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REVIEW ESSAY

Explaining IT

Global "Body Shopping": An Indian Labor System in the Information Technology Industry
Biao Xiang (Princeton: Princeton University Press, 2007)

Virtual Migration: The Programming of Globalization
A. Aneesh (Durham: Duke University Press, 2006)

In April of 2001, I sat on the roof of an office building in Bangalore listening to Metallica covers sung by a band made up of IT (Information Technology) professionals in their twenties. My new friends regaled me with stories of their success, boasting of their enormous salaries and summer homes under construction in the countryside. To them, this rooftop party represented the end of a long Indian transformation: the rise of IT as the most prestigious of young mens' callings, the end of the need to emigrate to the US or elsewhere for work, and India's emergence from 50 years of import substitution and socialism into the light of global economic equality. India appeared like it was finally in a position to make its own economy a destination.

April 2001 was also, however, the month when the dotcom boom ended with a precipitous plunge, and it gave that evening a sense of impending doom. The ecstasy of the music clashed with the nagging sense that Bangalore had been buoyed by an alien exuberance that was about to come crashing back down onto the reality of software off-shoring and outsourcing. Since then, I have wondered about the role of IT labor before and after the dotcom boom and its global ramifications: how to fit these millenarian images of change into the more frequent banal journalistic visits to call centers, or the hype about a "flat world"? More and more, it seemed to me that the dotcom boom wasn't a blip. Indeed, from the perspective of my Lars-loving rooftop cosmopolitans, the dotcom boom was just the tip of an India-shaped iceberg transforming the global IT industry.

Now we have two very good books that help explain how. A. Aneesh's *Virtual Migration*, and Xiang Biao's *Global "Body Shopping*," throw into sharp relief how India's recent economic and cultural transformations have shaped the practice and form of globalization in IT and IT-related aspects of the economy. Much like the centrality of Mexican migrant workers to US agriculture, India's IT laborers have built a unique labor practice that has fed an insatiable and volatile new economy.

Together these two books introduce the practice and theory of Indian IT labor in the last quarter century. The core practice of "body shopping"—like "head-hunting" to which it is opposed—is an economy-within-an-economy that circulates bodies according to ever more elastic labor market demands. *Virtual Migration* is sociological

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and theoretical in spirit, laying out all of the scholarly debates related to globalization, transnationalization and labor practice. Going beyond outsourcing, subcontracting or trans-national labor, Aneesh develops such concepts as "programmed" capitalism, "skill saturation," "algocracy" and "virtual migration." Global "Body Shopping" is by contrast a fantastically rich multisited ethnographic work on the details of body shopping, its relation to IT labor market dynamics, and most intriguingly to the transformation of Indian families, educations, and wealth. The two books complement each other, and in many places confirm each others' observations. However, they also pull in opposite directions. Virtual Migration pulls readers towards a theorization of "code" and "algocracy"—a desire to rethink the heritage of social theory after the spread of information technology. Global "Body Shopping," meanwhile, pulls readers firmly in the direction of process and fieldwork, toward a detailed understanding of how, for instance, the practice of dowry is intimately related to the labor and immigration decisions of young IT workers, and in turn how their marital situations determine their cultural and social lives while abroad.

A. Aneesh's Virtual Migration treats now familiar issues such as "outsourcing" and "call centers" but goes deeper into the structures that give rise to them. Virtual Migration bills itself as being an intervention into current studies of migration and labor, inverting the assumption that bodies flow just as capital. It demonstrates that some bodies are staying put, but instead flowing through "code." The "deterritorialization" of labor in the age of the Internet is also the lens through which Xiang understands body shopping, as distinct from older forms of outsourcing and off-shoring. The latter precedes the Internet and is most often a direct response to local labor shortages or cost-cutting schemes in the US or Europe. Body shopping by contrast is coterminous with the rise of the Internet and network-based tools for deterritorialization and with the "financialization" of the IT industry in which health is closely tied to the stock market, increasing the need for ever more elastic labor markets to respond to peaks and dips. As Xiang writes, "Bodyshopping matched mobile labor to volatile capital." (p. 7) Whereas Xiang treats this practice as a new and distinctively Indian practice, Aneesh sees it as a form of embodied migration that is balanced by other, also novel, forms of "virtual" migration.

Virtual migration consists of new forms of spatial and temporal integration. "Spatially" work sites in India are integrated into American corporations through the labor of programming and organization, so that they seem to be just another floor of the office building. The integration is never absolute, however, and Aneesh details some of the many strategies that are involved in smoothing out the wrinkles. These strategies include: the "75–25" rule of having 75 percent of a team in India, and the other 25 in America; the American subsidiary that sets up shop temporarily in India; or the use of third party firms that coordinate between US and India operations. "Temporal" integration concerns taking advantage of the alternating cycles of the work day, so that when US firms close for the night, Indian firms take over in the day—the so-called "follow-the-sun" approach. Although it is not quite clear in Aneesh's book, such an approach seems to be most relevant for extremely time-sensitive industries, such as finance, film-making or call-center support work.

The most theoretically interesting chapter of Virtual Migration is Chapter 5, titled "Action Scripts," which tries to distinguish three forms of rationality and power: bureaucracy, panopticism, and "algocracy." Aneesh suggests that "algocracy" and the "programming schemes" it creates are significantly different from these two older models of power and rationality. Programming schemes are more than just programming; they are "part of a general war on surprise" among which are risk management, disease management, Global Positioning Satellites and functional magnetic resonance imaging (pp. 23-24). Aneesh's claim that "code" is an understudied aspect of work transformation is true enough, but still underspecified. If code means "business logic" as programmers like to say, then there are reams of literature in business, management and organizational studies that document and discuss the "code" of business. But if "code" means particular kinds software applications and networks that have emerged in the last 20 years, then there is far less work on the subject. Strangely, Aneesh's examples of "programming schemes" in India are the Railroad and the Postal System. Although this analysis is interesting, it is hardly emblematic of the kinds of work organization on which the book intends to focus. Aneesh's work might have benefited from a closer engagement with work in the history of computing in which there are debates about whether to understand the role of the computer as a radical new invention or as an "information machine" that is continuous with older forms of bureaucracy (as in the work of Jon Agar on the British Civil Service).

Aneesh's book is filled with details. He is obviously an avid reader of business and management publications, and curious about the specific tools, software, models, and fads that at once permeate the corporate world, but also disappear frequently without structure. When describing algoratic structures, for instance, he mentions a series of tools that seem to demand just a bit of lingering—"MetaEdit, ClearCase, InSite" (p. 117). But these tools are treated as self-evident, perhaps because they seem self-evident to the actors themselves. The basic metaphor of "algoracy"—that of systems of control in which options are constrained and controlled by new information technologies (compare Larry Lessig's "Code is Law"—is intuitively provocative, but ultimately empty without specific attention to the detail of business process.

Xiang takes a different kind of approach to the subject. On the surface, his book is more ethnographic—filled with the kinds of details of everyday business operations, social life and technical connections that are lacking in *Virtual Migration*. But *Global "Body Shopping"* is not just ethnographic in a conventional sense—rather it is an excellent example of fitting form to subject matter, and by virtue of this, providing theoretical insight. Because body shopping takes unfamiliar forms—more complicated than simple models of digital divides or global/local would allow one to see—it necessitates an unfamiliar form of analysis. On the ground, Xiang conducted fieldwork in Coastal Andra Pradeshi villages, Urban Sydney IT neighborhoods, and various typical "stopovers" (Kuala Lumpur, e.g.) that represents a standard IT worker's peregrination. But the book is not only about labor or migration but is also about transformations in local social relations that enable or constrain certain kinds of labor opportunities and, most interesting, affect things such as the institutions of arranged marriage/dowry, which Xiang explores in detail.

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Although many readers might not see this feature of it, Xiang's book is in fact one of the best examples of "reflexive ethnography" in the last twenty years of experimentation in anthropology. It is not theory saturated, carefully self-regarding, or textually clever (as reflexivity is often interpreted). Instead it is reflexive in the precise sense that his understanding of his involvement in the lives of South Indian IT workers, as a Chinese-born, Oxford-trained anthropologist is on view. He recognizes how being Chinese and male provides certain kinds of access that being white and female would forbid (e.g. sleeping five to a room with "benched" IT workers in Sydney), or how his Oxford credentials are mobilized by his friends to improve their own status amongst family in India.

Most of Global "Body Shopping" is devoted to exploring how body shopping is a "uniquely Indian practice"—and what that means (p. 4). "Ethnicization" is thus a key aspect of Xiang's analysis, but he resists the rush to cultural explanations that are such a common feature of journalistic accounts (e.g., that Indian society is naturally suited to mathematical and computational thinking or that the combination of English language training and poverty makes them the easiest for transnational firms to exploit). The "ethnic" component is not about race, but about networks of kin and solidarity that can be exploited by the body shopper. Ironically the "ethnic" character of body shopping leads not to enhanced or transformed perceptions of collectivity (and most certainly not to self-perception as a working class), rather it leads to enhanced "individualization" which Xiang nicely describes as "less about 'self' and essentially about the perception of society-particularly how one should apprehend uncertainty" (p. 9). Uncertainty in the marketplace turns individual "merit" into the key to success, rather than being seen as the failure of the body shoppers themselves. A result of this combination of ethnicization and individualization is that workers are constantly encouraged to move up—such successes worked in favor of body shoppers who gained prestige by marketing "talented" individuals, and against the "collective" identity of workers as having shared interests. The final piece of the puzzle is the "transnationalization" of body shopping—the hierarchical ordering of particular nations into a chain of possible movements (e.g., from Andhra Pradesh to Malaysia to Australia to Canada to the US). Transnationalization keeps IT workers on the move, is perceived as the confirmation of "individual merit" and in turn reflects success at home in India—both for families connected to the circulating workers and to the reproduction of IT workers through training institutes.

By far the most interesting part of *Global B* is Xiang's discovery of the centrality of the institution of dowry. Dowry is a recent development in Indian kinship, one that has exploded in the age of global IT labor. Dowries for IT engineers are much higher than those for non-IT engineers or nonengineers, including doctors who once held pride of place in the professional hierarchy. Such large dowries often mirror the speculation inherent in the industry, so that even unemployed IT workers are more valuable than stably employed men in other professions. High dowry can be seen as reimbursement for the groom's parents' investment in IT education, and in some cases has even created a "futures market" in which a bride's parents offer to pay education fees for a potential son-in-law. Body shopping played directly into this economy by allowing IT workers to begin the transnational circulation and individualized

"merit" that would eventually result not just in an overseas position, but potentially in a series of high dowry offers. The mechanics of the body-shopping labor system are thus crucially tied into particular kinds of social relations in India—making it a "distinctively Indian" labor system not because of anything distinctively Indian, but because of a complex overlapping system of markets: IT training, dowry and jobs abroad in the IT sector. One wonders how these new patterns might compare with those of Mexican and Central American migrants in the US farm economy or Turkish workers in the German building industry.

Together Global "Body Shopping" and Virtual Migration fill a need for work on the subject of body shopping and migratory labor—one I have personally been waiting for since that evening party on the roof in Bangalore. The two books complement each other nicely—especially in a pedagogical frame. Whereas Global "Body Shopping" gets at the thorny theoretical issues through detail and description, Virtual Migration is filled with extended, pastiched excurses on the theoretical and conceptual difficulties occasioned in trying to understanding contemporary IT-enabled work organization. Global "Body Shopping" can orient students toward the distinctiveness of labor as it emerges in practice; Virtual Migration can orient students toward the theoretical impasses and debates that need to be overcome in order to understand the significance of these new practices. Together they can make sense of how the global IT economy is not something that has "effects" on local Indian society but is in fact something that has emerged directly out of the social and economic practices of that society.