

# Three Waves of Variation Study: The Emergence of Meaning in the Study of Sociolinguistic Variation

Penelope Eckert

Department of Linguistics, Stanford University, Stanford, California 94305-2150;  
email: eckert@stanford.edu

Annu. Rev. Anthropol. 2012. 41:87–100

First published online as a Review in Advance on  
June 28, 2012

The *Annual Review of Anthropology* is online at  
anthro.annualreviews.org

This article's doi:  
10.1146/annurev-anthro-092611-145828

Copyright © 2012 by Annual Reviews.  
All rights reserved

0084-6570/12/1021-0087\$20.00

## Keywords

indexicality, style, enregisterment, social meaning

## Abstract

The treatment of social meaning in sociolinguistic variation has come in three waves of analytic practice. The first wave of variation studies established broad correlations between linguistic variables and the macrosociological categories of socioeconomic class, gender, ethnicity, and age. The second wave employed ethnographic methods to explore the local categories and configurations that inhabit, or constitute, these broader categories. In both waves, variation was seen as marking social categories. This article sets out a theoretical foundation for the third wave, arguing that (*a*) variation constitutes a robust social semiotic system, potentially expressing the full range of social concerns in a given community; (*b*) the meanings of variables are underspecified, gaining more specific meanings in the context of styles, and (*c*) variation does not simply reflect, but also constructs, social meaning and hence is a force in social change.

## THE FATE OF SOCIAL MEANING IN THE STUDY OF VARIATION

The first quantitative community study of linguistic variation was all about social meaning. On the basis of ethnographic observations and interviews on Martha's Vineyard, William Labov (1963) established that the pronunciation of /ay/ had been recruited as an indexical resource in a local ideological struggle. This diphthong had a centralized nucleus in the Vineyard dialect, but for some years, island speakers had been following the mainland trend to lower the nucleus to [a]. Labov found that some speakers were reversing this lowering trend, in an apparent move to recapture one of the most salient features of the distinctive island dialect. Led by the English ethnic fishing community whose control over the local economy was under threat from the mainland-controlled tourist industry, this revival of a traditional local pronunciation constituted a claim to island authenticity. This move was a textbook example of the workings of what Silverstein (2003) has termed "indexical order," by which a feature that had simply marked a speaker as a Vineyarder came to be used stylistically within the island to index a particular kind of Vineyarder, foregrounding a particular aspect of island identity.

This study established without question that speakers exploit linguistic variability in a systematic way to add a layer of social meaning to the denotational meaning that is the primary focus of most linguists. And in so doing, it raised a congeries of questions about both the linguistic and the social embedding of variation. In the decades that followed, though, the social study of variation moved quickly away from social meaning to focus on macrosociological categories as they reveal (and presumably structure) the spread of linguistic change through social space. This first wave of studies constituted a retreat from ethnography to survey studies and from local social categories to the sociologist's primary categories. The subsequent history of variation study has taken place in two subsequent waves, moving first

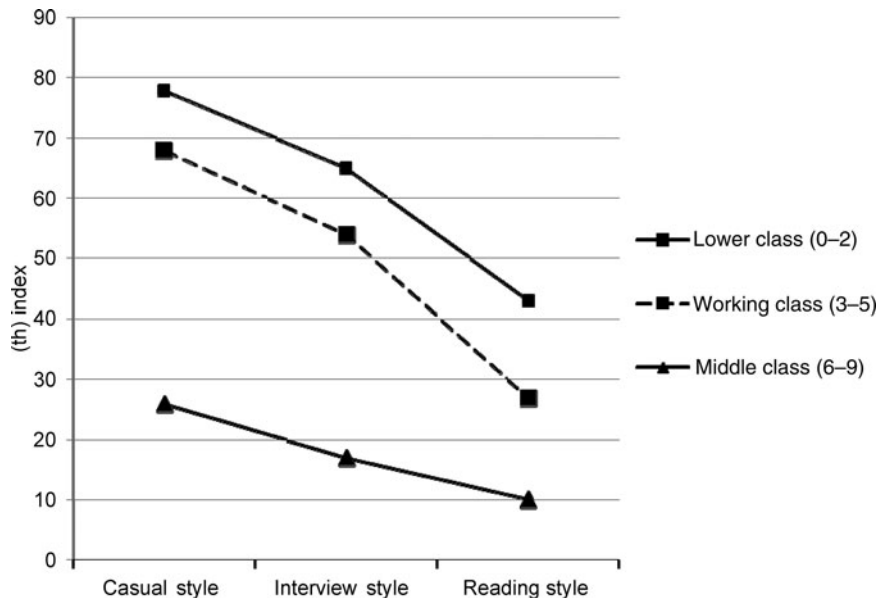
back to ethnographic methods with a focus on local dynamics and finally back to a focus on meaning. I describe briefly the first two waves and focus on the third, which is in its infancy.

### THE FIRST WAVE

The first wave of variation studies began with Labov's (1966) study of the *Social Stratification of English in New York City*. Labov's main results were replicated in a series of urban studies during the late 1960s and the 1970s not only in North America and Great Britain (e.g., Wolfram 1969, Trudgill 1974, Macaulay 1977) but elsewhere such as Panama (Cedergren 1973) and Iran (Modaressi 1978). These studies established a regular pattern of socioeconomic stratification of linguistic form, with greater regional and ethnic differentiation at the lower end of the socioeconomic hierarchy as well as greater use of more widespread nonstandard forms. These forms, stigmatized on the standard language market (Bourdieu & Boltanski 1975), decrease in frequency as one moves upward through the class hierarchy.

Using recorded interviews and correlating features of speech production across and within speakers, this work introduced a new quantitative empiricism into linguistics, with supportive theoretical underpinnings. Although Labov's study was based on a representative sample of the community (New York's Lower East Side), subsequent studies came to focus on filling cells defined by macrosociological categories. In this way, speakers emerged as human tokens—bundles of demographic characteristics.

Central to the theory of variation was the notion of the vernacular. Labov (1972b) defined the vernacular as each speaker's first acquired and most automatic, hence maximally systematic, linguistic production. Unaffected by socially motivated correction, the vernacular emerged as a classic natural object of scientific inquiry, untouched by the reflexivity of human agency. Class, determined according to standard sociological measures, placed individuals passively within a structure that determined



**Figure 1**

Class stratification of (th)-stopping. From Labov (1966).

their access to standard language and their exposure to linguistic change. Social agency was limited to self-correction as individuals, sensitive to the relative status of class varieties, moved away from the vernacular as they adopted more standard forms in their more careful speech. As a result, the larger socioeconomic pattern was nested within the stylistic repertoire of each individual, as shown in **Figure 1**. This figure represents the percentage of pronunciation of /th/ as [t] (as in thing) in three styles: casual interview speech, formal interview speech, and a reading passage. The first wave treated this within-speaker pattern of variation not as involving a choice between socially meaningful forms, but as the result of self-monitoring to suppress a natural cognitive process. Style, then, was conceived purely as the output of varying attention to speech.

A number of the variables in these studies arguably represented ongoing sound changes. In an early study of the Romance dialect of Charmey (Switzerland), Louis Gauchat (1905) showed that age differences in contemporary speech reflected the progress of historical

change. Similar age differences showed up in the urban studies, leading to the adoption of the uniformitarian principle (Labov 1972b), giving the analysis of variation the status of an in vivo study of historical change. This principle depended on the assumption that the adult's linguistic system reflects the state of the language at some critical period in acquisition, making the theory of the vernacular even more central. Thus whereas the socioeconomic hierarchy structured the use of apparently historically stable nonstandard forms such as /th/-stopping, apical realizations of -ing (e.g., walkin'), and multiple negation, it also emerged as the path of spread of sound change. And these changes, originating at the lower end of the hierarchy and by virtue of their local origins, create regional and ethnic distinctions, while the standard, disconnected from place, indexes class position and its presumed cosmopolitanism.

Labov's claim that every speaker has a personal vernacular appeared at odds with the more common definition of vernacular as the speech of locally based communities, and it is difficult to miss the fact that each speaker's

personal vernacular is closer to the community vernacular than to the standard. The link between the two surfaced more explicitly, as in his characterizations (Labov 1972c) of middle-class speech as more self-conscious and contrived than working-class speech, and in Kroch's proposal (1978) that connects the socioeconomic stratification of phonology to a stratified resistance to natural phonological processes.

First-wave studies also found gender stratification in variation. Wolfram's (1969) study of African American speakers in Detroit, focusing on variables specific to African American Vernacular English, showed women's speech to be consistently more standard than men's across the socioeconomic hierarchy. British studies showed women's speech to be more standard as well (Trudgill 1974, Macaulay 1977). These differences were commonly taken to signal women's greater upward mobility and hence their sensitivity to standard pressures (Trudgill 1972). This explanation was based on little independent evidence, but by connecting women's patterns to a concern with class, it maintained class position as the central indexical focus of variation.

The first wave viewed linguistic change as emerging from pressures within the linguistic system, first affecting the speech of those least subject to the influence of standard language and spreading outward through populations increasingly resistant to change. At the same time, a variety of variables that are not changes in progress are stratified as a result of such things as dialect contact and resistance to standardization. The perspective of the first wave on meaning was based in the socioeconomic hierarchy: Variables were taken to mark socioeconomic status, and stylistic and gender dynamics were seen as resulting from the effects of these categories on speakers' orientation to their assigned place in that hierarchy.

But if the survey era revealed regular social patterns of variation, it also yielded significant exceptions. The leaders in sound change and greatest users of vernacular variants appear to be not those at the lowest rung of the socioeconomic hierarchy—those that one might assume

are the least subject to the pressures of the standard—but members of the upper-working and lower-middle classes (Labov 2001). This group is the segment of society with the greatest local engagement, suggesting that vernacular variants are not simply the most natural way of speaking but have some kind of positive indexical value related to locally based life. And in the United States at least, it is not the youngest speakers who lead in sound change, but adolescents (Eckert 1997, Labov 2001). This adds certainty to the supposition that the use of these features is not simply a matter of exposure and attention to speech, but involves some kind of social agency. This notion has been further supported by some evidence (Sankoff 2006) that speakers' patterns of phonetic variation can continue to change throughout their lifetime, becoming more conservative in some cases and more innovative in others.

Finally, the simple view of women as more conservative was contradicted by studies in the United States showing women leading in sound change. And Labov's later work (Labov 2001), separating out gender from class, showed a gender crossover for some variables: Upper-middle-class women's speech was more standard than upper-middle-class men's, but working-class women's speech was less standard than working-class men's. These data suggest that if gender has a uniform effect on variation, it is in women's greater use of variation to index social differences (Eckert 1989b).

The survey method's primary virtues, coverage and replicability, depend on the use of predetermined social categories and fairly fleeting social contact with the speakers chosen to represent those categories. As a result, studies in the first wave interpreted the social significance of variation on the basis of a general understanding of the categories that served to select and classify speakers rather than through direct knowledge of the speakers themselves and their communities. The second wave of variation studies turned to ethnographic methods to get closer to the local dynamics of variation. These studies sought out local categories that could shed light on the

relevance of macrosociological categories for life in the local setting, drawing a direct relation between the social dynamics giving rise to these categories and the use of linguistic variables.

## **THE SECOND WAVE OF VARIATION STUDIES: THE ETHNOGRAPHIC APPROACH**

A tacit but fairly widely held view from the start of variation studies proposed that the vernacular had positive indexical value. Labov and others often referred to the vernacular as having local value, and Trudgill (1972) attributed the spread of working-class innovations into the middle class to men's identification with working-class physical masculinity. Labov's (1972a) study of African American Vernacular English in New York also interpreted pre-adolescent boys' use of vernacular features as indexing peer-group status. But the centrality of the vernacular and self-monitoring as fundamental explanatory devices in the first wave kept agency from achieving theoretical status in the mainstream study of variation.

The second wave began with the attribution of social agency to the use of vernacular as well as standard features and a focus on the vernacular as an expression of local or class identity. Milroy (1980), inspired by the work of Gumperz (e.g., 1982), ushered in the second wave with a study of phonological variation in social networks in Belfast. Explicitly arguing against the passive view put forth in the first wave, Milroy sought out the positive forces in the vernacular usage of Belfast's working class. She argued that dense multiplex networks, typical of the working class, would have a strong local norm-enforcing power, and she sought to correlate individuals' network types with their use of vernacular variables. The study showed such a correlation between variation and the density and multiplexity of women's working-class social networks and was followed by studies showing a relation between the use of local variants and engagement in local ethnically defined networks as well (Edwards & Krakow 1985, Edwards 1991, Knack 1991).

Cheshire's (1982) study in Reading, England, also sought out the positive value of the vernacular in a study of nonstandard morphosyntactic features in the speech of working-class adolescents who frequented two local parks. She found correlations of some variables in boys' speech with participation in an antiauthority "vernacular culture" (p. 97) on the basis of practices that emerged as important to the group: carrying weapons, criminal activities, swearing in her presence, resisting legitimate fashion, peer-approved job aspirations, and skill in fighting.

Studies in rural communities, meanwhile, brought local issues into the understanding of the relation between variation and occupation. In his work on a sugar plantation in Guyana, Rickford (1986) found a major division between those who worked the sugar (the estate class) and those who worked in the offices (the non-estate class). These groups showed sharp differences in verbal culture, in language ideology, and in linguistic production as witnessed in the use of standard English (acrolectal) variants in single pronoun subcategories. This study emphasized that although the vernacular may be stigmatized on a global level, its association with local values and practices gives it positive value on the local level. Whereas a large study encompassing nonagricultural communities across Guyana might find gradual stratification along the lines found in urban studies, local experience in this community involves no such continuum but conforms more to a conflict model of class and of linguistic variation.

Holmquist, working in a peasant village in the Spanish Pyrenees (Holmquist 1985), examined the relation between variation and the move into the mainstream economy. Here, the traditional raising of mountain animals, such as goats and sheep, was giving way to dairy farming, and finally, young people were leaving agriculture altogether to work in a nearby factory. Individuals' integration with the national economy, as based in their place in these three stages of economic change, correlated with a sound change that brought the local dialect closer to Castilian: the lowering of posttonic [u]

(the masculine endings of nouns and adjectives) to [o]. As Gal (1979) had found in her study of language shift in Austria, Holmquist found agricultural women leading men in change—a pattern that is no doubt due to the fact that in both communities, agricultural life is particularly unattractive to women. The other side of this finding, of course, is that men, who have a greater stake in the peasant economy, lead in resistance to assimilation to the national norm.

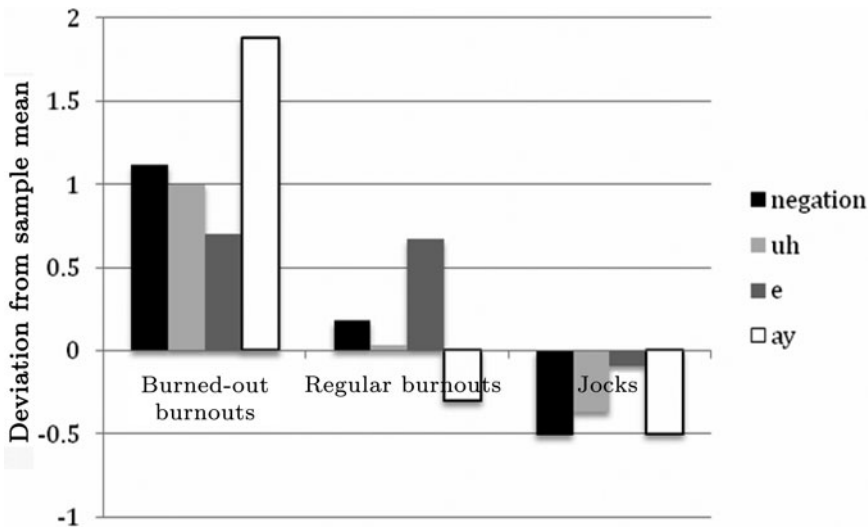
The apparent fact that adolescents lead in sound change and in the use of the vernacular raised the question of the role of class in adolescent variation. This led Eckert (1989a, 2000) to conduct an ethnographic study of adolescents in high schools from the predominantly white Detroit suburban area. The student social order in these schools involved two mutually opposed social categories, “jocks” and “burnouts,” which constituted middle- and working-class cultures, respectively. The college-bound jocks based their networks, identities, and social lives in the school’s extracurricular sphere, forming a tight and competitive hierarchy and maintaining cooperative and even collegial relations with teachers and administrators. Burnouts, on the other hand, almost all pursuing a vocational curriculum, rejected the institution as a locus for social life and identity and based their networks, identities, and social lives in the neighborhood and the broader conurbation. The jocks came predominantly from the upper half of the local socioeconomic hierarchy, whereas the burnouts came predominantly from the lower half. However, there was sufficient crossover to allow the comparison between parents’ class and adolescent class-based category affiliation as constraints in variation. A mismatch between the two would suggest that patterns of variation are not set in childhood but continue to develop along with social identity.

The jock and burnout categories, in turn, were located in the continuous sociolinguistic geography of the wider conurbation, and the construction of the polar opposition is a prime example of the semiotic practices of distinction set out by Gal & Irvine (2000): recursivity,

erasure, and iconization. Socioeconomic status increases, and the use of urban linguistic variables decreases, with distance from Detroit. Every suburban public school has jocks and burnouts, embedding the urban-suburban pattern in each school in a process that Gal & Irvine term “fractal recursivity.” This shows up in language use, as the burnouts in each school lead overwhelmingly in the use of nonstandard negation and in the advancement of the three sound changes that are moving outward from the urban end of the conurbation. And although some correlation exists between the use of negative concord and mother’s education as well as social category, the sound changes correlate with social-category membership rather than either parent’s class membership (or both), clearly showing that patterns of variation are not set in childhood but serve as resources in the construction of identity later in life. This finding indicates that broader class correlations are not simply the fallout of education, occupation, and income, but rather reflect local dynamics rooted in practices and ideologies that shape, and are in turn shaped by, class.

Variation also emerged as part of a broader stylistic complex including territory and the full range of consumption—such as adornment, food and other substance use, musical tastes—that jocks and burnouts exploit in constructing their mutual opposition. Detroit versus varsity jackets, bell bottoms (at the time) versus straight-leg jeans (Eckert 1980), and dark colors versus pastels, among others—all explicitly index urban versus school orientation. Burnouts from the more suburban schools admire urban burnouts for their autonomy, toughness, and street smarts; jocks from the urban periphery envy suburban jocks for their greater affluence, sophistication, and institutional skills. And the repeated combination of stylistic complexes with socially located individuals and their activities and social moves establishes what seems a natural connection, leading to iconization. One student referred to a more working-class school in the same town as containing wide wide bells, making the iconic link between burnouts and bell bottoms.





**Figure 2**  
Use of vernacular variants by girls' subcategory. From Eckert (2000).

Finally, erasure of gradual differences across the conurbation results in an urban-suburban opposition, particularly for the burnouts who contrast the vanilla suburbs with the excitement of Detroit. Yet for the burnouts, Detroit begins not at the city limits, but at the tougher and poorer white suburbs on the periphery. Locally, meanwhile, the polar jock and burnout categories are also carved out of a social continuum. Only about half the kids in any school identify as jocks or burnouts, whereas the rest refer to themselves as “in-betweens,” placing themselves on a continuum between the polar categories. When the urban practice of cruising Detroit is entered into a regression that includes jocks, burnouts, and in-betweens, social category remains statistically significant but falls second to cruising, with cruisers using more urban variants. Also erased are differences within each category. There are two friendship clusters of burnout girls: the regular burnouts, and a smaller cluster who pride themselves on being the biggest burnouts by virtue of their wildness, rebelliousness, and drug consumption. Other burnouts refer to them as “burned-out burnouts,” and they refer to other burnouts as “jocks.” As **Figure 2**

shows, the burned-out burnout girls lead all others (boys as well) in the use of vernacular variants. These facts alone make it clear that linguistic variables do not index categories, but characteristics, giving an entirely new theoretical underpinning and methodological thrust to the variation enterprise in the third wave.

### THE THIRD WAVE OF VARIATION STUDIES: THE STYLISTIC PERSPECTIVE

The ethnographic studies of the second wave provided a local perspective on the findings of the survey studies of the first wave, making the connection between macrosociological categories and the more concrete local categories and configurations that give them meaning on the ground. But like studies in the first wave, second-wave studies focused on apparently static categories of speakers and equated identity with category affiliation. But ethnography brought stylistic practice into view, even if these studies did not deal explicitly with the nature of the indexical relations between variables and social categories. The principal move in the third wave then was from a view

of variation as a reflection of social identities and categories to the linguistic practice in which speakers place themselves in the social landscape through stylistic practice (Bucholtz & Hall 2005, Bucholtz 2010, Irvine 2001).

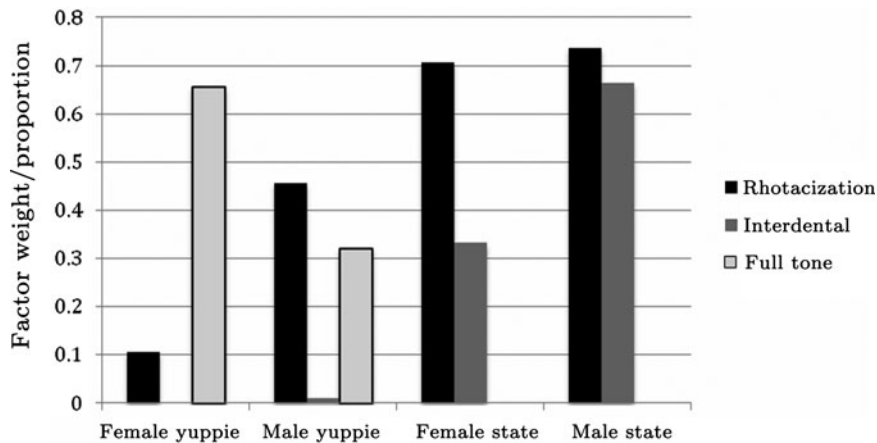
Whereas the first two waves viewed the meaning of variation as incidental fallout from social space, the third wave views it as an essential feature of language. Variation constitutes a social semiotic system capable of expressing the full range of a community's social concerns. And as these concerns continually change, variables cannot be consensual markers of fixed meanings; on the contrary, their central property must be indexical mutability. This mutability is achieved in stylistic practice, as speakers make social-semiotic moves, reinterpreting variables and combining and recombining them in a continual process of bricolage (Hebdige 1984).

Indexical order (Silverstein 2003) is central to the mutability of indexical signs. At some initial stage, a population may become salient, and a distinguishing feature of that population's speech may attract attention. Once recognized, that feature can be extracted from its linguistic surroundings and come, on its own, to index membership in that population. It can then be called up in ideological moves with respect to the population, invoking ways of belonging to, or characteristics or stances associated with, that population. Such an index can be used by outsiders to call up stereotypes associated with the population. It can be used to pejorate, as in the case of Anglo Americans' use of mock Spanish (Hill 1993), and Hong Kong journalists' biased uses of the gay community's preferred self-referential term *tongzhi* (Wong 2005). It can be used to lay claim to admired qualities, as in white American boys' use of African American Vernacular English (AAVE) features to index a kind of masculinity (Bucholtz 1999, Cutler 1999). And it can be used by members of the population to make distinctions within, as in the case of the English fisherfolk of Martha's Vineyard. Repeated indexical acts of this sort conventionalize the new sign, at which point it becomes available for further indexical

moves. This is not an accidental event, but a continuous process in which linguistic features of all sorts are continually imbued with a variety of meanings. As a result, indexical order is not linear but can progress simultaneously and over time in multiple directions, laying down a set of related meanings. These meanings at any particular time constitute an indexical field (Eckert 2008)—a constellation of ideologically linked meanings, any region of which can be invoked in context.

Zhang (Zhang 2005, 2008) traces the indexical appropriation of individual Mandarin variables in the emergence of a wealthy elite in Beijing. China's move into the global economy has created a new class of yuppies, young managers in the foreign-owned financial sector. The yuppies' value in the global financial market depends on the projection of a cosmopolitan self, and they have developed a speech style to match their more general materialistic and cosmopolitan lifestyle—a style that contrasts starkly with that of their peers in state-owned financial institutions. The most commented-on resource in this linguistic construction is the use of full tone, a feature of nonmainland Mandarin associated most particularly with the global markets in Hong Kong and Taiwan. Completely foreign to Beijing and never appearing in the speech of the managers in state-owned businesses, this tone brings yuppie speech into the transnational sphere. The yuppies also make scant use of certain local Beijing variables, which index local types that do not mix well with a cosmopolitan image. One such variable, the rhotacization of finals (in which “flower” [hwa] is pronounced [hwaɹ]), is probably the best-known diagnostic variable of Beijing speech and is popularly seen as giving Beijing speech a distinctive “slippery” quality or “oily tone” (Zhang 2008, p. 201). Rhotacization can be marked orthographically, and Zhang (2008) traces its use in twentieth-century literature to portray the speech of a prototypical male Beijing urban persona, the “smooth operator” or wheeler-dealer. Whereas the state managers show considerable rhotacization, the yuppies, particularly the women, show a subdued use of this variable.





**Figure 3**

Use of Beijing and Non-Mainland variables by managers in the foreign- and state-owned financial sector (factor weights for rhotacization and interdental, proportion for full tone).

Another Beijing feature, the interdental pronunciation of /z/, is commonly associated with a feckless character, the “alley saunterer,” who hangs around the disappearing *butongs* of Beijing. The yuppies stay away from this variable altogether because casual fecklessness is not a desirable trait for a transnational business person. (One of the yuppies in Zhang’s study commented on this explicitly.) The alley saunterer is a male stereotype, and female state managers use this variable considerably less than their male colleagues do. As **Figure 3** shows, by combining these resources (and no doubt others), the yuppies have created a style that contrasts with that of the state managers. Zhang notes that yuppie women’s greater use of full tone and avoidance of rhotacization yields a staccato sound that matches the crisp image required of women in the gendered cosmopolitan marketplace, contrasting with the already iconized Beijing smooth tone. Through this stylistic practice, the yuppies have constructed not only themselves as cosmopolitan, but the state managers as local. And in so doing, they have changed Beijing’s social and linguistic landscape.

The jocks and burnouts, and the yuppies and state managers, were not born with distinctive styles, but instead developed them in the course

of social differentiation in high school and in the workplace. This change, then, can take place in the relative short term. In an ethnographic study of high-school girls in Bolton, in the United Kingdom, Moore (2004) witnessed such differentiation in the speech of girls who formed a rebellious group, the “populars.” In the course of a year, several of the populars moved off to engage in a more intensely wild lifestyle, as “townies.” In the process, they increased their use of nonstandard speech, as evidenced by their use of first- and third-person *were* (e.g., “I were drunk”). Whereas the populars’ use remained essentially the same, the townies’ use of the nonstandard form jumped from 25% to 48%. This social split brought about—and, one might say, was brought about by—the townies’ increasing use of nonstandard speech.

All these studies foreground the relation between language use and the kinds of social moves that lead to the inscription of new categories and social meanings. The question of how this meaning-making unfolds in interaction leads quite naturally to the stance-taking moves in which terms of differentiation are actually laid out on the ground. In an ethnographic study of a fraternity, Kiesling (1998) showed fraternity brothers using apical

variants of -ing to invoke power by indexing working-class cultural models and confrontational stances. He argues more generally (2001, 2005, 2009) that individual, group, or category styles emerge from repeatedly taken stances in what Dubois (2002) and Rauniomaa (2003) have referred to as stance accretion. This mechanism has been taken up by Bucholtz & Hall (2005) in their study of identity practices and Moore & Podesva (2009) in their study of the strategic use of tag questions by the populars and townies (and other groups) discussed above.

One could say that every case of variation discussed above involves enregisterment. In the case of Beijing yuppies, the use of full tone can be seen as a tropic use (Agha 2005) of an element of an enregistered variety, Hong Kong or Taiwan Mandarin, and reinscribed as part of a new Beijing yuppie register. Registers are both an important source of stylistic resources and a potential end product of bricolage.

Johnstone's work on Pittsburghese has contextualized variation within a broader view of enregisterment (Agha 2003, 2007)—a perspective that had been missing in variation studies in spite of the fact that the field was built on New Yorkese, a most perfect example of enregisterment. What is particularly interesting about the Pittsburgh case is that it is happening before our eyes, whereas the New York case has been enregistered on a national, even an international, level for some time. Johnstone and colleagues (e.g., Johnstone et al. 2006, Johnstone & Kiesling 2008, Johnstone 2011) emphasized that enregisterment depended on the emergence of Pittsburgh as a place worth pointing to—a destination and a place to be from. Variables that locals recognize as indexing the Polish working class have come to index Pittsburgh as a whole to people who have left, or come to, Pittsburgh. Distance was necessary for Pittsburghese to be extracted from its local context and associated with a vision of Pittsburgh. Johnstone (2011) thus emphasizes that differences in interpretive repertoires play an important role in the mutability of the indexical value of variables. This enregisterment is part of a larger project of enregisterment among

the cities of the rust belt, all known for their Eastern Europe work force. Examining the commodification of Pittsburghese on T-shirts, Johnstone (2009) emphasizes the connections between language and local institutions, such as the football team whose name, the Steelers, invokes Pittsburgh's distinctive heavy industrial past and its local pronunciation (Stillers) locates it linguistically. A similar connection is portrayed in the well-known Saturday Night Live skits in which a bunch of guys with Polish names and exaggerated Chicago accents drink beer, eat Polish sausage, and talk about Chicago's football team, "da Bearss." In this way, Pittsburghese is located not only with respect to its own history, but within a wider regional culture.

The focus on style has led beyond the regional and obviously nonstandard variables that have been the bread and butter of the first two waves. Third-wave studies often begin with styles, seeking out what makes them distinctive, in an attempt to fill out the kinds of resources and meanings that give language its social life. This process has led to a recognition that sound symbolism and iconization are at work in variation. The aspiration of intervocalic /t/ is a versatile stylistic resource that has been found to play a role in enregistered styles ranging from "geek" girls (Bucholtz 1996) to Orthodox Jews (Benor 2001) to gay men (Podesva et al. 2002; Podesva 2004, 2007). All three cases appear to exploit the indexical value associated with hyperarticulation, no doubt mediated by enregistered sources as divergent as British English, Yiddish, and schoolteacher talk. Podesva (2004) examines the use of this variable in the speech of a gay medical student, Heath, as he moves from the clinic, where he adopts a competent and educated persona, to a barbeque with friends, where he adopts a playful "diva" persona (Podesva 2007, p. 4). Heath uses significantly more instances of /t/ release in the clinic than at the barbecue, but the /t/s that he does release at the barbecue have significantly longer bursts of aspiration. Podesva argues that the exaggerated burst parodies a schoolteacher style, invoking a kind of fussy hyperarticulateness or prissiness in

keeping with the diva persona. This use is certainly a tropic use of a well-enregistered feature of schoolteacher style. At the same time, it owes its force to its participation in a broader phonological system, whose shape takes on indexical potential through iconization. And recent findings of the role of sound symbolism in variation open up a new range of possibilities for our view of social meaning.

As a hyperarticulation, /t/ release can index carefulness, precision, and general standardness, hence politeness, attention to detail, or education. As a fortition, it can index emphasis or force, hence focus, power, or even anger. And a hypoarticulated, lenis realization can index the reverse. In this way, the meanings of /t/ release constitute an indexical field that is based in iconic potential (Eckert 2008). And extending through the continuum of lenition to /t/ deletion, one might find an indexical field based in a mirror image. Thus indexical value accrues not just to individual variables, but also to phonological processes. The variation between velar and apical realizations of (ING) (“walking” versus “walkin”), while based on the juxtaposition of historically distinct forms, is perceived by speakers as similarly iconic, as evidenced in the popular characterization of the apical variant as “dropping your g’s,” linking it up to a more general indexical field somewhat similar to that of /t/. Campbell-Kibler (2007) has shown that listeners associate the velar variant of -ing (“walking”) with education, intelligence, formality, and articulateness and the apical variant (“walkin”) with a lack of these qualities. They also associate northerners and southerners with greater and lesser use of the velar, respectively, and with the qualities that these variables index (Preston 1989). Listeners in Campbell-Kibler’s experimental study based their interpretation of occurrences of these variants on their beliefs about the regional origins of speakers, judging southerners’ use of the velar form as pretentious, and northerners’ use of the apical form as an attempt to be folksy. The indexical potential of this variable appears to involve a conspiracy of relations to both phonological process and register. Certainly, one could say that lenition

and fortition more generally are components of registers, but at that point, I would argue that the notion of enregisterment loses its analytic force. It is in continual stylistic practice that nuances of sound take on sufficient meaning to participate in processes of enregisterment.

The nuance that Podesva (2004) found in /t/ release has a distinctly iconic quality, at the levels both of the indexical potentials enabled by hyperarticulation and fortition and of the intensifying potential of phonetic exaggeration (e.g., lengthened bursts). This general semiotic device emerged in Mendoza-Denton’s (1996) study of Chicana gang girl makeup, as the length of a girl’s eyeliner indexes her willingness to fight. Iconization appears in other cases of variation, notably in affective displays. In a study of preadolescents, Eckert (2011) found the frequency code (Ohala 1994) at work, as fronting and backing of low vowels correlated with the expression of positive and negative emotional states, respectively. Iconization is particularly useful in resources for affective displays because the effect of both depends on a perception of naturalness. But affect, also, is at the root of the social and emerges commonly in stylistic practice. Affect is central to jock and burnout identity and style: Jocks take pride in their happy demeanor, whereas burnouts consider jocks’ perennial smiles to be fake, viewing problems as an integral part of who they are individually and collectively. And the synaesthetic associations of light (front) and dark (back) vowels converge in sartorial style: The jocks wear pastels in both clothing and makeup, and burnouts wear dark-colored clothing and dark eyeliner. Linguistic variation, in other words, is a very broad-spectrum component of a broader semiotic system.

## CONCLUSION

In the move from the first to the third wave of variation studies, the entire view of the relation between language and society has been reversed. The emphasis on stylistic practice in the third wave places speakers not as passive and stable carriers of dialect, but as stylistic

agents, tailoring linguistic styles in ongoing and lifelong projects of self-construction and differentiation. It has become clear that patterns of variation do not simply unfold from the speaker's structural position in a system of production, but are part of the active—stylistic—production of social differentiation.

For years, the study of variation was dominated by a definition of style as “different ways of saying the same thing” (Labov 1972b, p. 323).

This definition was compatible with linguists' focus on denotational meaning, with a view of variation as marking social address and with a popular view of style as artifice. But style is at its foundation ideological, and the stylistic form of propositions is very much a part of their meaning. The third wave locates ideology in language itself, in the construction of meaning, with potentially important consequences for linguistic theory more generally.

## DISCLOSURE STATEMENT

The author is not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

## LITERATURE CITED

- Agha A. 2003. The social life of a cultural value. *Lang. Commun.* 23:231–73
- Agha A. 2005. Voice, footing, enregisterment. *J. Ling. Anthropol.* 15:38–59
- Agha A. 2007. *Language and Social Relations*. Cambridge, UK: Cambridge Univ. Press
- Benor S. 2001. Sounding learned: the gendered use of /v/ in Orthodox Jewish English. In *Penn Working Papers in Linguistics: Selected Papers from NWAV 29*, ed. DE Johnson, T Sanchez, pp. 1–16. Philadelphia: Univ. Penn.
- Bourdieu P, Boltanski L. 1975. Le fétichisme de la langue. *Actes Rech. Sci. Soc.* 1:2–32
- Bucholtz M. 1996. Geek the girl: language, femininity and female nerds. In *Gender and Belief Systems*, ed. N Warner, J Ahlers, L Bilmes, M Oliver, S Wertheim, M Chen, pp. 119–31. Berkeley, CA: Berkeley Women Lang. Group
- Bucholtz M. 1999. You da man: narrating the racial other in the production of white masculinity. *J. Socioling.* 3:443–60
- Bucholtz M. 2010. *White Kids: Language and White Youth Identities*. Cambridge, UK: Cambridge Univ. Press
- Bucholtz M, Hall K. 2005. Identity and interaction: a sociocultural linguistic approach. *Discourse Stud.* 7:585–614
- Campbell-Kibler K. 2007. Accent, (ING) and the social logic of listener perceptions. *Am. Speech* 82:32–64
- Cedergren H. 1973. The interplay of social and linguistic factors in Panama. PhD thesis. Cornell Univ., Ling. Dep. 324 pp.
- Cheshire J. 1982. *Variation in an English Dialect*. Cambridge, UK: Cambridge Univ. Press
- Cutler CA. 1999. Yorkville crossing: White teens, hip hop and African American English. *J. Socioling.* 3:428–41
- Dubois JW. 2002. *Stance and consequence*. Presented at Annu. Meet. Am. Anthropol. Assoc., 101st, New Orleans
- Eckert P. 1980. Clothing and geography in a suburban high school. In *Researching American Culture*, ed. CP Kottak, pp. 139–44. Ann Arbor: Univ. Mich. Press
- Eckert P. 1989a. *Jocks and Burnouts: Social Categories and Identity in the High School*. New York: Teach. Coll. Press
- Eckert P. 1989b. The whole woman: sex and gender differences in variation. *Lang. Var. Change* 1:245–67
- Eckert P. 1997. Age as a sociolinguistic variable. In *Handbook of Sociolinguistics*, ed. F Coulmas, pp. 151–67. Oxford: Basil Blackwell
- Eckert P. 2000. *Linguistic Variation as Social Practice*. Oxford: Blackwell
- Eckert P. 2008. Variation and the indexical field. *J. Socioling.* 12:453–76

- Eckert P. 2011. Where does the social stop? In *Language Variation—European Perspectives III*. Selected Papers from Int. Conf. Lang. Var. Europe (ICLaVE 5), 5th, June 2009, Copenhagen, ed. by F Gregersen, JK Parrott, P Quist, pp. 13–29. Amsterdam: John Benjamins
- Edwards W, Krakow C. 1985. *Polish-American English in Hamtramck: a sociolinguistic study*. Presented at Conference on New Ways of Analyzing Variation in English, Georgetown Univ., Washington, DC
- Edwards WF. 1991. Sociolinguistic behavior in a Detroit inner-city black neighborhood. *Lang. Soc.* 21:93–115
- Gal S. 1979. *Language Shift: Social Determinants of Linguistic Change in Bilingual Austria*. New York: Acad. Press
- Gal S, Irvine J. 2000. Language ideology and linguistic differentiation. In *Regimes of Language*, ed. PV Kroskrity, pp. 35–83. Santa Fe, NM: Sch. Am. Res. Press
- Gauchat L. 1905. L'Unité phonétique dans le patois d'une commune. In *Aus Romanischen Sprachen und Literaturen: Festschrift Heinrich Morf*, pp. 175–232. Halle: M Niemeyer
- Gumperz J. 1982. *Discourse Strategies*. Cambridge, UK: Cambridge Univ. Press
- Hebdige D. 1984. *Subculture: The Meaning of Style*. New York: Methuen
- Hill JH. 1993. Hasta la vista, baby: Anglo Spanish in the American Southwest. *Crit. Anthropol.* 13:145–76
- Holmquist J. 1985. Social correlates of a linguistic variable: a study in a Spanish village. *Lang. Soc.* 14:191–203
- Irvine J. 2001. Style as distinctiveness: the culture and ideology of linguistic differentiation. In *Stylistic Variation in Language*, ed. P Eckert, J Rickford, pp. 21–43. Cambridge, UK: Cambridge Univ. Press
- Johnstone B. 2009. Pittsburghese shirts: commodification and the enregisterment of an urban dialect. *Am. Speech* 84:157–75
- Johnstone B. 2011. Dialect enregisterment in performance. *J. Socioling.* 15:657–79
- Johnstone B, Andrus J, Danielson AE. 2006. Mobility, indexicality, and the enregisterment of “Pittsburghese.” *J. Engl. Ling.* 34:77–104
- Johnstone B, Kiesling SF. 2008. Indexicality and experience: exploring the meanings of /aw/-monophthongization in Pittsburgh. *J. Socioling.* 12:5–33
- Kiesling S. 1998. Men's identities and sociolinguistic variation: the case of fraternity men. *J. Socioling.* 2:69–100
- Kiesling S. 2001. Stances of Whiteness and hegemony in fraternity men's discourse. *J. Linguist. Anthropol.* 11:101–15
- Kiesling S. 2005. Variation, stance and style. *Engl. World-Wide* 26:1–42
- Kiesling S. 2009. Style as stance: Can stance be the primary explanation for patterns of sociolinguistic variation? In *Sociolinguistic Perspectives on Stance*, ed. A Jaffe, pp. 171–94. Oxford: Oxford Univ. Press
- Knack R. 1991. Ethnic boundaries in linguistic variation. In *New Ways of Analyzing Sound Change*, ed. P Eckert, pp. 252–72. New York: Acad. Press
- Kroch AS. 1978. Toward a theory of social dialect variation. *Lang. Soc.* 7:17–36
- Labov W. 1963. The social motivation of a sound change. *Word* 18:1–42
- Labov W. 1966. *The Social Stratification of English in New York City*. Washington, DC: Cent. Appl. Ling.
- Labov W. 1972a. *Language in the Inner City*. Philadelphia: Univ. Penn. Press
- Labov W. 1972b. Some principles of linguistic methodology. *Lang. Soc.* 1:97–120
- Labov W. 1972c. The logic of nonstandard English. In *Language in the Inner City*, ed. W Labov, pp. 201–40. Philadelphia: Univ. Penn. Press
- Labov W. 2001. *Principles of Linguistic Change: Social Factors*. Cambridge, UK: Blackwell
- Macaulay RKS. 1977. *Language, Social Class and Education: A Glasgow Study*. Edinburgh: Univ. Edinb. Press
- Mendoza-Denton N. 1996. Muy macha: gender and ideology in gang girls' discourse about makeup. *Ethnos* 61:47–63
- Milroy L. 1980. *Language and Social Networks*. Oxford: Blackwell
- Modaresi Y. 1978. *A sociolinguistic analysis of modern Persian*. PhD thesis. Univ. Kansas. 257 pp.
- Moore E. 2004. Sociolinguistic style: a multidimensional resource for shared identity creation. *Can. J. Linguist.* 49:375–96
- Moore E, Podesva RJ. 2009. Style, indexicality and the social meaning of tag questions. *Lang. Soc.* 38:447–85
- Ohala J. 1994. The frequency code underlies the sound-symbolic use of voice pitch. In *Sound Symbolism*, ed. L Hinton, J Nichola, JJ Ohala, pp. 325–47. Cambridge, UK/New York: Cambridge Univ. Press
- Podesva R. 2004. *On constructing social meaning with stop release bursts*. Presented at Socioling. Symp. 15, Newcastle upon Tyne

- Podesva RJ. 2007. Phonation type as a stylistic variable: the use of falsetto in constructing a persona. *J. Socioling.* 11:478–504
- Podesva RJ, Roberts SJ, Campbell-Kibler K. 2002. Sharing resources and indexing meanings in the production of gay styles. In *Language and Sexuality: Contesting Meaning in Theory and Practice*, ed. K Campbell-Kibler, RJ Podesva, SJ Roberts, A Wong, pp. 175–90. Stanford, CA: CSLI Press
- Preston D. 1989. *Perceptual Dialectology*. Dordrecht: Foris
- Rauniomaa M. 2003. *Stance accretion*. Presented at Lang., Interact. Soc. Organ. Res. Focus Group, Univ. Calif., Santa Barbara
- Rickford J. 1986. The need for new approaches to class analysis in sociolinguistics. *Lang. Commun.* 6:215–21
- Sankoff G. 2006. Age: apparent time and real time. In *Elsevier Encyclopedia of Language and Linguistics*, ed. K Brown, pp. 110–16. Oxford: Elsevier. 2nd ed.
- Silverstein M. 2003. Indexical order and the dialectics of sociolinguistic life. *Lang. Commun.* 23:193–229
- Trudgill P. 1972. Sex, covert prestige and linguistic change in the urban British English of Norwich. *Lang. Soc.* 1:179–95
- Trudgill P. 1974. *The Social Differentiation of English in Norwich*. Cambridge, UK: Cambridge Univ. Press
- Wolfram W. 1969. *A Sociolinguistic Description of Detroit Negro Speech*. Washington, DC: Cent. Appl. Ling.
- Wong A. 2005. The re-appropriation of Tongzhi. *Lang. Soc.* 34:763–93
- Zhang Q. 2005. A Chinese yuppie in Beijing: phonological variation and the construction of a new professional identity. *Lang. Soc.* 34:431–66
- Zhang Q. 2008. Rhotacization and the “Beijing Smooth Operator”: the social meaning of a linguistic variable. *J. Socioling.* 12:201–22





# Contents

## Prefatory Chapter

Ancient Mesopotamian Urbanism and Blurred Disciplinary Boundaries <i>Robert McC. Adams</i> .....	1
---	---

## Archaeology

The Archaeology of Emotion and Affect <i>Sarah Tarlow</i> .....	169
--	-----

The Archaeology of Money <i>Colin Haselgrove and Stefan Krmnicek</i> .....	235
---	-----

Phenomenological Approaches in Landscape Archaeology <i>Matthew H. Johnson</i> .....	269
---	-----

Paleolithic Archaeology in China <i>Ofer Bar-Yosef and Youping Wang</i> .....	319
--	-----

Archaeological Contributions to Climate Change Research: The Archaeological Record as a Paleoclimatic and Paleoenvironmental Archive <i>Daniel H. Sandweiss and Alice R. Kelley</i> .....	371
--	-----

Colonialism and Migration in the Ancient Mediterranean <i>Peter van Dommelen</i> .....	393
---	-----

Archaeometallurgy: The Study of Preindustrial Mining and Metallurgy <i>David Killick and Thomas Fenn</i> .....	559
---	-----

Rescue Archaeology: A European View <i>Jean-Paul Demoule</i> .....	611
---	-----

## Biological Anthropology

Energetics, Locomotion, and Female Reproduction: Implications for Human Evolution <i>Cara M. Wall-Scheffler</i> .....	71
---	----

Ethnoprimateology and the Anthropology of the Human-Primate Interface <i>Agustin Fuentes</i> .....	101
Human Evolution and the Chimpanzee Referential Doctrine <i>Ken Sayers, Mary Ann Raghanti, and C. Owen Lovejoy</i> .....	119
Chimpanzees and the Behavior of <i>Ardipithecus ramidus</i> <i>Craig B. Stanford</i> .....	139
Evolution and Environmental Change in Early Human Prehistory <i>Richard Potts</i> .....	151
Primate Feeding and Foraging: Integrating Studies of Behavior and Morphology <i>W. Scott McGraw and David J. Daegling</i> .....	203
Madagascar: A History of Arrivals, What Happened, and Will Happen Next <i>Robert E. Dewar and Alison F. Richard</i> .....	495
Maternal Prenatal Nutrition and Health in Grandchildren and Subsequent Generations <i>E. Susser, J.B. Kirkbride, B.T. Heijmans, J.K. Kresovich, L.H. Lumey, and A.D. Stein</i> .....	577
<b>Linguistics and Communicative Practices</b>	
Media and Religious Diversity <i>Patrick Eisenlobr</i> .....	37
Three Waves of Variation Study: The Emergence of Meaning in the Study of Sociolinguistic Variation <i>Penelope Eckert</i> .....	87
Documents and Bureaucracy <i>Matthew S. Hull</i> .....	251
The Semiotics of Collective Memories <i>Brigitte M. French</i> .....	337
Language and Materiality in Global Capitalism <i>Shalini Shankar and Jillian R. Cavanaugh</i> .....	355
Anthropology in and of the Archives: Possible Futures and Contingent Pasts. Archives as Anthropological Surrogates <i>David Zeithyn</i> .....	461
Music, Language, and Texts: Sound and Semiotic Ethnography <i>Paja Faudree</i> .....	519

## **International Anthropology and Regional Studies**

Contemporary Anthropologies of Indigenous Australia <i>Tess Lea</i> .....	187
The Politics of Perspectivism <i>Alcida Rita Ramos</i> .....	481
Anthropologies of Arab-Majority Societies <i>Lara Deeb and Jessica Winegar</i> .....	537

## **Sociocultural Anthropology**

Lives With Others: Climate Change and Human-Animal Relations <i>Rebecca Cassidy</i> .....	21
The Politics of the Anthropogenic <i>Nathan F. Sayre</i> .....	57
Objects of Affect: Photography Beyond the Image <i>Elizabeth Edwards</i> .....	221
Sea Change: Island Communities and Climate Change <i>Heather Lazrus</i> .....	285
Enculturating Cells: The Anthropology, Substance, and Science of Stem Cells <i>Aditya Bharadwaj</i> .....	303
Diabetes and Culture <i>Steve Ferzacca</i> .....	411
Toward an Ecology of Materials <i>Tim Ingold</i> .....	427
Sport, Modernity, and the Body <i>Niko Besnier and Susan Brownell</i> .....	443

## **Theme I: Materiality**

Objects of Affect: Photography Beyond the Image <i>Elizabeth Edwards</i> .....	221
The Archaeology of Money <i>Colin Haselgrove and Stefan Krmnicek</i> .....	235
Documents and Bureaucracy <i>Matthew S. Hull</i> .....	251
Phenomenological Approaches in Landscape Archaeology <i>Matthew H. Johnson</i> .....	269

Language and Materiality in Global Capitalism <i>Shalini Shankar and Jillian R. Cavanaugh</i> .....	355
Toward an Ecology of Materials <i>Tim Ingold</i> .....	427
Anthropology in and of the Archives: Possible Futures and Contingent Pasts. Archives as Anthropological Surrogates <i>David Zeitlyn</i> .....	461

## Theme II: Climate Change

Lives With Others: Climate Change and Human-Animal Relations <i>Rebecca Cassidy</i> .....	21
The Politics of the Anthropogenic <i>Nathan F. Sayre</i> .....	57
Ethnoprimatology and the Anthropology of the Human-Primate Interface <i>Agustin Fuentes</i> .....	101
Evolution and Environmental Change in Early Human Prehistory <i>Richard Potts</i> .....	151
Sea Change: Island Communities and Climate Change <i>Heather Lazrus</i> .....	285
Archaeological Contributions to Climate Change Research: The Archaeological Record as a Paleoclimatic and Paleoenvironmental Archive <i>Daniel H. Sandweiss and Alice R. Kelley</i> .....	371
Madagascar: A History of Arrivals, What Happened, and Will Happen Next <i>Robert E. Dewar and Alison F. Richard</i> .....	495

## Indexes

Cumulative Index of Contributing Authors, Volumes 32–41 .....	627
Cumulative Index of Chapter Titles, Volumes 32–41 .....	631

## Errata

An online log of corrections to *Annual Review of Anthropology* articles may be found at <http://anthro.annualreviews.org/errata.shtml>