

## 2006/2007 Senior Sabbatical Fellowship Awards

The H. Axel Schupf '57 Fund for Intellectual Life supports the Senior Sabbatical Fellowship Program, which increases tenured faculty members' salaries for one semester of leave from 80 to 100 percent. The fellowships are competitive, and they are awarded by the Dean of the Faculty and the Committee of Six once their recommendations are approved by the President and the Trustees. The following are summaries of the 2006-2007 Fellowship recipients' research projects.

### **Rowland Abiodun, John C. Newton Professor of Fine Arts and Black Studies**

Research Project: Reclaiming African Aesthetic Concepts: Essays on Yoruba Art

Professor Abiodun will put into one volume the results of his long and intensive research on Yoruba art and aesthetics. This book-length study should provide not only an important methodological approach to the study of Yoruba aesthetics, but also a model for studying other artistic traditions in Africa. His work has a polemical edge. While it may have been useful to employ only Western theoretical paradigms in the study of African art history and aesthetics early in the twentieth century, and while scholarship modeled on Western tropes has continued to yield interesting fruit in the present, Professor Abiodun believes that we must privilege the aesthetic concepts of those who made and used the art. He argues that we must search carefully within specific African cultures from which the art forms originate, and use internally derived conceptual frameworks in the critical analysis of African art. Marginalizing, for whatever reasons, the importance of African languages, terms and aesthetic concepts—which embody specific African world pictures—all have contributed to the systematic purging of the “African” from “African art.”

### **Jay Caplan, Professor of French**

Research Project: Postal Enlightenment

Professor Caplan will describe the material conditions of letter-writing in the Enlightenment and consider how those conditions affected the way in which members of the “Republic of Letters” imagined each other and themselves. He will present these issues through the cases of Voltaire and Rousseau. Voltaire, for example, lived in a succession of places throughout his long life, all the while remaining at the center of European Enlightenment. At a time when national postal monopolies and postage stamps did not yet exist, he maintained a vast correspondence with persons all over Europe, from England to Russia. Caplan plans to show how Voltaire's letters (and those of his correspondents) reached their destinations, what itineraries they followed, and how long it took for the letters to reach their destinations.

Today everyone knows that the apparently instantaneous delivery of e-mail leads users to adopt a style that is different from that of “paper” letters and to imagine themselves and their correspondents in new ways. Professor Caplan hopes to show how the material conditions of letter-writing in the Enlightenment influenced the ways in which people wrote letters and understood themselves at the time.

### **John Cheney, Samuel A. Hitchcock Professor of Mineralogy and Geology**

Research Projects: Evolution of Cycladic Subduction Zone Rocks; The Proterozoic Sky Orogeny in Southwestern Montana; The Alleghanian Assembly of Central New England

Professor Cheney will use his sabbatical to accomplish three objectives. He will conclude a six-year project on the Aegean Island of Syros; he will continue his ongoing study in southwestern Montana that is now focused upon the Big Sky orogenic event; and he will develop a new study that tests the hypotheses that the Appalachian Mountain belt in New England was assembled significantly later than heretofore recognized. This last work builds on the results of a previous National Science Foundation (NSF) project on "Dating New England." Each of these projects is collaborative. The first two have been funded by the KECK Geology Consortium, and the New England work has been funded by NSF.

Professor Cheney will spend July and early August preparing existing rock samples from both Montana and New England for dating on the ion probe at WHOI (Woods Hole Oceanographic Institute). In mid-November, and again in January, he will travel back to WHOI to date these samples. Professor Cheney will spend the fall semester in the lab prepping and processing additional samples from Montana, New England, and also existing materials from the Aegean. He will also spend part of the fall semester synthesizing, organizing, and writing up previous studies in the Aegean made in collaboration with other scientists, focusing upon the P-T-t paths and their implications. His plan is to present the initial findings for the New England work in March at the regional GSA Meetings and the results for the Big Sky project at the national GSA meeting in October. Professor Cheney's goal is to summarize his research group's results in at least one collaborative paper on the evolution of the Cycladic rocks by the end of the summer, 2007.

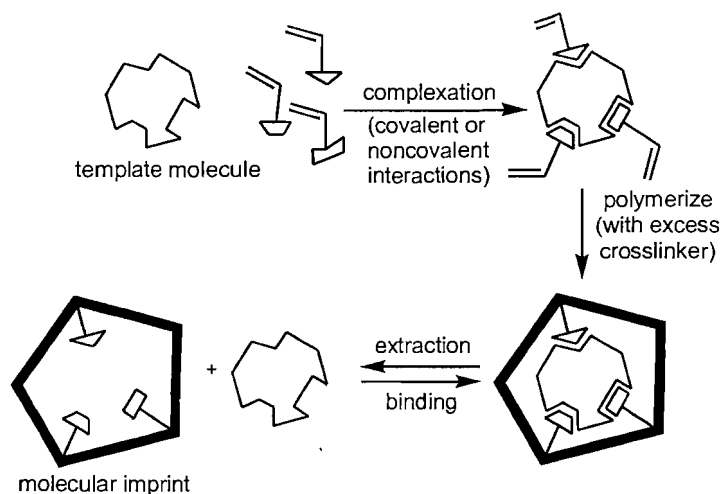
**Howell D. Chickering, Jr., G. Armour Craig Professor of Language and Literature**  
Research Project: Chaucer and the Sound of Poetry

Professor Chickering will use his sabbatical to continue work on his book *Chaucer and the Sound of Poetry*. The book is aimed at the general educated reader interested in poetry and also at serious academic readers of Chaucer who are often not interested in poetry *per se*. They are all too often tin-eared, and more interested in ideas than in the living body of poetry. Professor Chickering will show this audience the critical tools at our disposal for listening sensitively to the *sounds* of Chaucer's sense, and will give them a better appreciation of the prosodic, rhythmic, and sonorous practices that are an integral part of the poet's narrative and lyric designs. During his sabbatical he will continue to explore Chaucer's two great masterpieces, *Troilus and Criseyde* and *The Canterbury Tales*. He will describe the ways Chaucer employs the rhyme royal stanza within a range of stylistic registers in *Troilus*, and also how this stanza-form serves both lyric and narrative modes. He will also examine Chaucer's major verse-form in *The Canterbury Tales*, which George Saintsbury called "riding rhyme" and today is called his decasyllabic couplet, and the ways it distributes emphases of wit and idea in its different stress-positions. He will consider in particular the *Knight's Tale*, *Wife of Bath's Prologue*, and *Pardoner's Prologue and Tale*. These are among Chaucer's most frequently read tales, in the genres of epic romance, confession, and sermon, respectively, and they all are cast in this same verse-form, to which little literary attention has been paid. Professor Chickering will explore the degree to which Chaucer's practice within this form is uniform, and, by contrast, the extent to which it is inflected by genre and topic in these three extraordinary poems.

## David Hansen, Professor of Chemistry

### Research Project: A Catalytic Molecular Imprint for a Lactonization Reaction

Professor Hansen will use his Senior Sabbatical Fellowship award to study new strategies for the generation of organic, polymeric “molecular imprints” with improved—and novel—catalytic activities. The technique of “molecular imprinting,” which was pioneered by Klaus Mosbach and Günther Wulff, works as diagrammed here:



The target molecule, known as the “template molecule,” is dissolved in a solution of (typically) methacrylate or styrene “monomers.” These monomers also contain chemical functionality that interacts with the template molecule. Formation of these bonds assembles the monomers around the template. The mixture then is copolymerized in with a large excess of crosslinker to yield a “rigid, porous lattice”—*i.e.*, a macroporous plastic. The template molecule is then washed away from the polymer, leaving microscopic cavities (the “imprints”) that are electrostatically and geometrically complementary to the template molecule. The imprinted plastic is ground and wet sieved to yield the active polymer. Such imprints can show exquisite specificity for the template molecule.

When an appropriately designed template molecule is employed, the resultant molecular imprints can also be catalytic, and over the past 20 years, numerous such reports have appeared. While a range of strategies has been employed, what is most striking about the catalytic imprints generated to date is the small rate-enhancements they typically effect. Although rate accelerations of over 100-fold are often seen as compared with the analogous reaction free in solution, accelerations of under 10-fold are usually observed when compared with control polymers (which are generated from the same cocktail of monomers and crosslinker absent the template molecule). The use of other materials for catalytic imprints has also been reported, but the rate accelerations observed are all quite modest.

Professor Hansen’s research group will explore molecular imprints with three features intended to enhance the catalytic activity of the imprints obtained: One, each imprint will employ a covalent or “stoichiometric-noncovalent” bond between functionalized monomer and template; two, each will incorporate a nucleophile into the catalytic mechanism; and three, each will be generated using the technique of “precipitation polymerization.” Covalent and stoichiometric-noncovalent imprinting

allow for more precise positioning of the template (and thus of the analogous substrate) within the polymeric matrix, while direct participation of a catalytic nucleophilic functionality—a mechanistic feature that can lead to huge rate accelerations in intramolecular model systems—should lead to enhanced rates. Finally, precipitation polymerization directly yields polymer beads that are uniform in size (with diameters of a micron or less) and that display higher affinity for template. If the approaches outlined do yield molecular-imprint catalysts with enhanced activities, then a general, inexpensive, and straightforward method for the creation of active catalysts will be at hand.

**Margaret Hunt, Professor of History and Women's and Gender Studies and Bruss Reader**  
Research Project: Gender and the Royal Navy: Maritime Communities and the British Military State, 1650-1720

The late seventeenth- and early eighteenth-century wars between the Netherlands and England, and then England and France, prompted one of the largest naval buildups in history. Professor Hunt's book examines the men and especially the women who made up the English side of this "military revolution." Navy records show that women in maritime communities such as London, Portsmouth, and Southampton were closely engaged with the burgeoning military bureaucracy. With their men away at sea, often for years at a time, women handled most conflicts over pay, desertion, death and disability benefits, impressments, and officer malfeasance. They also held together families and communities in the face of the extremely protracted navy pay schedules—it usually took several years for men to get their military pay, and longer for it to trickle down to the women and children. And women routinely contracted with the navy themselves, as nurses, victuallers, and suppliers of sails and sailor's ready-made clothes. This close, though ambivalent relationship between more than 100,000 poor women and the growing fiscal-military state had a variety of implications. Female-dominated alternative currency systems arose in maritime communities based upon the discounting of navy promissory notes. There was an epidemic of identity theft, most of the culprits being women impersonating sailors' kin. The uneven influx of money, or the promise of money, into poor communities, coupled with the very high mortality of sailors, altered marriage and reproductive strategies, leading to rising bigamy rates and a spike in resort to prostitution. And the constant tension over pay, impressments, and other issues politicized communities, resulted in wave upon wave of demonstrations, law suits and lobbying projects that represent some of the earliest sustained political activism by plebeian women. Social contracts—the ones on the ground, as opposed to the lofty abstractions of a Locke or a Jefferson—are built from the hardships, sorrows, and quest for recompense of people like these. This project seeks, by telling their stories, both to enrich the literature on military history and women's history and to yield more general insights into the relationship between people, their governments, and the wars they share.

**Christian Rogowski, Professor of German**  
Research Project: Urban Jungle: The Discourse on Blacks in the Culture of Weimar Germany.

Professor Rogowski's project concerns the representations of Blacks in the Culture of Weimar Germany. While there were, numerically speaking, only few people of African or African-American descent residing in Germany at the time, they played an important role in the German "National Imaginary" that far outweighed their demographic significance. Indeed, it can be said that a culture that liked to define itself in terms of ethnic homogeneity and "racial purity" turns out

to have been obsessed with representations of “Blackness” in various cultural arenas (literature, film, the fine arts, music, popular culture etc.). This obsession can be viewed in part as one of the unintended legacies of the German colonial enterprise in Africa. The Versailles Treaty deprived Germany of its overseas territories, effectively expelling Germany from the ranks of major players in the arena of world politics. For instance, the Black characters that populate the periphery of Weimar genre films—mostly unnamed servants, carriers, entertainers, and page boys—seem to bolster a sense of superiority in a defeated nation whose own status among “White” nations has been called into question. The situation was compounded by the deployment of colonial troops from North, West, and sub-Saharan Africa among the French forces that occupied the Rhineland (German territories to the West of the Rhine) between 1920 and 1930. Alongside the concern over the “Americanization” of Germany in the 1920s, the hysterical propaganda campaign against the so-called “Black horror on the Rhine” (“*Schwarze Schmach*”) provides a subtext to the representations of “Blackness” in Weimar German culture, in which racial, sexual, political, economic, and cultural anxieties merge into an unholy alliance. Among the circumstances that determine the function of discourses on racial difference in Weimar Germany there is not only Germany’s loss of its status as a colonial power after World War I, with Blacks on screen and elsewhere primarily functioning as reminders to a white German audience of German “superiority” (thus ultimately offering the reassurance of Germans as “White”); there is the onslaught of American mass entertainment (“Jazz,” mechanized chorus lines, consumer culture etc.), with Blacks signaling an ambivalent fascination with something that is both alluring and threatening; most importantly, however, images of Blacks in the various media serve as an indicator of the actual presence of (ethnic, cultural, and racial) diversity in a society that, for the longest time, tried to define itself as a homogeneous *Volk*. From this perspective, an analysis of racial difference in the popular culture of Weimar Germany sheds new light on the problems Germany has been facing, at least since the reunification of 1990, with the recognition of the de-facto diversity that has been part of its fabric for decades.

**Karen Sanchez-Eppler, Professor of American Studies and English**

Research Project: *The Unpublished Republic: Manuscript Cultures of the Mid-Nineteenth-Century U.S.*

Through analysis of nineteenth-century literary texts that were not published in their own time—most of which, indeed, were created with no intention of publication—*The Unpublished Republic* reassesses the conception of the public sphere promised and promoted by print. Scholars have often credited print as a democratizing force; Professor Sanchez-Eppler’s study of the relations between print and manuscript production suggests that publication closes off some possibilities even as it enables others. Many of the texts discussed in *The Unpublished Republic* were written by people whose access to the press was limited by age, race, or gender. The particular manuscripts that form the focus of this study include the diary of a very public man, who nevertheless chooses to record history in this private form; a friendship album created for his teacher by a Chinese student in Connecticut in 1824 that uses a manuscript book to bridge cultures; a library of child-made picture books that suggests an apprenticeship to print; an unpublished novel about a hermaphrodite written in 1846, and another apparently written by a fugitive slave that raise questions about what stories could be told and who could tell them; as well as the manuscript poetry of Emily Dickinson, work always treated as unusual that can now be understood as part of a widespread cultural practice. Professor Sanchez-Eppler thus sees these manuscript practices as creating alternative public spheres that stand in self-conscious

juxtaposition to and conversation with the realm of printed things. In gaining a fuller understanding of the allures of manuscript form, her study aims to re-situate and re-evaluate the role of the printed book.

**Ethan Temeles, Associate Professor of Biology and Pick Reader**

Research Project: Sexual Dimorphism and Coevolution in Hummingbird Species of the Lesser Antilles Archipelago

Professor Temeles's research at the Smithsonian Institution consists of two projects that examine polymorphisms and coevolution in hummingbirds and heliconias. In one project, he will quantify sexual dimorphism in size and bill morphology within the subfamily Phaethorithinae, one of two subfamilies of hummingbirds, using the ornithological collection at the United States National Museum of Natural History. The species comprising this subfamily are commonly nicknamed "the hermits," owing to their drab plumage, and have been believed to exhibit little sexual dimorphism. Professor Temeles's pilot research indicates that sexual differences in bill curvature are present in approximately 50 percent of the hermits, and that it is closely associated with heliconias as food plants. In addition to providing an understanding of the evolutionary history of sexual dimorphisms within this taxon, his research will test hypotheses for ecological causation of sexual dimorphism in hermit hummingbirds, and especially for associations with heliconias, using the museum's botanical collection. In the second project, he will use the museum's ornithological and botanical collections as well as field data to test for the evolution of non-random size differences within assemblages of hermit hummingbirds and the Lesser Antillean hummingbird fauna (non-hermits), matched with corresponding tests in their *Heliconia* food plants. The application of phylogenetic and geographic methods to analyze coevolutionary associations between hummingbirds and their *Heliconia* food plants represents a novel approach to studies of ecological causation of sexual dimorphism, and will define a research protocol for future studies of this question.

**Patrick Williamson, Edward H. Harkness Professor of Biology**

Research Project: Phospholipid Transport

Professor Williamson will spend his sabbatic leave in the laboratory of Dr. Joost Holthuis of the University of Utrecht. His intention is to study newly discovered subunits of the membrane transporters that are the focus of his work and that of Dr. Holthuis. About ten years ago, Williamson's lab identified a protein capable of actively transporting phospholipids from one side of a membrane to the other, where phospholipids are the molecules that make up that same membrane. While these experiments considerably illuminated the problem of phospholipid transport, there were indications that Williamson and his co-workers were missing important features of this system. Recent work from Japan suggests that a membrane protein named cdc50p of previously unknown function may be a required subunit for the yeast transporter. Professor Williamson hopes to begin working out what the subunits contribute to the transport process, and how the two proteins associate with one another to make a functional whole. A first step will be to work out the architecture of the association between these proteins—what parts of the molecules interact and how many of each are present in the complexes. The methods of yeast genetics provide one avenue to investigating these problems, by the study of mutants in which the localization and function of the transporter have been disrupted. The laboratory of Dr. Holthuis is a center of studies of this kind, and Professor Williamson will go there to learn to apply the relevant methods.