#### Wellesley Students' Attitudes Towards Mathematics

*Katherine A. Linsenmeier, Psychology '00*

ADVISOR: *Beth A. Hennessey, Psychology*

Previous research has investigated college students' attitudes towards mathematics, degree of mathematics anxiety, and mathematics performance. However, the interactions between these factors are not

clearly understood. One of the few consistent findings is that research outcomes appear to depend upon the population studied. The present investigation targeted Wellesley students, and was designed to address the following relations: 1) the correlation between mathematics anxiety and mathematics performance, 2) the relation of various student characteristics, attitudes, and beliefs to mathematics performance, and 3) the relation of various student characteristics, attitudes, and beliefs to mathematics anxiety. Overall, students with high mathematics anxiety were found to have performed less well on standardized mathematics exams than students with low anxiety. Math-anxious Wellesley students also appeared to be avoiding the study of mathematics when possible. Finally, an internal locus of control for success was found to be associated with lower mathematics anxiety and higher performance.

### Voice and Connection III

#### Of Water

*Chrisanne Souza, English '00*

ADVISOR: *Frank Bidart, English*

There is always a struggle beneath the surface of things, always tension and possibility. My poetry explores this notion as well as feelings of an uneasy coexistence with nature and an attraction to the strangely natural. These are the underpinnings of my poetry. On the surface are stories of relationships set against a background of seemingly benign images such as starlings, yellowed leaves, or the tips of bulbs pushing up through the miserable dirt, reminders of how quietly some things live and die.

#### Eclectic Electric Poems

*Anna Raphael, Biochemistry '01*

ADVISOR: *Frank Bidart, English*

As a biochemistry major and person interested in all sorts of natural phenomena, I inevitably reveal my scientific interests in my writing. These two areas are often considered mutually exclusive, yet a scientific background adds a rich vocabulary and “library” of experimental techniques that can be used as metaphors in poetry. It is possible to write a love poem using

the principles of molecular genetics. Of course, not all my poetry is unabashedly scientific. I will be sharing other poems, written during English 302, which use more universal language. Come to both hear and see an experience involving a Van de Graaf generator. It would also help to glance at Archibald MacLeish's poem *Ars Poetica* before the presentation so as to better appreciate one interpretation: *Ars Poetica*.

### MURDerER

*Johanne Blain, Multimedia Arts '00*  
ADVISOR: Naomi Ribner, Studio Art

It is often said that the medium modifies, changes, and/or *is* the message itself. When written poetry is read aloud to become a performance art, is a different message conveyed or is it left to the interpretation of the reader? In much the same way imagery can either enhance the meaning of the word or refute it — nonetheless the words are brought to new life. Spoken word poetry is where emotion and language combine and form art. Is it still art when imagery and technology are used to bring the poetry into electronic life? In MURDerER the words of the author were brought to life through my artistic interpretation. I have thus gained power, for the life the poem has now is defined by me. Yet the audience can empower itself by taking away whatever opinions they have of what was being communicated. Through MURDerER we find that art can live many lives in its single existence.

## Gender and Sexuality

### Views of Gender

#### Moon, Menses, Madness: Menstruation in Myth, Culture, and Politics

*Deborah F. Milstein, Medieval and Renaissance Studies '00 and P.H. Michelle Tsai, English and Latin '00*  
ADVISOR: Susan Reverby, Women's Studies

Beginning with prehistorical societies and ending in modern-day America, we will examine how the phenomenon of menstruation has been perceived and constructed: from cultures that respected the female

body and its cycles to cultures that devalue the female experience. We will compare and contrast ancient symbols of femininity and fertility with modern ideals of womanhood. We will examine how menstruation and sexuality link together in modern constructs of the female body. How have women's bodies been portrayed through the media, healthcare, and consumer industries? What implications do these social norms and biases have for the definition of the female gender, and how do these translate into our personal lives and self-images? We will review the history of the sanitary products industry, concentrating on industry health standards and advertising approaches. Addressing the risks of these products to our bodies and to the earth, we will offer alternative methods.

#### Tom Girls and Nancy Boys: Preschool Children's Reactions to Gender Stereotypes

*Casey Olm-Shipman, Psychology '00*  
ADVISOR: Linda Carli, Psychology

This study investigates preschool children's reactions to males and females who engage in various stereotypical and non-stereotypical gender-role behaviors. For example, I assessed how young children reacted to boys who exhibited nurturing behavior, a stereotypical feminine trait, and to girls who displayed leadership, a stereotypically masculine trait. Research among adults indicates that men and women who violate prescriptive gender-role norms (i.e., beliefs about how people should behave according to their gender) are evaluated more negatively than are people who adhere to these norms. I predicted that this would also be true among young children. Specifically, I predicted that girls who exhibited stereotypical masculine behaviors (e.g., dominance, independence, leadership, and boastfulness) would be evaluated more harshly by children than would girls who exhibited stereotypical feminine behaviors (e.g., friendliness, kindness, submissiveness, and self-deprecation). Likewise, I hypothesized that boys who engaged in stereotypical feminine behaviors would be evaluated more harshly than would boys who exhibited stereotypical masculine behavior.

3:00 – 4:10

**Politics: Identity and Change****International Political and Economic Issues****Dumping or Protection?: A Reevaluation of the Case of Turkish Steel Rebar before the International Trade Commission***Bouchra Aquil, International Relations '00*  
ADVISOR: David Lindauer, Economics

Recent events in Seattle demonstrate the complexity of issues surrounding trade between developed and developing nations. The United States preaches a free trade message, while challenged U.S. industries successfully lobby the government for protection against foreign competition. One common instrument of protection is to accuse foreign firms of dumping – selling goods inexpensively at below cost of production or below the selling price in overseas markets. For a research project in Economics 212, Brooke Luetgert '99 and I examined one such case. It resulted in a questionable U.S. government finding that Turkish firms were guilty of dumping steel rebar, a product sold widely in Puerto Rico for pool and patio construction. Through interviews and analysis of published and internet sources, we found that foreign firms are subject to unfair processes and legal maneuvers. The underlying problem for the U.S. firms injured by imports was an inability to compete internationally.

**Causes and Consequences of the Russian Financial and Economic Crisis, 1998***Natalya Kaydash, International Relations, '00*

ADVISOR: Marshall I. Goldman, Economics

In August 1998, the international financial community was unpleasantly surprised by the Russian default on its foreign currency denominated debt. The major outflow of funds from the emerging markets due to the Asian Crisis, combined with the decrease in oil prices, have strained the overheated market economy in transition, and the government's budget suffered a

dramatic decrease in revenues. Was this course of events completely unexpected or were the signs of turmoil dismissed by the international and domestic investors as distant and irrelevant threats? What are the prospects for Russia now, that the oil prices are up and the emerging markets are regaining the trust of investors? In this presentation I will discuss the causes and the course of the crisis, as well as the developments of the Russian economy since and its possible future.

(Research supported by the Barnette Miller Student Grant in International Relations)

**Economics and Olympic Medals***Ayfer Ali '02*

ADVISOR: Dan Johnson, Economics

In the history of the Olympic games the countries that have ranked highest, according to the number of medals they have won, are those that are economically developed and powerful. Data show that, while in the early Olympics (e.g. London, 1908) over 90 percent of the participant countries won medals, in recent ones (e.g. Seoul, 1988) only 30 percent win. This paper asks how the distribution of medals has changed as the number of participating countries has grown, using economic variables to explain a country's decision to participate in the games and its chances of winning medals. It also addresses the importance of the home-country bias on the outcome of competition and how that influences rent-seeking behavior when host cities are chosen. Based on the evidence that we have from the past, the paper predicts medal rankings at the games in Sydney, Australia this summer. (Research supported by an NSF AIRE grant)

**Financial Structure, Investment, and Growth***Tracey Dominick, Economics and Art History '00*

ADVISOR: Joe Joyce, Economics

Financial structures provide the conduit for capital raising in today's economies.

As such, the availability of these structures facilitates a country's capital accumulation. In this presentation, the roles of two main financial structures, equity markets and financial intermediaries, will be examined. There are inherent differences in the operation of each of these structures leading to varying levels of efficiency. Thus, one may hypothesize that there could be an optimal type of financial structure for a given economy to maximize its investments and therefore increase its level of economic growth. My presentation will examine the relevance of financial structure as a feature in the equations for both economic growth and investment. By means of explaining the topic, I will first explore the historical context of this question. From there I will summarize the theoretical framework surrounding the topic. To further illustrate the question, I will distinguish between different types of financial structures. Drawing from the current literature on this topic, I will give the advantages, disadvantages, and potential ramifications of each. Finally, using econometric analysis, I will further explore the significance of financial variables in the equations for growth and investment.

**Cross-Cultural Encounters****Living and Learning Abroad****Relationship between a Petro-chemical Complex, Surrounding Communities, and the Pollution of Lake Maracaibo, Venezuela***Sarah Coradetti, Anthropology '00*

ADVISOR: Sylvia Hiestand, Director of International Studies and Services

During the fall 1998 semester, I conducted a month-long independent field project in and around a petro-chemical complex on Lake Maracaibo, Venezuela. The purpose of this study was to understand the relationships between the lake, the petro-

chemical industry, and the general community regarding water pollution and its environmental impacts. Interviews with industry officials, community members, scientists, environmental educators, and park rangers revealed a spectrum of opinion on the sources and degree of pollution of the lake and about the company that owns the complex, and pointed to a general lack of communication and trust between groups. In-progress scientific studies using biological indicators suggest that industrial effluents discharged by the petro-chemical complex into Lake Maracaibo contain high levels of contamination. The company is currently developing more ecological and sustainable solutions to the pollution problem through bio-remediation of effluents and the treatment and reuse of domestic waste-water and sewage.

#### **River Water, Holy Water—Current Conceptions of Nepal's Bagmati and Her Waters**

*Sarah Coradetti, Anthropology '00*  
 ADVISOR: *Sylvia Hiestand, Director of International Studies and Services*

My spring 1999 project explored Hindu perceptions of Nepal's most sacred and polluted river, the Bagmati, by examining how people differentiated between environmental and ritual pollution and how this informed their conceptions about the holiness of the river in its current state. The Bagmati is considered to be a goddess and her water is important in Hindu rituals, but with recent rapid urbanization and development of the Kathmandu Valley, the environmental condition of the river and the ways people relate to her has also changed. Interviews with worshippers, resident ascetics, and shopkeepers at the riverside Pashupati temple complex in Kathmandu received three rough categories of response: the river and her waters are still and always holy; the river is still holy, but her waters are not; neither the river nor her waters are holy anymore. I speculate about how demographics and socio-economics may influence such expressions.

#### **Estimating Stocking Rates of Resident Livestock at the Ngong Hills Forest Reserve**

*Brooke Devenney, Biological Sciences '00*  
 ADVISOR: *Sylvia Hiestand, Director of International Studies and Services and Abdelwahab Sinnary, Center for Wildlife Management, Athi River, Kenya*

The Ngong Hills Forest Reserve, located 20 kilometers south of Nairobi, Kenya, was gazetted as a forest reserve through the Kenyan government in 1981. The reserve encompasses 3,077 hectares of the Rift Valley Escarpment, dominated by cool climate, 600-1400 mm. of rainfall per year, and productive soils. The area possesses high agricultural potential; however, it is currently in danger of overutilization. The overabundance of resident as well as migratory livestock owners has increased grazing pressure to an unsustainable level, causing soil erosion and land degradation. The results of a previous study (August 1998) conducted in the Ngong Hills Forest Reserve suggested overstocking of livestock in the Reserve at three times the sustainable level. Through the Center for Wildlife Management, a follow-up study was administered to assess the current stocking rate, determine the sustainable levels of the Reserve's resources, and make recommendations for the future management of the Reserve.

#### **Tutorial in Contemporary Women's Issues in China, Summer, 1999**

*Kristen Looney, Chinese '01*  
 ADVISOR: *Sylvia Hiestand, Director of International Studies and Professor Guo Li of the Heilongjiang Province Women's Research Institute Harbin, China*

As part of my course work in Harbin, I designed a one-on-one tutorial on Contemporary Women's Issues in China. My professor works at the Heilongjiang Province Women's Research Institute. Through our time together, we established a close friendship. She introduced me not only to the many problems that women face, but also to a variety of other contemporary social problems such as health

care, education, child welfare, unemployment, and the environment. I also learned about many differences between rural and urban China with respect to these issues. My professor provided me with amazing opportunities to talk with Chinese people working in law and psychology. I also met an editor of a popular women's magazine. On one occasion, I went to an office affiliated with the United Nations, at which I interviewed women who had come that day from homes in the countryside to Harbin in search of work. Given that the class was taught entirely in Chinese, I made incredible progress with my language through discussing these complex issues. At the end of my term, I wrote a research paper in Chinese characters and gave a 15 minute oral presentation in Chinese to teachers and students about my paper. Since we covered so much material in the tutorial, I focused my final paper and presentation on marriage law and the one child policy.

#### **Latina Women at Wellesley**

##### **In Their Own Words: Portraits of Latina Identity**

*Maria Celeste Alvarado, Spanish and Political Science '02*  
 ADVISOR: *Veronica Darer, Spanish*

Whether born in Puerto Rico or Mexico, Argentina or the United States, all Latinos are unified in a shared history and language. What is so amazing is that regardless of the collective culture, a clear sense of individuality remains. To share a common culture is not to claim a common identity. In this project, I examine personal perceptions of Latino identity within the Wellesley community. Drawing from interviews of diverse Latina Wellesley women, I have formed a panel of selected interviewees. Their narratives are the basis for the discussions that will provide a deeper insight of what the Latina identity is, and how that identity lives and evolves at Wellesley College.

## Science and Technology

### Cell and Molecular Biology

#### The Immunogenicity of Murine Immature Dendritic Cells Expressing DNA-Vaccine-Encoded Polypeptides of the Rauscher Leukemia Virus

*Karen Sautter, Biological Sciences '00*

ADVISOR: Jennifer O. Manilay, Biological Sciences and Ruth Ruprecht, Dana-Farber Cancer Institute, Boston, MA

The overall goal of this study is to elicit protective immunity against retroviral infection via intravenous injections of immature dendritic cells (DCs) expressing a DNA vaccine using a mouse model system. DCs, which represent a class of powerful professional antigen-presenting cells, are believed to be central in the initiation of immune responses after the administration of a DNA vaccine. It is speculated that immature DCs infected with a DNA vaccine encoding a particular viral antigen will increase overall antigen presentation and generate intense humoral and cell-mediated immune responses. It is thus the aim of this project to achieve full protection against the Rauscher murine leukemia virus (RLV) in mice by administering immature DCs expressing either env or gag-pol genes by adoptive transfer prior to virus challenge. Cellular and humoral immune responses will be evaluated. (Funded by Staley Cancer Research Grants)

#### Study of the Wnt Cancer Pathway

*Hillary Bernstein, Latin American Studies '00*

ADVISOR: Marjory Levey, Biological Sciences

Cancer can result from uncontrolled cell growth. The Wnt pathway, involving many intracellular proteins, may play an important role in regulating gene transcription. This project focused on developing efficient methods for analyzing the Wnt pathway and its related proteins. Activation of the Wnt pathway causes an accumulation of a cytoplasmic protein,  $\beta$ -catenin, resulting in the activation of the nuclear transcription factor, TCF. This cascade turns on transcription of a cell cycle

gene, which may result in uncontrolled cell proliferation. The first approach was to create fusion proteins of  $\beta$ -catenin and TCF with a viral protein. These constructs were transfected into a mammalian cell line and assayed using Western blot analysis and immunofluorescence. The second approach utilized the estrogen receptor hormone-binding domain (HBD), which can be selectively activated by estrogen. Future experiments will involve the fusion of  $\beta$ -catenin and TCF to HBD and will test function by selectively inducing protein activity. (This research was done at the UCSF Cancer Center)

#### Cell Cycle and E Protein Regulation

*Tina Jen-Ting Chen, Biological Chemistry '01*

ADVISOR: Kimberly O'Donnell, Biological Sciences

An individual grows by cell proliferation. Subsequently, cells differentiate into discrete cell types. When a cell loses its ability to stop proliferation, it can become cancerous. My research focuses on the stability of E protein. E proteins are factors that play an important role in cell division and differentiation. To investigate E protein stability, a region of the protein was altered to create an area of negative charge, which mimics phosphorylation. The effect of the mutation was tested in proliferating and differentiating cells. Using immunofluorescent microscopy, I saw that the phosphorylated-like mutant E protein prevents differentiation. This result suggests that protein stability and phosphorylation are related to the role of E protein in cell cycle regulation. (Research supported by Alvan T. and Viola D. Fuller Research Fellowship)

### Metals in Chemistry and Biology

#### Anomalous Photophysical Behavior of the Uranyl Ion

*Jennifer Williams, Chemistry '00*

ADVISOR: William F. Coleman, Chemistry

The Beer-Lambert Law states that the absorbance of a solution should be linearly dependent on the concentration of the absorbing species. However, the uranyl ion ( $\text{UO}_2^{2+}$ ) in dilute acidic media does not

obey this law between 350 and 400nm, although it does so at higher wavelengths. It is unprecedented to have a system that obeys this relationship in some regions of the spectrum but not in others. The uranyl ion also displays anomalies in the emission quantum yield. Assuming that relaxation from upper excited states to the emitting level is essentially 100% efficient, the emission quantum yield should be independent of the excitation wavelength. The relative emission quantum yield of the uranyl ion is wavelength dependent, with a 50% decrease in the quantum yield in the region 350-400nm. The Beer-Lambert Law violation can be explained with a model that involves dimer formation by uranyl ions. The quantum yield behavior is consistent with a multiple excited state model, where high-energy states relax directly to the ground state by non-radiative means. Our focus is on combining these models to develop a single mathematical and chemical model to explain all of our observations.

#### Biological Toxicity of Heavy Metals

*Barbara B. Jurim, Biological Chemistry '00, Nancy Kesek, Biological Chemistry '00 and Iris Kuo, Biological Chemistry '00*  
ADVISOR: Gary Harris, Biological Sciences

One of the most serious threats facing our planet, and the creatures that inhabit it, is the continued direct and indirect destruction of its environment by the introduction of a wide variety of pollutants. One group of these pollutants, often collectively referred to as heavy metals, can be toxic to all forms of life, and includes lead, mercury, nickel, copper, cobalt, cadmium, and zinc. This study's goal, conducted as a part of BISC 317, was to investigate copper phytotoxicity in the aquatic plant, water hyacinth. Specifically, we focused on the effects of toxic concentrations of copper on the biochemistry, physiology, and microscopic anatomy of leaf cells. We believe that a clear understanding at the molecular level of how plants cope with heavy metal (copper) stress may contribute to a general understanding of how all organisms, including humans, deal with environmental stresses and are damaged by heavy metal poisoning.

## Biological Responses to Natural and Unnatural Stimuli

### Electron Microscopy of Rat Lungs as Affected by Adrenaline Blocking Drugs

Jennifer Vazquez '02

ADVISOR: Dennis Smith, Biological Sciences

Drugs called beta blockers compete with adrenaline for beta receptor found in lungs and hearts, and interfere with the action of adrenaline, helping to reduce the symptoms connected with various disorders including stage fright. In previous experiments, it was seen that an injury response occurred when male rats were exposed to continuous propranolol, a beta-adrenergic blocking agent. A more specific drug, ICI 118,551, was used to test the effects of the beta-2-adrenergic blocking response that the drug caused within the lungs of rats. I examined the lung tissue of male rats through electron microscopy after exposure of two to three hours to the drug and the control group exposed to saline. From the images obtained from the electron microscope, we observed similar effects to those previously demonstrated in the propranolol-treated group, such as thickening of the connective tissue, increased number of Type II cells, and possible endothelial cell apoptosis.

### Proteases in Cyanobacteria

Fong (Fawn) Cheng, Biological Sciences '00, Khadija Mani '02, and Michelle Iniguez '03

ADVISOR: Adele J. Wolfson, Chemistry

Cyanobacteria are blue-green algae that contain a nitrogen storage molecule called cyanophycin (which is known as cyanophycin granule polypeptide, or CGP, in its insoluble form). The purpose of our research is to identify proteases (enzymes that degrade other proteins) involved in the breakdown of CGP by studying the electrophoretic gels of cyanobacterial extracts. We have been using zymogram gels with casein, a protein that has been shown to be a suitable substrate for "cyanophycinase". We have found that cyanobacteria treated with chlorampheni-

col (a drug that inhibits protein but not CGP synthesis) under low light conditions contain new proteases. Cells subjected to nitrogen starvation have at least two proteases that can be inhibited by typical protease inhibitors and at least one that cannot. We are studying the conditions under which these proteases appear in order to determine the class of protease to which they belong and how they might be regulated. (Research supported by NSF grant MCB-9728609)

### Stability and Binding of Ligand to Endopeptidase 24.15

Christine Guth, Chemistry '00

ADVISOR: Adele J. Wolfson, Chemistry

Endopeptidase 24.15 (EP 24.15), also called thimet oligopeptidase, is an enzyme that cleaves neuropeptides to either bioactive or inactive forms. Previous studies have shown that EP 24.15 appears to be activated by calcium at millimolar concentrations. Research has shown two seemingly conflicting results as to where the calcium is binding in order to confer the observed activation. Some experiments have shown that the calcium appears to bind directly to the enzyme, while other studies indicate that the calcium binds to the enzyme's ligand (substrate or inhibitor). We can observe changes in the thermodynamic parameters of the protein in the presence and absence of calcium and the ligand through calorimetry. Through comparison of our thermodynamic and kinetic data with structural characteristics of the enzyme, we hope to gain more of an understanding of the molecular mechanism of EP 24.15's apparent activation by calcium.

### Effect of Calcium on Structure of Endopeptidase 24.15

Dawn Joyce '02

ADVISOR: Adele J. Wolfson, Chemistry

Endopeptidase 24.15 (EP 24.15) is an enzyme that cleaves neuropeptides to either bioactive or inactive forms. Research has indicated that the enzyme is activated by calcium ions, but it is not known whether the interaction of the

metal is with ligand or directly with the enzyme. One approach to answering this question is to determine whether EP 24.15's electrophoretic mobility changes as a result of interactions with calcium, in the presence or absence of ligand. A change in mobility would indicate a conformational change or alteration in molecular weight. Electrophoresis also yields information about aggregation of the enzyme. EP 24.15 can exist as a single subunit, as dimers or higher-order multimers. Reagents that favor formation of the monomer activate the enzyme. Results of electrophoresis in the presence and absence of calcium indicate that calcium may interrupt formation of dimers and oligomers. (Supported by Wellesley's Award for the Integration of Research and Education grant)

### Does a Change in Finger Temperature Precede a Migraine Attack?

April Bonnie Chang, Neuroscience '01

ADVISOR: Mary D. Coyne, Biological Sciences

Stress is an established trigger of migraine headaches. Because the sympathetic nervous system responds to stress with increased stimulation, the interval before a migraine attack is believed to be a period of heightened sympathetic activity. Sympathetic activity will cause vasoconstriction, which lowers finger skin temperature. Finger skin was therefore hypothesized to exhibit low temperatures before a migraine attack, and the possibility of using finger skin temperature as an indicator of an upcoming migraine episode was examined. Students from Wellesley College who suffer from migraine headaches participated in the study by agreeing to have measurements of finger and body temperature, sleepiness, heart rate, and activity taken. Finger skin temperature was not found to differ significantly before and after a migraine attack, but the possibility of misdiagnoses and a too small sample size may have resulted in spurious findings.

### Rhythms of the Night: Circadian Rhythms in the Leech

*Diane Birmingham, Biological Sciences '00, Jessica Brommelhoff, Psychobiology '00, and Sheila Ravendhran, Neuroscience '00*

ADVISOR: *Barbara Beltz, Biological Sciences*

Research has demonstrated a potential link between light exposure and serotonin levels in invertebrate species, such as *Aplysia*. This examines the effects of light cycles on the serotonin levels in *Hirudo medicinalis* and *Haemopsis grandis*. Leeches were separated into three different categories based on light exposure for seven and fourteen days. Ventral nerve cords of leeches were harvested and serotonergic cells were localized in the ganglia via immunocytochemical methods employing HRP. Qualitative results of serotonin staining were obtained in a photographic form using light microscopy. Effects of light exposure emerged upon analysis of data. Dark and random light cycles elicited decreased serotonergic response in both *Hirudo* and *Haemopsis*. Noteworthy unforeseen effects of light deprivation on behavior were additionally observed. Leeches deprived of light were markedly lethargic and exhibited little swimming behavior relative to enlightened peers. Findings suggest circadian rhythms exist in the leech and are related to levels of the neurotransmitter serotonin.

### Vernal Pool Conservation

*Elizabeth Cope '02 and Jean Huang, Biological Sciences '01*

ADVISOR: *Marcy Thomas, Biological Sciences*

Vernal pools are unique seasonal freshwater bodies that are essential to the survival of many vertebrate and invertebrate species. Several species of mole salamanders (*Ambystoma*), the wood frog (*Rana sylvatica*), and the invertebrate fairy shrimp (*Anostraca*) are considered obligate species, which means that they depend exclusively on these wetlands for breeding and survival. Vernal pool habitats are being drastically reduced by development. Only if they are certified can these habitats

be protected under the Wetlands Protection Act. Certification involves identifying and mapping the location of a vernal pool and documenting the presence of obligate and facultative species according to the guidelines of the Natural Heritage and Endangered Species Program. For the past two years, eleven Wellesley College students have worked on this project which was funded by the Howard Hughes Medical Institute. By definition, vernal pools are in existence only in the springtime so most of the biological activity must be documented from early April to late May. The goals of the project were twofold. The first part involved community outreach and education, where we spoke to community groups and children in middle schools and high schools. The second component was the legal protection of the habitat of obligate species. We studied over 40 vernal pools and certified 24 in 7 towns in Massachusetts.

### About Wellesley

#### Hannah French: Book Arts at Wellesley College

**"Preservative of All Arts": Hannah French and the Art of the Book at Wellesley College**

*Alexis R. Dinniman, Art History '00*  
ADVISOR: *James O'Gorman, Art History*

One of the most unique yet least well-known resources at Wellesley, the Book Arts Laboratory has served the campus for over 50 years. Over that period of time, students, faculty, and staff alike have utilized the laboratory in learning how to set type and print everything from stationary to small publications. Founded in 1944 by Special Collections librarian Hannah French, the laboratory was a significant contribution to the college community, but Miss French also contributed to the field of book arts through her research and teaching. Drawing largely on the College Archives and other resources, my 360/370 research has focused on the life of Hannah French and her contributions

to this field, at Wellesley and elsewhere, which will be explored in my Ruhlman Conference presentation. The Book Arts Laboratory remains a lasting reminder on this campus of the remarkable woman who founded it and who devoted herself so fully to an area few know about.

### A Famous Graduate

**Bridging Three Centuries: Mayling Soong (Class of '17)**

*Alice Tzou, Psychology '01 and Jennifer Downing, East Asian Studies '01*  
ADVISOR: *Sherry Mou, Chinese*

The life of Wellesley's oldest alumna, Mayling Soong '17, is one of the most celebrated at the College. Also known as Madame Chiang Kai-Shek, this 103-year-old woman represents a merging of East and West. Alice Tzou, who met Mayling Soong in New York this year at the opening reception of an art exhibition featuring her paintings, will discuss her impressions of this special experience. Mayling Soong's life will be examined and reflections will be made about her role as a woman, a wife, a Chinese, a Christian, and a political figure. Jennifer Downing, who also visited the art exhibit, will speak about the collection of paintings and Mayling Soong's life as a talented woman. The panelists will discuss how Chinese and American scholars perceive and interpret Mayling Soong's various roles.

### Life, Literature, and the Arts

#### Harriet Beecher Stowe

**Racial Myopia in Stowe's Characterization of Negroes in *Uncle Tom's Cabin***

*Lauren Zykorie, English and Africana Studies '00*  
ADVISOR: *William Cain, English*

Harriet Beecher Stowe's endorsement of racial stereotypes in *Uncle Tom's Cabin* animates much of the current debate concerning the treatment of race in the American literary canon. When we place

this issue in its historical context, we can perceive how Stowe's characterization reveals her conformity to abolitionist thought and furthers her own beliefs in racialism. However, by understanding stereotypes, and Stowe's adoption of them for her black characters, we can see that although Stowe intended to and somewhat succeeded in transcending the racial prejudices of her time, the pervasiveness of stereotypical characterization ultimately subverts her intentions.

### George Harris and Colonization in *Uncle Tom's Cabin*

Lydia Chan, *English and Chinese Studies '01*

ADVISOR: William Cain, *English*

Stowe's own view of race relations in America was pessimistic. She could not envision a life for freed slaves in the North, and in the character of George Harris, she suggests her approval of colonization, a movement based on the belief that free blacks and whites could not live together on equal terms in the United States. George's letter at the end of *Uncle Tom's Cabin*, announcing his intention to go to Liberia, has become one of the more controversial aspects of the novel, and Stowe implies that emigration to Liberia is one of several options that slaves can take once they are emancipated.

### Slave Insurrection, God, and Dred in Harriet Beecher Stowe's *Dred: A Tale of Great Dismal Swamp*

Dawne Thorne, *English and Greek '01*  
ADVISOR: William Cain, *English*

In her second antislavery novel, *Dred: A Tale of the Great Dismal Swamp* (1856), Stowe presented a hero very different from her first, the passive, Christlike Uncle Tom in *Uncle Tom's Cabin* (1852). Affected by the violence occurring in the United States during this period and the panic over slave conspiracy and insurrection which plagued the slave states, Dred is the son of famous slave conspirator Denmark Vesey. Gloomy, prophetic, and powerful, Dred is an overwhelming force in the novel about whom Stowe seems ambivalent. Although Dred is consumed

by the crimes endured by his race and capable at times of "savage fierceness" (274), Stowe demonstrates an immense sympathy and compassion for his plight, even going so far as to reconcile the two roles of God—the New Testament God, the savior, and the Old Testament God, the avenger.

### Voices in Literature and Medicine

#### "Til Death Do Us Part: A Doctor's Two Loves

Maria Almond, *English '00*  
ADVISOR: Michèle Respaut, *French*

Through the interweaving of voice, this fictional piece takes the reader through the life of a rural country doctor, following his struggle with role and identity. Both a public figure and a private individual, Dr. Harold Almond moves uncertainly between his commitment to the community and his relationship with his wife in an effort to find the niche where both roles become possibilities. This tale describes the inner debate of a man fighting the multiplicity of his separate selves and a woman waiting for their reconciliation.

#### Solving the Mystery: Diagnosis and Literary Analysis as Art

Hannah K. Galvin, *Biological Sciences '01*  
ADVISOR: Michèle Respaut, *French*

The doctor-patient relationship could be improved significantly if the patient were given more of a voice in his or her own examination and treatment. Critics have asserted that this may be accomplished in part by viewing the illness as comparable to a literary text and the patient as the author of that text. If the physician could take the role of the reader of that work (in diagnosis), as well as coauthor (in healing), medicine could reclaim its traditional role as a healing art. In this project, I set out to explore medicine as an art form by comparing diagnosis with literary analysis. I examined the process of a mock diagnosis and then applied this process to the analysis of several choruses from Jack Kerouac's *Mexico City Blues*. Through a detailed history, followed by a physical examination of the text, I gained a new understanding of this work. This

comparison of methods demonstrated itself to be helpful in viewing medicine as a healing art.

#### The Self of Madness: From the Inside

Katrin Sadigh, *English and Psychology '00*  
ADVISOR: Michèle Respaut, *French*

Both literature and medicine create human histories. The writer and the doctor put pen to hand and craft narratives in an attempt to bring certain human experiences to light. Yet often times, they both lose sight of the one object that always lies at the very heart of their work — the person. Immersed in the particulars of language and form, confined by the limits of time and situation, these storywriters concoct as best a representation of a self as they can. It is vital to consider the ways in which even such sensitive and perceptive vision may prove oblique and inadequate. What of the self itself? What kind of vision comes from within the self, and what knowledge can be gained by listening to the voices of the damned, the struggling, the mad? I wish to create a space for these voices to speak, for the stories to be told by those who live the story. I will present slides of different works of art representing a vision of madness from the inside, as I read pieces of my own poetic work, with the hope that the "self" can be a part of our vision of madness.

### Self and Identity

#### Children and Relationships

##### Young Children's Concepts of Close Relationships

Anneliese Bass, *Psychology '00*  
ADVISOR: Tracy Gleason, *Psychology*

Children's early relationships are important as contexts for developing language skills, exposure to cooperation and conflict, and forming an understanding of the world. Young children begin to differentiate between relationships and to develop expectations for "social provisions" of relationships. Social provisions are characteristics of relationships that meet an indi-

vidual's requirements for well-being, such as companionship, nurturance, and instrumental help. Little is known about how children conceptualize relationships in terms of social provisions. Interviews of 31 three- to five-year-old children were conducted regarding the social provisions they associated with their mothers. Children were also observed in free play sessions encouraging pretense because children demonstrate their understanding of social provisions when enacting roles. Preliminary results suggest age differences in early concepts of and differentiation of the social provisions associated with relationships with mothers.

### Perceived Mutuality between Parents and Their Preschool Children

*Emily M. Hansen, Psychology '01*  
ADVISOR: *Nancy P. Genero, Psychology*

It is generally acknowledged that the relationship between a parent and young child is crucial to the child's psychological development. To understand the communicative aspects of the parent-child relationship, researchers have primarily focused on the type and frequency of parent-child conversations. Few studies, however, have assessed the mutual or bidirectional quality of parent-child conversations. This study was conducted to assess whether mutuality, as measured by the Mutual Psychological Development Questionnaire, correlates with conversation satisfaction. Correlations between mutuality, frequency of conversations, and perceptions of the child's positive emotional state were also examined. A total of 66 parents whose preschool children attended the Wellesley College Child Study Center and Cambridge Children's Associated Day Care Center participated in this study. Results indicated significant positive correlations. Furthermore, no significant differences were found in levels of mutuality between parents of different racial/ethnic backgrounds.

### Nature Writing

*Elizabeth Campbell, Biological Chemistry '02, Stephanie Kyriazis '02, and Auben Van Meter, Philosophy '02*

ADVISOR: *Kenneth Winkler, Philosophy*

Nature writing is a genre exemplified by authors such as Henry David Thoreau, Ralph Waldo Emerson, Charles Darwin, and Annie Dillard. It is often valued for its beauty and wisdom. Through the contemplation of nature, insights into life, relationships, and personal philosophies can be gained. Three students will present samples of their own nature writing. "Interactions with the Ocean" explores the sea as a source of inspiration. "An Essay on the Relationship between Nature and Humans" compares brute sensation to human thought. In "Brazos Peak," the narrator reflects on a hike through northern New Mexico. She considers how the indifference and the power of nature can be both humbling and exhilarating.

## Gender and Sexuality

### Feminist Perspectives

#### Feminist Sociosexual Orientation

*Kathryn L. Ward, Psychology and Women's Studies '00*

ADVISOR: *Jonathan M. Cheek, Psychology*

The current study explores the relationship among sociosexual orientation, feminist identity development, and several dimensions of individual differences. Previous research suggests that there are two categories to describe women's sexuality: the liberated woman and the validation seeker. One hundred and three Wellesley College seniors completed a questionnaire packet containing the Sociosexual Orientation Inventory, the Feminist Identity Scale, the Shyness Scale and several other measures of sexual attitudes and behaviors, feminist development, and other relevant individual differences. Analysis will examine correlations between personality traits and feminist development as they are related to sexuality, and implications for expanding previous research will be discussed.

### Gender Imbalances in Attitudes and Practices of Housework and Child Care by MIT Sloan School of Management Students

*Jennifer Kiest, Psychology '00*

ADVISOR: *Ira Silver, Sociology*

Although the presence of overtly gendered paid work is declining, women are still perceived as naturally better at housework and child care. While women are increasingly accepted in the workplace, men are less eager to increase their involvement in unpaid and undervalued housework and child care. Does the significant gender gap Arlie Hochschild found in the division of housework and child care exist among today's dual career couples? To what extent do current business school students consider the labor of raising children to be a factor influencing their career choices? Using data from written surveys and phone interviews, I examined whether gender affected the attitudes of current MIT Sloan students about housework and child care. I found that gender differences in housework and child care still exist in theory and in practice. Although it is difficult to generalize from a small sample size, racial differences are apparent in a few areas of housework and child care.

### "Unpacking the PAQ: A Reanalysis of the Personal Attributes Questionnaire after 25 Years of Social Change"

*Jennifer Schurer, Psychology and Women's Studies '00*

ADVISOR: *Jonathan Cheek, Psychology*

The Personal Attributes Questionnaire was developed in 1974 to measure individuals' endorsement of 55 sex-linked attributes. These attributes, such as "cries easily" or "always acts as a leader," were chosen and labeled "masculine," "feminine," or "androgynous" based on the interplay between the sex-stereotypes and ideals of hundreds of coed undergraduates. However, in the past 25 years the gender climate in the United States has undergone radical changes. The political, social,

and economic status of American women is beginning to rival that of men. But have people's ideas of what a man and woman are and aren't supposed to be really changed? The sex-ideals and stereotypes of 100 Wellesley women were gathered and compared to those of the female undergraduates in 1974 to begin to answer this question and many more. (Research supported by an NSF summer research grant)

### **Reconstituting Feminism: Women of Color in the 1970s and 1980s**

Yael Sherman, *Women's Studies '00*

ADVISOR: Elena Creef, *Women's Studies*

My topic is the development of new feminist discourses by women of color in the 1970s and early 1980s in the United States. Though too often our history of feminism is white-washed, women of color virtually created new feminisms in the same time period that saw the explosion of liberal and radical White feminisms. My thesis historicizes the development of feminist consciousness among Asian-Americans, Blacks, Native Americans and Chicanas and proceeds to discuss the development of feminism grounded in differential oppositional consciousness by radical women of color. My primary sources for the development and evolution of new feminist discourses are Gloria Anzaldua and Cherrie Moraga's *This Bridge Called My Back*, Gloria Anzaldua's *Making Face Making Soul* and *Borderlands*. These three seminal texts have become cornerstone works which have helped reconstitute feminism by redefining it around the intersubjective experiences of women of color. In building what these writers have dubbed a "theory of the flesh," they disrupt the myths that power our society. The final part of my thesis consists of analyzing the performances of Spiderwoman, a collective theater group of the 1970s and 1980s made up of Native American women. My analysis will focus on the underlying myths that power their performance and their relation to the new feminisms at the beginning of the 21st century.

4:30 – 5:40

**Politics: Identity and Change****A Contemporary Interpretation of Marxism**

*Sarah P. Fishleder, Philosophy '00*  
 ADVISOR: *Joel Krieger, Political Science*

Is Marxism translatable to a world where capitalism is not only the driving force, but also the defining characteristic? Can the egalitarian ideals of socialism be translated to practice? Coupon Socialism provides an economic scheme that combines the equality inherent in socialism and the strength derived from competition in capitalism. By creating two currencies, one for purchasing goods and another "coupon" currency for investing in companies, Coupon Socialism alters the economic and social experience of citizens. At a designated age, all citizens would receive an equal number of coupons for purchasing shares in companies; this allows each citizen to enjoy benefits like those of stockholders, including votes on the board of elections and dividends, in the form of additional coupons. The analysis of Coupon Socialism will include issues of personal identity and social responsibility.

**The Concept of Sovereignty in an International Community: A Philosophical Analysis**

*Anne Openshaw, Philosophy and Italian '00*  
 ADVISOR: *Maud Chaplin, Philosophy and Ifeanyi Menkiti, Philosophy*

The concepts of state sovereignty and international community may appear two incompatible ideals, yet a sovereign state is essential for the creation of an international community. A state begins looking outside its own boundaries only after obtaining a certain degree of political and economic stability. On the international level, Immanuel Kant and John Rawls outline the just, utopian community. Only to some extent, however, should we strive for such a community. There is danger in homogeneity and the resultant decrease in

competitive tension. Bombarded by the popular view for a more just society through an international community, we must not abandon the concept of sovereignty. The state, although not in its traditional, nationalistic guise as the sole sovereign power in regional conflicts, is still crucial in international levels of governance. Most importantly, as we face ever-increasing talk of "globalization," the state must serve as the unity preserving particular histories of peoples.

**Women and Democratization: Allies or Antagonists? A Comparison of Spain and Argentina**

*Mélody Saint-Saëns, International Relations and Spanish '00*  
 ADVISOR: *Carlos Ramos, Spanish*

Abstractly divided into a transitional and a consolidation phase, democratization terminates into a democracy, characterized by fair, open, and regular elections, and institutions that recognize and protect the citizens' rights. However, most of the research on democratization ignores the presence of women. Recognizing that academic void, I dedicated my thesis to answer two questions: How do women participate in democratization? How does democratization affect the lives of women? I use two case studies: socialist Spain in the post-Franco years starting in 1975 and neoliberal Argentina after the Dirty War, beginning in 1982. I argue that although the Argentine women demonstrated a greater activism in the transitional phase of democratization, the Spanish women have received more benefits in the consolidation phase. I conclude that both the women's involvement and the effects of democratization on their lives depend on the social, political, and economic contexts surrounding this process.

**Albert Speer: Moral Responsibility in a Totalitarian Regime**

*Katherine E. Graf, Philosophy '00*  
 ADVISOR: *Maud H. Chaplin, Philosophy*

"Being in a position to know and never-

theless shunning knowledge creates direct responsibility for the consequences." With these words Albert Speer, Armaments Minister for the Third Reich, takes responsibility for the deeds of the regime he supported for twelve years and raises interesting questions about the nature of personal responsibility. I will explore Speer's responsibility for his wartime actions: his use of forced labor, his stance toward the Holocaust, and his decision at the end of the war to break with Hitler. The questions Speer raises are not as simple as they may first appear, for war, positions of leadership, and the nature of a totalitarian regime all affect the moral requirements made on a person and on his responsibility for his actions.

**Cross-Cultural Encounters****Stories of Change****Silent Speaking: Memory and Voice in Women's Lives**

*Jean Poe, Women's Studies '00 and Stephanie Lueckel, Economics '00*  
 ADVISOR: *Susan M. Reverby, Women's Studies*

We will be contrasting the oral histories of two women: one a Somali immigrant woman and one an Austrian-Greek immigrant who is Stephanie's grandmother. In obtaining each of these women's stories, we had both similar and different problems during the interviews as well as in the analysis. In our talks, we will discuss what it meant to be an "insider" in one case, an "outsider" in the other, drawing upon historical backgrounds and the impact of history on their lives. We will focus on why each of these interviews was difficult in differing ways, providing an analysis of the literature on representation and memory, and what happens when you try and "translate" across the border of culture and family.

### Health Care Professionals: Reversing the Brain Drain

Jane A. Gwira, *French Cultural Studies '01*  
 ADVISOR: Jonathan B. Imber, *Sociology*

This century has witnessed a mass exodus of African students and professionals to Europe and North America in search of better education and work opportunities. This has inevitably led to a decrease in the number of professionals equipped to lead these African countries, the majority of which are less than 50 years old. This phenomenon has been termed the "Brain Drain" because of the economic, social, and cultural losses this migration has caused. However, in recent years, this trend seems to be slowly reversing, as more and more professionals return to their countries of origin. This research focuses specifically on ten Ghanaian doctors educated in Europe and North America who are presently practicing in Accra, Ghana. Through taped interviews, their stories unfold, revealing the emotional, cultural, financial, and social adjustments they have made in contributing to reversing the "Brain Drain." (Supported by a Wellesley College Multicultural Grant)

### "I Feel a Little Discombobulated": Reflections on a Week in India

Hilary Johnson, *Italian Cultural Studies '01*  
 ADVISOR: Maurizio Viano, *Italian*

In December, I presented a paper at the Forum on Contemporary Theory, held in Udaipur, India. It was my first time in India, and my first time at an academic conference. I met people from all over the world who had one thing in common: the commitment to interdisciplinary studies as a practice bringing inclusive and respectful values into the new century. I am constantly trying to make the connection between my education and my life a meaningful and liberating one. Besides providing a testing ground for my ideas and writing, travelling to India put a concrete sensory experience to theories I have been studying.

## Science and Technology

### Science and Society

#### Privacy and the Genetic Age

Jennifer Gillcrist, *Philosophy '00*  
 ADVISOR: Maud H. Chaplin, *Philosophy*

Scientific advances in molecular biology have revealed that DNA is the secret code that is the basis of all life. The discovery of the double helical structure of DNA launched a new era of genetic advancements. Modern genetics has sought to decode the genome in order to gain a better understanding of life itself. Already, genes that code for certain traits have been discovered and tests for those genes have been developed. Technologies that arise out of advances in molecular biology promise to change the world. However, misuse of genetic technology presents serious threats to privacy and other subsequent effects, including genetic discrimination. It is unlikely that scientific advances will be slowed or hindered by privacy concerns; therefore, it is necessary to anticipate the consequences of genetic information and institute policies for the acceptable use of genetic technology.

#### Voodoo Medicine and Survival: A Look at Haiti's Traditional Healing System

Valerie Antoine, *Neuroscience '01*  
 ADVISOR: Jean Fuller-Stanley, *Chemistry*

From images of satanic rituals to images of earth-haunting zombies, it has become a tradition of the popular media to debase Voodoo, the religion of the Haitian people. These distorted images play a key role in augmenting the confusion on the true Voodoo rites and very often make people firm believers of the equation Voodoo equals evil. My research is an attempt to present a side of this religion that does not elicit negative images, but rather explores its merits and restrictions. Through the intimate experiences of two practitioners, I demonstrate how the Voodoo temple is responsible for realizing, and partially remedying, the suffering of many Haitian people.

### Reading between the Genes: The Human Genome Project in Popular Discourse

Judith E. Scott, *Sociology '00*  
 ADVISOR: Susan S. Silbey, *Sociology*

The debate surrounding genetic research, particularly the Human Genome Project, is both visible and virulent. I do not presume to evaluate the science of genome research, but rather aim to deconstruct popular representations of the truth, meaning, and value of this research. Because the science itself is so new, and its potential consequences so far-reaching, this debate provides a particularly fertile opportunity for examining the role that science plays in our cultural life. My empirical research includes a content analysis of popular newsmagazine articles from 1989-1998 to examine how genetic research, particularly the Human Genome Project, are represented in popular discourse. I compare these representations to those in popular scientific magazines during the same time period. Finally, I use the results of three focus group discussions to directly illustrate the opinions of those evaluating the arguments for and against genetic research. (Research support by a Schiff Fellowship)

### Vomit/Comet

#### Wellesley's "Vomit Comet" Team Experience 2000: Group Investigating Rotating Liquids under Space Conditions just *wanna* have Fluids Under No-gravity (G.I.R.L.S. just *wanna* have F.U.N.)

Allison Dupuy '02, Kathryn Odiorne, *Physics '01*, Jennifer Ross, *Physics and Mathematics '00* and Rebecca Wilson '02  
 ADVISOR: Robert Berg, *Physics*

The behavior of fluids in a microgravity environment has many implications for satellite design and stability. In order to study fluid dynamics in microgravity, four Wellesley students flew on NASA's KC-135A. The aircraft, dubbed the "Vomit Comet," has the ability to create a microgravity environment for about 20 seconds at a time. During the microgravity phase, the students simulated a satellite roll-out from a space shuttle. The activity of the

fluid inside a mock fuel tank was video-recorded during the flight. The video data was then analyzed to determine the behavior of the liquid while the apparatus was spinning. The team is specifically interested in the location of the air bubble inside the tank. The data collected will help modify the simplified potential energy model, which was originally used to predict the location of the bubble during flight.

### About Wellesley

#### Film Visions

##### Gendered Violence

*Kristen Boney, American Studies '00, Monica Della Croce, Italian and Peace and Justice Studies '00, Alyssa England, Political Science and Peace and Justice Studies '00, Stephanie Harre, Anthropology '00, Brooke Iglehart, Anthropology '00 and Kristina Lawyer '02*  
 ADVISOR: *Sally Merry, Anthropology and Nan Stein, Center for Research on Women*

Gendered violence, which can be defined as any physically or psychologically violent act motivated by the gender of its victim, is an integral part of the society in which we live. Through interviews of fourteen randomly selected first-year students, we were able to determine ways in which gendered violence has affected Wellesley women. The students' frank descriptions of their experiences confirmed our belief in the pervasiveness of gendered violence. We hope that the video that we created from the information we obtained through our interviews can be used as a catalyst to encourage students, especially first-years, to discuss this important issue.

20

*Yuiko Yasuda, Film Studies and Economics '00*

ADVISOR: *Maurizio Viano, Italian*

I made this short film (12 min.) when I was 20 years old in order to record the emotion, thoughts, and experiences that I was going through around the time of its production. It was a project done for ITAL 262 *Religion & Spirituality in Cinema*, and I put various clips of films that were discussed in the class and my own footage together. It is quite a personal piece, for I, myself, narrate and appear in the film. I would call it an audio-visual diary, through which I express my spiritual growth and joys of being enlightened. In it, I made an extensive use of cinematic codes and semiotics to show what I was feeling and how my feelings changed. "20" speaks about my emotion more than my words ever could.

#### Anomie, Spirituality, and Life Changes

##### Anomie and Higher Education

*Sola A. Adelowo, Sociology '00, Iris Yee, Sociology '01, Natka Bianchini, Sociology '00, Ayn Cavicchi D3, Dena Citron, Sociology '01, Karina Coombs, Sociology D4, and Sarah Gottesman, Sociology '00*  
 ADVISOR: *Susan Silbey, Sociology*

This panel presents the results of research on the relationship between higher education and anomie among contemporary college students. Papers explore the relative strengths of electronic communities, governance systems, and curriculum requirements as possible limits on individual choice and careerism.

### Life, Literature, and the Arts

#### Building an Ear

##### A Performance of Student Compositions and Classic 20th-Century Repertoire

*Brigid Cohen, Music '00*

ADVISOR: *Martin Brody, Music*

This concert spotlights student achievement in composition and 20th-century music performance. The program of this concert features works that explore a variety of musical idioms and media, from surrealist electronic works to post-tonal chamber music. In this way, the concert showcases, in miniature, the diversity of languages and practices characteristic of new music at the turn of the millennium.

##### "Schubert's Trout Quintet"

*Eliza Heaton, Julie L. Lee, Julia S. Lee, Anna Koteff, and Amelia Hicks*

ADVISOR: *Martin Brody, Music*

#### Art, Architecture, and Life

##### Transcending Divisions: The United States-Mexico Border and Its Impact upon a Growing Artistic Movement in Mata Ortiz, Chihuahua, Mexico

*Laura C. Widmar, Art History and English '00*

ADVISOR: *James Oles, Art History*

The growing emphasis on the United States-Mexico border has focused international attention on an area that has quickly become an important staging ground for economic, cultural, social, and political forces. The border town of El Paso, Texas is a gateway to Ciudad Juárez and the highway leading to Casas Grandes, Chihuahua and the small village of Mata Ortiz. Mata Ortiz, a village of approximately 1,500 people is currently the seat of an artistic movement, which is quickly redefining Northern Mexico's position in Mexican folk art. The impact of the border on this astounding artistic phenomenon will be explored in this paper in an attempt to illuminate the factors that contribute to an artistic movement's international success.

### Frank Lloyd Wright and Distinct Usonia

Caroline Hellman, *English and Art History '01*

ADVISOR: Alice Friedman, *Art History*

In 1947, Taliesin apprentice David Henken located a site in Pleasantville, Westchester County, NY for a cooperative housing project. His vision was based on Frank Lloyd Wright's idea of Usonia: inexpensive, non-elaborate, but tasteful and functional single family homes in a community of circular one-acre plots. The Pleasantville site was deemed Usonian Homes II, with three houses designed by Wright, the majority designed by Henken, and a few designed by other architects. Usonian Homes included a dedicated group of middle-class citizens who had no formal political agenda but promoted ethnic and racial diversity and were interested in an idealistic American community. Two of the houses designed by Wright, the Friedman House, built in 1948, and the Reisley House, built in 1951, embody the idea of Usonia in different ways. The Friedman House exemplifies the individual expression of its inhabitants, while the Reisley House features both typically Usonian characteristics and components of Wright's architecture commonly seen in his larger houses.

#### "Economics and Style: The Usonian Automatic Style as Exemplified by the Pappas House"

Tracey Dominick, *Economics and Art History '00*

ADVISOR: Alice Friedman, *Art History*

From the onset of the Great Depression through the Korean War, Frank Lloyd Wright focused much creative energy on inexpensive residences which would encourage an informal style of domestic life. Borrowing Samuel Butler's term for the United States in his 1917 utopian novel, *Erewhon*, Wright coined 'Usonian' as a housing style that would embody both his belief in suburbia as well as the changing nature of American society.

Coupled with these considerations, Wright attempted to resolve the problem of "low-cost housing against a background first of shortages of resources, then of rising costs." To this end, Wright would eventually modify the Usonian style home to the 'Usonian Automatic' which allowed for do-it-yourself construction, further reducing costs. A key example of this latter style is the Pappas House in St. Louis, Missouri. What makes this house so unique is that it was actually constructed by its owners, as Wright had intended for this style of housing. Thus, in this presentation, I will focus on the Pappas house, paying specific attention to my on-site research and first-hand interviews with the client.

### Self and Identity

#### Expressions of Self

##### The Influence of Mood States on the Perception of Emotion

Elizabeth David, *Neuroscience '00*

ADVISOR: Elissa Koff, *Psychology*

In this study, we explore the impact of one's tendency to produce negative thoughts and one's current mood state upon judgments of emotion displayed in human faces. Sixty college-age women will participate in the study; they will complete a handedness questionnaire, the Dysfunctional Attitudes Scale, the Positive and Negative Affect Scale, and the Profile of Mood States. Participants will then complete an emotion judgment task (free-vision chimeric face task) and participate in a mood induction procedure (positive, negative, or neutral mood). Following the mood induction procedure, participants will complete a second emotion judgment task, the Positive and Negative Affect Scale, and the Profile of Mood States. Performance before and after the mood induction procedure will be compared.

### The Impact of Acculturative Stress on the Development of Possible Selves

Erin Pahlke, *Psychology '00*

ADVISOR: Nancy Genero, *Psychology*

Possible selves constitute an individual's realistic hopes, fears, and fantasies. This conception of self may be particularly important for college students who are considering future personal and occupational goals. Although the concept of self has traditionally been viewed as a personal construct, it is becoming increasingly clear that cultural values and attitudes contribute to identity development in important ways. In this study, the following questions were explored: What happens when the values of one's culture of family origin are inconsistent with those associated with college life? How do these inconsistencies impact the development of possible selves? To explore these questions, a survey of 50 Wellesley College students, who identified themselves as being ethnic, was conducted. Measures of possible selves, acculturative stress, and social support were analyzed. Findings will be discussed from a relational-cultural perspective.

### Gender and Sexuality

#### Looking through a Gendered Lens

##### Looking through a Gender Lens: Self-Perception and Performance

E. Ashley Reichheld, *Psychology '01*

ADVISOR: Maud Chaplin, *Philosophy*

Gender is a social construction that is given meaning by the complex structure of domination imposed by our society. It is a play in which we are assigned a costume and are made to perform an act that is created and recreated in time. It is an oppressive dichotomy where we are taught what it means to be either a "man" or a "woman." This project confronts the idea of gender as a binary system. Instead of portraying gender as a fixed image, this project explores the many dimensions of gender, resulting in a number of colorful, vibrant, and diverse images.

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### Conference Planner

Time	Presentation 1	Presentation 2	Presentation 3	Presentation 4
9:30 – 10:40	Topic:	Topic:	Topic:	Topic:
	Presenter(s):	Presenter(s):	Presenter(s):	Presenter(s):
	Location:	Location:	Location:	Location:
10:40 – 11:00	B R E A K			
11:00 – 12:10	Topic:	Topic:	Topic:	Topic:
	Presenter(s):	Presenter(s):	Presenter(s):	Presenter(s):
	Location:	Location:	Location:	Location:
12:10 – 1:30	L U N C H			
1:30 – 2:40	Topic:	Topic:	Topic:	Topic:
	Presenter(s):	Presenter(s):	Presenter(s):	Presenter(s):
	Location:	Location:	Location:	Location:
2:40 – 3:00	B R E A K			
3:00 – 4:10	Topic:	Topic:	Topic:	Topic:
	Presenter(s):	Presenter(s):	Presenter(s):	Presenter(s):
	Location:	Location:	Location:	Location:
4:10 – 4:30	B R E A K			
4:30 – 5:40	Topic:	Topic:	Topic:	Topic:
	Presenter(s):	Presenter(s):	Presenter(s):	Presenter(s):
	Location:	Location:	Location:	Location:



## **Addendum to Ruhlman Conference Program**

### **Effects of Grooming and Sexual Orientation on Hiring**

Alethea Senour '00, Jana Wolfova '00, Kim Bigelow '99, & Alison Pan '99

Psychology

Advisor: R. Steven Schiavo, Psychology

In this experiment undergraduate women at Wellesley evaluated a job applicant based on his photograph and resume. A two by two design was used. Participants viewed one of two photographs of the same man: either cleanly shaven and wearing a suit or wearing a tee-shirt and several days' stubble. Participants also read one of two resumes, which varied in terms of work and extracurricular experience such that the applicant could be viewed as either straight or gay. Participants then completed questionnaires asking their impressions and evaluation of the applicant. Regardless of grooming, the gay applicant was evaluated more positively, including a greater likelihood of being hired. The gay applicant was perceived to be more positive in terms of job competence, leadership ability, and interpersonal characteristics, but differences in evaluation were not as clear for items relating to masculinity and emotional stability.

### **Unlocking the Secrets of the Well: The Finds and Theories of the Excavation at the Etruscan Site of Poggio Civitate**

Sarah Beam, Classical Civilization '02

Advisor: Brendon Reay, Department of Greek and Latin

The complex of structures at the Etruscan site of Poggio Civitate is the earliest of its kind in the Western Mediterranean. The overlapping foundations from both the Orientalizing and Archaic periods reinforce the belief that this fortified palace and workshop was the local center of trade in that time. In 1997 a preserved well was discovered about 175 meters from the original complex along with traces of another substantial building of the same period. In the summer of 1999 the well was excavated and was found to have been sealed by roof tiles and pottery. The closing of the well marks the end of Etruscan habitation at the site. The tiles and pottery were carefully removed and cleaned in hopes of finding burn marks or other indicators of what forced the Etruscans from Poggio Civitate. The finds included an orangeware vase with handle complete, a rarity for the area. The well still appeared to be useful and indications of animal fossils suggested that it a dead animal might have fallen or been put into the well to poison the inhabitants.

### **Title: The Scent of Limes: State Censorship and Women Writing in Cuba, 1980 – 1995**

Gillian R. Green '00

Advisor: Lori Roses, Spanish Department

As Virginia Woolf indicated, to write a person needs time and space. Since the Revolution of 1959 Cuban women have had no sustained time to themselves, no time to think in silence. In addition, Cuban women authors face a multiplicity of problems such as under-research, difficulties in publication and in the distribution of their work and censorship. However, the women whose stories appear in *Cubana*, a collection of short stories edited by Mirta Yáñez, have found a way to reveal an intuitive blending that avoids the challenges of censorship and incorporate the Hemingwayesque code whose essence is the glorification of the often solitary struggle for existence. Rather than depicting the various stages of the Revolution, they proffer insight into the everyday lives of women we would otherwise know nothing about. They expend time to *contarnos*, in a most eloquent fashion, about the space and time that these women occupy in a tumultuous contemporary Cuba.

### **A Software Tool for Calculating First and Follow Sets (moved from Practical and Fun Applications of Computers at 1:30)**

Hefei Wang, Computer Science and Math '00

Advisor: Takis Metaxas, Computer Science

The calculations of the FIRST and FOLLOW sets are central in the development of any compiler, and they are extensively studied in every course that discusses the issues related to compiler construction. Calculating these sets for the symbols of a grammar is typically the first step in the development of parsers, both bottom-up and top-down. Algorithms for calculating them are known since the 1960's. Even though these algorithms are easy for a computer to execute, it is rather difficult for humans, including students, to understand, visualize and follow. We believe that we can improve the situation with the help of a graph theoretical approach, which we introduce in our project. The algorithms we present have the advantage of being derived directly from the definition of the FIRST and FOLLOW sets, simplifying their conceptual complexity. Moreover, the graphs make it straightforward to answer questions like "why x appears on the FOLLOW set of y", which would be difficult using the traditional algorithms. The animation and visualization package we are currently implementing in Java is expected to further help the understanding of these concepts.

Please see the front of this sheet for the poster conference site and room changes.

## **Addendum to Ruhlman Conference Program**

### **Late Breaking Poster Session**

**4:30-5:40**

#### **Science Center Focus**

##### **Effects of Grooming and Sexual Orientation on Hiring**

Alethea Senour '00, Jana Wolfova '00, Kim Bigelow '99, & Alison Pan '99

Psychology

Advisor: R. Steven Schiavo, Psychology

##### **Unlocking the Secrets of the Well: The Finds and Theories of the Excavation at the Etruscan Site of Poggio Civitate**

Sarah Beam, Classical Civilization '02

Advisor: Brendon Reay, Department of Greek and Latin

##### **The Scent of Limes: State Censorship and Women Writing in Cuba, 1980 – 1995**

Gillian R. Green, Spanish and Math '00

Advisor: Lori Roses, Spanish Department

##### **A Software Tool for Calculating First and Follow Sets**

(moved from Practical and Fun Applications of Computers at 1:30)

Hefei Wang, Computer Science and Math '00

Advisor: Takis Metaxas, Computer Science

Please see the back of this sheet for the abstracts of these posters.

### **Room Changes**

**11:00 – 12:00**

**Art and Science of Multimedia** (multimedia) **Science Center 377** *(was in Science Center E211)*

**1:30-2:40**

**Public Policy in Massachusetts** (paper session) **Collins Cinema** *(was in Pendleton West 105)*

**4:30-5:40**

**Issues in Political Philosophy** (paper session) **Pendleton West 105** *(was in Collins Cinema)*