Published in final edited form as:
Contemp South Asia. 2013 ; 21(3): 275–290. doi:10.1080/09584935.2013.826626.

Citizens in the commons: blood and genetics in the making of the civic

Deepa S. Reddy
University of Houston-Clear Lake

Abstract

This essay is based on ethnographic fieldwork conducted with the Indian community in Houston, as part of a NIH/NHGRI-sponsored ethics study and sample collection initiative entitled 'Indian and Hindu Perspectives on Genetic Variation Research.' Taking a cue from my Indian interlocutors who largely support and readily respond to such initiatives on the grounds that they will undoubtedly serve 'humanity' and the common good, I explore notions of the commons that are created in the process of soliciting blood for genetic research. How does blood become the stuff of which a civic discourse is made? How do idealistic individual appeals to donate blood, ethics research protocols, open-source databases, debates on approaches to genetic research, patents and Intellectual Property regulations, markets and the nation-state itself variously engage, limit or further ideas of the common good? Moving much as my interlocutors do, between India and the United States, I explore the nature of the commons that is both imagined and pragmatically reckoned in both local and global diasporic contexts.

Keywords

commons; blood donation; genetic research; exchange; market relations; Indians in diaspora; citizenship; public goods

Introduction: complaints and corollaries

In my years of living, researching, and traveling in India, I have heard one complaint uttered more frequently, with greater feeling than any other: 'Indians have no civic sense.' Outsiders have noticed, and not hesitated to point out, the omnipresence of filth, dirt, excrement, walls stained with the red spittle of so much chewed beetelnut, the abysmal condition of so many public spaces, the non-existence of so many public services. The writings of V.S. Naipaul (*An Area of Darkness*, 1964) and Günter Grass (*Show Your Tongue*, 1989) are among the more well known of such accounts. The only women to find a place on the street, note Vasanth and Kalpana Kannabiran, are prostitutes, vendors, and others for whom the street is a place of business (1991: 2132). Urban dwellers complain lamentably about loudspeakers mounted on mosques, temples, and churches, blaring prayers and sermons and songs at all hours, causing disturbance and communal tension.

Of course, this is a stark account. It is both possible and necessary to offer a more nuanced view of public space in India, in which women are everywhere despite the unfriendliness of spaces beyond home and family, in which 'slum dwellers [leave] their homes in freshly washed and crisply ironed shirts,'[1] and where the rules of personal discipline and the habits of hygiene in individual practice are many and strict. This sort of obvious contradiction has

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[1] Ilija Trojanow, 'Imperial politics in the progressive gaze': http://www.hinduonnet.com/thehindu/lr/2001/12/02/stories/2001120200080100.htm

led scholars to posit a boundary between inside and outside, home and world, purity and pollution, where the ‘outside ... always carries 'substances” that threaten one's well-being’ (Chakrabarty 1991:20; see also Douglas 1966, Raheja 1988: 43ff). By all accounts, then, the outside is a space fraught with risk (if not outright danger), filled with strangers, and saturated with ‘substances’ of threatening character. It is an example of what A.K. Ramanujan (1990) may have dubbed the ‘context-free,’ or an environment in which contexts are many and rapidly shifting, difficult to comprehend or situate oneself within. Such analyses perhaps hint at *why* Indians may feel the absence of civic sense. But what, then, are we to make of the desire for common, public spaces governed by civic commitments that is the unspoken corollary to the complaint?

The question goes to the heart of this essay, in which I consider how the ‘“substances” that threaten one's well-being’ paradoxically become the stuff of which a civic discourse is made. The substance in question here is blood: bearing great symbolic and metaphorical weight it is a source of much anxiety, but, in medical practice, as a question of therapeutic and/or research need, it has also the capacity to level or transcend the differences of here and now to become the means by which fresh commonalities gain expression. The Indian lament about the absence of civic sense is accompanied by a less clearly articulated, but significantly more idealized commons governed precisely by a vigorous civic sense: critique and idealization go hand-in-hand, and blood encapsulates both. Blood makes it possible, even necessary, to imagine a more-and-less idealized, more-and-less pragmatically configured commons shaped by the ‘dynamic public discourse’ of four ‘interactive components’—the state, the private, the market, and the public, to draw on Thomas Janoski's definition of civil society (1998:12). In this essay I ask therefore: How does blood and, in particular, the arguments for the solicitation and banking of blood, foster this discourse? What kind of a commons is the imagined result?

The research that has thrown this topic into relief is the ELSI-HapMap Project. Between 2004 and 2008, I was co-investigator on a project entitled ‘Indian and Hindu perspectives on genetic variation research,’ funded by the ELSI (Ethical, Legal and Social Issues in genomic research) program of the National Institutes of Health and the National Human Genome Research Institute (NIH/NHGRI). [2] The purpose of this ‘community consultation’ project was to engage members of the Indian community in Houston on questions of participating in genetic research, and ultimately to collect 140 blood samples from Indian Gujaratis for the construction of a Haplotype Map: a strategized cataloguing of human genetic variation. To this end, it was part of my charge as an ethnographer to conceptualize what the act of blood donation might means to Indians resident in Houston, and what sorts of ethical questions the proposition to donate for genetic research might posit. Essentially, then, the NIH/NHGRI community consultation project asked Indians both for a donation to research and about the meanings of that contribution in the (imagined or real) act of giving.

This research context is germane not only because the present essay draws on ‘data’ collected by NIH/NHGRI mandate. Although the project (and other ELSI undertakings like it) was not framed as research on the concept of the ‘commons’ or civil society, some engagement with notions of commonality and civic responsibility was inevitable. For one, this was a ‘community consultation’ project, which demanded the identification of ‘community’ as a public body to be consulted on the matter of sample collection for genetic research (see Brodwin 2005; Juengst 1998; Strathern 2005). ‘Community’ could have been

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[2] The ELSI Research Program was started in 1990 as part of the Human Genome Project, to foster research on the ethical, legal, and social implications of genetics and genomic research for individuals and communities. The program is funded by 3 to 5 percent of the annual Human Genome Program budgets of the NIH and DOE (U.S. Department of Energy), and is currently administered by the NHGRI. As such, it represents one of the largest bioethics initiatives in the world.

fractured by differing opinions, but needed nonetheless to be identifiable: commonness, somehow defined, was a prerequisite. Second, the HapMap Project's efforts to collect samples from a range of minority communities within the United States made participation inevitably a matter of representation. Indians were being called upon to donate samples alongside Mexican-Americans, Chinese, and African-Americans, Italians, Japanese, Nigerians and others, all towards the creation of an International Haplotype Map of *human* genetic variation. Humanness was summoned at the farthest level, but more immediately the call was one to ‘stand and be counted’: ethnic, national, and cultural differentiation marked the route to citizenship within both local and global orders. Lastly, the HapMap Project has itself an avowed commitment to the commons: in the creation of a public resource (the HapMap) to be made available to researchers, and in its desire to avoid the criticism that it has insufficiently engaged ‘the public’ in civic dialogue.[3] Fostering dialogue about interests, commitments, responsibilities, and ownership—in short, negotiating the very character of the commons—was key.

Our interlocutors in Houston, too, characterized sample donation abstractly, as serving ‘the community’, ‘the greater good’, and as a generalized ‘good cause’. Their formulations were elusive, but not unfamiliar: ‘humanity’ and the generalized ‘public good’ are not uncommon beneficiaries of Indian charity and philanthropic giving (Haynes 1987, Palsetia 2005). The available literature on these topics glosses such terms, however, in favor of explicating how particular circumstances modulate traditional giving practices according to context (L. Caplan 1998, P. Caplan 1985). The emergence of civic culture in colonial India, the scholarship suggests, for instance, was the result of a complex engagement with British notions of humanitarianism and philanthropy. Haynes shows how merchants in late 19th and early 20th century Surat came to incorporate philanthropic activities in their larger portfolio of ‘symbolic investments,’ adjusting their modalities of giving in concord with the changing sociopolitical world around (1987: 340). Palsetia offers a biography of Jamsetjee Jejeebhoy, a ‘leading merchant, influential citizen, and philanthropist in Bombay during the first half of the 19th century,’ whose use of public philanthropy ‘in benefit of Indian welfare’ but also ‘in deference to imperial standards and idioms’ contributed to the ‘formation of an emergent civic culture’ (2005: 198). And Watt considers how the expansion of associations and institutions, facilitated by active claims to citizenship, reinforced public life and precipitated a model of social service that was at once Western and ‘inflected by indigenous traditions of giving’ (2005: 7, 88).

Much the same may be said of ELSI-HapMap: the mechanics of giving, and the emergent ideas about civic responsibility, collective welfare, and common resources, even the use of abstraction and hyperbole, are inherently tied to the historical circumstances within which the giving happens. If the ease with which our sample collection drives progressed is any indication, however, our interlocutors’ decision to give in support of genetic research was relatively uncomplicated. Research (with a capital R) was important and needed to progress; Knowledge (with a capital K) was always deemed good, no matter the possibilities of its misuse. Indeed, even if our study's outcomes could be read as anti-climactic (Reddy 2007), the procedures of community engagement as an ethical route to sample collection were unprecedented: the mechanics of *asking* were more elaborate by far than the mechanics of giving. While analyses of gifts in India focus largely on the act of giving, and to a somewhat lesser extent on the effects of receiving (cf. Gold 1988; Parry 1986), in this case the means

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[3] In this, HapMap is unavoidably heir to the controversial legacy of the Human Genome Diversity Project (HGDP), an effort of anthropologists, geneticists, doctors, linguists, and others to ‘document the genetic variation of the human species worldwide’. The Project promised both insights on populations’ ‘history and origins’. Its diffuse focus, problematic assumptions, and ethically dubious sampling strategies, soon invited vocal criticism from indigenous communities, anthropologists and geneticists. Building controversy eventually shut down the Project by the end of the decade (http://www.stanford.edu/group/morrinst/hgdp.html; Harry 1994).

by which samples were solicited and later distributed and made available for use became key. The first sections of this essay therefore address a question always implied in the literature on (Indian) philanthropy and charitable giving, but seldom posed directly: what are the logics which frame solicitations, in this case of blood? How does the asking shape the giving? The latter sections then consider not so much what happens to the donated gift, but how the imaginaries on which both asking and giving were premised then begin to coalesce. How does the donation then actualize the common civic spaces promised in solicitation? What sort of ‘common good’ is the result?

I: ASKING

Soliciting therapeutic blood

The rhetorics and practices of therapeutic blood donation in India offer a backdrop for the research conducted in Houston. From 1942, when the first public blood bank was established in India, to 1967, the norm was to collect blood from professional, paid donors. A 1967 campaign spearheaded by the International Red Cross and the Government of India brought the concept of voluntary, non-remunerated blood donation into existence. It was not until 1996, however, that the Indian Supreme Court banned blood collection from professional, paid donors, making paid donations illegal, and thereby also fostering the emergence of new mechanisms for paid donations in the form of ‘replacement blood’ (Vicziany 2001:387).[4] Such tension between selling and giving is then formative, for volunteerism and donor recruitment strategies must reject the former to build on the latter. A ‘culture of donation’ must necessarily involve the efforts of ‘caring people,’ ‘people who dare to dream differently, the people who think beyond the bread & butter, the people who think themselves as the “*citizens of the world*”.’[5] Caring People, an NGO in Moradabad, draws inspiration from the Sanskrit saying *vasudaiva kutumbakam* [the world is one family], to reject boundaries and espouse nothing short of ‘the cause of humanity.’[6] Such integrative moves are not the exclusive purview of NGOs: Copeman (2009) has written of the Sant Nirankari Mission's deployment of blood donation as a means of both expressing and creating the ‘universal brotherhood’ to which the sect aspires. Extricated from the face-to-face contexts of sale, the ideal donor becomes one whose ‘primary motivation is to help unknown recipients,’[7] a ‘citizen of the world’[8] with an ethical responsibility to the countless unknown ‘somebodies’ who might be in need of blood. Giving blood thus becomes a form of SUPW (Socially Useful Productive Work), as many Indians know it in school: community service far more than donation, and these days equally a service-oriented form of public protest (Copeman 2012).

Blood collection camps are common enough in India to be dubbed ‘insignificant events’ (that is, in need of gimmicks or other efforts to draw special attention) by a medic at Manipal Hospital's Transfusion Services in Bangalore.[9] And yet, need is perpetually ahead of supply: as of 2012, the shortfall is estimated anywhere from 3-5 million units, and distribution, misperceptions about donation, and the ‘fragmented nature of blood transfusion services’[10] complicate both supply and access. Bray and Prabhakar write, for example, of

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[4] ‘Replacement blood’ is blood collected from the family members of individuals receiving transfusions, replenishing the blood supply quantum-for-quantum.

[5] http://www.hinduonnet.com/thehindu/2001/07/31/stories/0431401y.htm; http://www.blooddonations.org; http://www.blooddonations.org/AboutUs.aspx, emphasis added.

[6] http://www.blooddonations.org/AboutUs.aspx

[7] http://www.iitd.ernet.in/new/blooddonation.pdf

[8] http://www.blooddonations.org/AboutUs.aspx

[9] http://news.bbc.co.uk/2/hi/south_asia/5192030.stm

[10] http://sankalpindia.net/drupal/blood; http://zeenews.india.com/news/health/exclusive/india-faces-huge-blood-donation-deficit_17431.html

the mix of public and private organizations involved in blood banking, the ‘intense rivalry between and within charitable and independent commercial blood banks,’ and serious practical difficulties of obtaining blood: the higher risks of infections from replacement blood, the delays in testing and screening, among other impediments to good transfusion practices (2002: 477-78). Such factors have been cited as the impetus to establish centralized, private helplines and donor networks in several Indian cities, putting patients in touch with potential volunteer donors in case of need, and claiming to circumvent the crowd and chaos of blood banks.[11]

In such a context, blood seems less a public good (non-rivalrous, non-excludable) than a *limited* one. As an image of limited good, blood does not create a commons as much as it appears to call for one. For, alongside the many frustrations, tragedies, and critiques produced by the absence of blood are insistent idealisations of our common ‘humanity.’ The personal tragedies that have driven individuals like Khushroo Poacha (of indianblooddonors.com in Kolkata) to create a network and email-based alert system for volunteer donors are occasionally mentioned—but the focus of donor recruitment is overwhelmingly depersonalizing: an appeal to complete strangers to help complete strangers (Reddy 2007). ‘Blood Should Circulate’ ‘for the flow of blood is the essence of life,’ avers Jeevan Blood Bank in Chennai, simultaneously conflating the human body with the body politic and ironically acknowledging the many hardships involved in maintaining healthy circulation in spaces beyond the human body.[12]

Brokered Solicitation

In the outsides of the body politic, between the bodies of unknown donors and unknown recipients, lie the commons in which blood should circulate—and yet here is a space fraught with anxieties about supply and distribution. Several social networking strategies have emerged in recent years to address problems of distribution, but the absence of adequate infrastructure and public protocols is a limitation not easily overcome, and even the more influential of social projects can do little more than facilitate supply by connecting individuals to donors via online platforms (Sharma 2012). Socialblood.org, for example, makes active use of Indian user networks on Facebook, employing the logic that if donors knew whom they were helping, ‘human connections’ would be that much the smoother: the social network seeks to render blood into a common resource.[13] The strategy tellingly disavows the need for anonymity in donation, and apparently eliminates the middleman—though Jeevan's ongoing campaign to ‘Keep blood free’ serves as a parallel reminder that a battery of vital tests/procedures necessarily intercede in donor-recipient relations, requiring bio-medical infrastructure that can neither be eliminated nor easily reproduced. More conventional blood collection camps routinely call upon a range of more familiar, more-and-less collective identifications to make different sorts of ‘human connections’ that impel donation: with the gurus of a temple on whose grounds the camp is to be held[14], with adored film stars, with the appeal to ‘communal harmony’ in the context of religious violence[15], with nationalist figures and, by extension, the concept of the nation itself. The deaths of nationalist figures such as Bhagat Singh, hanged by the British for bombing the Central Assembly building in 1929, are transmuted into blood sacrifices for the country to be acknowledged by further donations of blood (Copeman 2004).

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[11] Sankalp India Foundation (http://sankalpindia.net/drupal/blood); indianblooddonors.com (http://indianblooddonors.com/default.asp).

[12] http://www.makebloodfree.org/

[13] http://www.fastcoexist.com/1679439/socialblood-wants-to-turn-facebook-into-the-worlds-largest-blood-bank

[14] http://www.bapscare.org/services/medical/bloodcamps.htm

[15] http://timesofindia.indiatimes.com/articleshow/24540.cms

In our research in Houston, although we were fully aware of the potential persuasiveness of a photograph of Gandhi, say, strategically placed on a recruitment table, we actively resisted manufacturing such an iconography of donation: it was not our place as researchers to solicit in that fashion. And yet, we were still embedded in the project and embodied it as middlemen, brokers without whom the task of obtaining samples would have either risked ethical controversy or otherwise stalled. ‘Why would I donate blood?’ one interlocutor asked, answering his own question thus: ‘Because you seem like a nice Indian woman, and you've come all this way to talk to us, so if you asked I'd give it.’ The people doing the asking, as personifications of the project and as the only knowable recipients of the physical samples, mattered more immediately than the distant, almost wholly abstract ultimate beneficiaries of genomic research. This became all the more evident during the third (and last) of our sample collection initiatives, at the Leuva Patidar Samaj National Convention held in Houston in the summer of 2006. Our booth happened to be adjacent to that of the BAPS [*Bochasanwasi Shri Akshar Purushottam*] Swaminarayan temple. Noting our hesitance to overly sell our project and actively recruit donors, a BAPS gentleman enthusiastically took it upon himself to send prospective sample donors our way simply on the grounds that such research would undoubtedly be for ‘the benefit of everybody.’ His assistance or, more accurately, his *brokerage* proved invaluable, for well before the day's end we were turning donors away: we had met our quota and exceeding it would be in violation of IRB protocols.[16]

Brokerage is thus key to facilitating the emergence of a substance commons, for our common humanity is abstract, context-free, and unknowable except through the go-betweens who connect us to it: donor recruiters, causes, saints, political figures, film stars, generic ‘nice people’ and Facebook friends—individuals and *types* of individuals, categorized strangers—all figures in the iconography of donation. The presence of brokers points to the actual infrastructure enabling wider idealizations: iconography, networks of people, relationships, commitments, testing laboratories and medical facilities guaranteeing safe supply—more and less concrete this-worldly exchanges. Each greases the transaction: makes it possible to work through the reluctances, misconceptions, and practical obstacles, so that blood can flow into an imaginary freed of such constraints.

Ethical Solicitation

The central role of brokers to the donation process indicates that the success of public blood banking initiatives turn on a full-fledged mechanics of solicitation which motivates donors to give. The integration of ‘ethics’ into the International HapMap Project serves a similar function. For no longer is it possible to presume that communities will voluntarily hand over human or other biological samples to researchers who come asking. Rather communities need to be consulted, informed, and ultimately convinced—both of the merit of their donation, and of their own role as stakeholders in its future. ELSI-HapMap ensures there is a procedure in place for this, even just in the rough directive to ‘community consultation’ that has assumed different forms in each research site. The method breaks down roughly thus: a series of interviews lead to a series of focus groups, working groups are then established, a community advisory group is formed, and the community so constituted then has the opportunity to maintain contact with the institute where the samples are stored and from there distributed, to follow the life of their gift, so to speak (Reddy 2009).

As a methodology that was first devolved in order to facilitate research on the human genome in the face of potential controversy, community consultation has its critics and

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[16] Copeman (2009) notes, in contrast, that blood collected for therapeutic use, particularly when the camps are organized by devotional orders, exceeding quotas and breaking records are always precisely the point of devotional expressionism.

cohorts who variously comment on its politics, its constructions of 'ethics,' its moral value, and its efficacy (Brodwin 2005, Foster et. al. 1999, Juengst 1998). Here, I consider it simply a form of solicitation: a mechanics of asking that attempts to circumvent controversy by establishing certain ethical parameters and procedures that delimit the roles of researcher-beneficiaries and the 'community.' Researchers must take time and make effort to ask about community interests and views about benefit returns in certain pre-determined ways before proceeding with their work; research cannot progress unilaterally but must be in communication with the contexts and communities that enable it. The procedural means by which researchers request and obtain samples (interviews, IRB reviews of research protocols, informed consent documents and the like), donning them with 'ethical provenance,' become critical to establishing the value of the samples themselves (Hamilton 2006). An appropriately devolved and implemented mechanics of asking becomes critical to the creation of 'ethical samples,' and to enabling the possibilities of genomic research itself —at once a 'foil' to science and the means by which science fashions itself in ever-more robust forms (Strathern 2005: 465, 466).

Communities have a role in the production of ethical samples, too: for community consultation to be successful, they must identify with and participate in this bioethics model of participatory research. They must add their voices to the chorus of others expressing diverse views on genomics. They must commit to social engagement as model citizens who 'manifest both public policy and private self-fulfillment' (Nettleton and Hardey 2006: 447). By making demands of researchers *and* communities, then, community consultation provides the mechanics by which the 'rights, recognitions, and responsibilities' of all those involved in sample collection can be connected to 'intimate, fundamental concerns about heritable identities, differential embodiment, and an *ethics of care*' (Heath et. al. 2004: 157).

Soliciting 'community'

Calls to an ethics of care and genetic citizenship come from various other quarters, too, via other modes of solicitation. At the time we were beginning our study in Houston in early 2004, 'philanthrocapitalism,'[17] or the return of capitalist profit to social projects for common benefit, was an important, emerging trend. Houstonians may remember the unusual billboards on Houston highways that year, seeking a liver donor for Todd Krampitz in a very personal and very public campaign that raised many questions about the ethics of jumping the queue by advertising for a donor. In 2004 began also the 'matchpia.org' campaign, a search for a bone marrow donor for Pia Awal (and Houstonian Megan Joseph) which gave prior efforts to get Indians to register with the National Marrow Donor Program (NMDP) a significant boost. Pia's and Megan's photographs were at virtually all community events, their campaigns for bone marrow matches drawing much attention to the fact that Indians are both severely underrepresented in the NMDP Registry and at much higher risk than other groups of not finding matches for bone marrow transplants.

At the same time as such campaigns highlighted the life-and-death human needs of the South Asian community, however, we heard repeatedly about its lack of cohesion: Bengalis with their Bengali associations, Gujaratis with their Gujarati associations and so on, but few formal means by which regional and linguistic identifications were eschewed or overcome. Chidanand Rajghatta has written of the bewildering proliferation of Indian representative associations in North America, where the presence of 2.6 million Indians divide endlessly into caste, religious, and ethnic groupings (2007). When Indians did come together, it was then only to hold each-other back, as one interlocutor recalled, citing a well-known joke: 'Do you know why baskets of Indian crabs on fishing boats are never covered? Because

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[17] *The Economic Times*, February 26, 2006.

each crab will hold on to the other, preventing anyone from ever leaving the basket!' Precisely to counter what they considered the narrow or fissiparous political tendencies of Indians, then, at the time we were conducting interviews various members of the community were petitioning the City for resources to build a community center called 'India House,' working towards a more supportive and cooperative model of 'Indianness' in diaspora.[18]

Given this background, HapMap functioned as a virtual emblem of idealized Indian commitments. On one level, it played (inadvertently) on pre-existing Indian inclinations to stick close to regional groupings: we were, after all, collecting samples only from Gujaratis. They also stood to gain modestly from our payments for facilities usage. On another level, however, since research utilizing HapMap samples would undoubtedly be generalized to all Indians, our ethnographic interactions were explicitly not limited to Gujaratis. HapMap thus represented the possibility of transcendence of the kind that Indians equally desired, but that seemed not to form so readily or naturally in the community. Quick to pick up on the futuristic, promissory nature of genomics, Indians then read genetic research (and 'research' in general) as a transcendent public good: a critical path to serve a humanity *not* fractured by linguistic, sectarian, or other more local, political associations. Giving to HapMap was in this sense meaningful on at least two levels: it was an already understood means of serving one's local community, but also of loosening associations in service of some wider, less definitive collectivity.

There were some notable exceptions, however; not all of our interlocutors so embraced the call of HapMap. My failed attempts at gathering a group of people from the Chinmaya Mission Houston (CMH) for a focus group discussion, for example, are instructive in this regard. When my requests were politely but firmly declined, I pressed several different members for reasons and eventually gathered just the following: the issue of genetic research was certainly a legitimate one, but it was not on the CMH's agenda—if we were really interested we could perhaps have a booth at their health fair the following year or identify doctors with whom to speak—and most Houstonians associated with CMH were volunteers with already more commitments than they could handle. At a brief meeting with the Acharya (priest-teacher) in charge of the Mission—he promised to give me no more than 10 minutes—I pressed further, suggesting that genetic research would likely progress with or without the participation of Indians; wouldn't greater participation therefore not be more in the interests of Indians themselves? The Acharya smiled genially and reaffirmed CMH's stance: 'People will always ask questions and then say you cannot be insured or something like that,' he said, closing the discussion and rising to give my then three year-old son a toffee.

While concerns about insurability are common to conversations on genetics, in this instance it was difficult to know whether the Acharya was raising that concern or the specter of genetic wrongdoing to dismiss me and the question of CMH participation—or both. Either way, it was clear that CMH had in place its own model of volunteerism and social action, very much focused on 'spirituality as a family activity,' and thus in developing 'programs that interest all members of the family.'[19] There was a different model of representation and civic commitment in place here, and it focused not on ensuring Indian representation in HapMap or claiming a global bio-genetic citizenship, but on the participation of children and adults, women and men, young and old in family-oriented activities and *satsanga*-s (gatherings), classes on Indian texts and precepts, and even youth 'lock-ins' on select weekends. Were larger identifications possible or necessary? In the CMH's refusal, were the

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[18] http://timesofindia.indiatimes.com/articleshow/msid-1261122,prtpage-1.cms.
[19] http://www.chinmayahouston.org/aboutus_new.htm

‘insides’ of ‘family’ and culture being protected against the ‘outsides’ of messy American healthcare politics? The CMH did not offer me any clear answers.

By contrast, other Indians associated with a range of temples and cultural organizations in town welcomed community consultation as a straightforward ‘ask-before-you-take’ approach, and HapMap as a path to *seva* (community service). Their identification with the model of citizenship offered by community consultation was partial—but with overlap enough to enable participation. The collectivity assembled by ELSI-HapMap, of diverse populations whose genetic material could enable further research on genome-wide disease association studies for the ultimate benefit of ‘world health,’ remained largely intact.

II: AN EMERGENT COMMONS

Biomedical Commons

Although the CMH Acharya's concerns focused on individual donors and individualized risk, HapMap as sample bank is premised on generalizability. It goes without saying that blood acquires its potential for such generalizability only when it has left the individual, physical body: when it has moved from inside to outside. But what are these spaces outside the body, and how do they relate to the collectivities precipitated by community consultation and the commons envisioned by donors?

Here, the differences between blood given for therapeutic use and blood given to research become apparent. For when the recipient is not another body but a laboratory, the blood is not handed over to re-distributive supply-chains, but rather to the established procedures for informed consent (with no donor names or other identifiers collected), sample processing checks and cross-checks that lead quickly to −170°C liquid nitrogen tanks at the NIGMS Human Genetic Cell Repository at the Coriell Institute of Medical Research in Camden, NJ. To get there, cells from samples must be numbered and bar-coded for tracking, and converted into immortalized cell lines so that they may then be retrieved and shipped as and when researchers request them. As such, they are stripped of all identifiers save gender and the donor community tag: ‘Gujarati Indians in Houston.’ Outside the context of the physical body, the samples are thus poised at the brink of generalizability, at last available for use—neither vulnerable nor threatening, but containing the possibilities of an unsymbolised (purified, perhaps also anti-political) politics (Copeman, this volume). And, with the possibilities of commercial uses closed off, the GIH cell lines fit the very definition of a public good.

It is here, however, precisely at a moment when biovalue becomes accessible, that fears about the ‘tragedy of the commons’ (Hardin 1968) become significant. Indeed, the vast literature on the commons, both in India and elsewhere, focuses predominantly on the problems of use: managing common resources, regulating and monitoring access, traditional means of managing (or disputing) the use of lands, forests, etc., and various tragedies stemming from the overuse or misuse, whether due to privatization, increased cultivation, encroachment, or simply the absence of effective management (Baden and Noonan 1998; Brara 2006). The aforementioned rivalry between and within charitable and independent commercial blood banks is replaced here by the possibility that competing claims to intellectual property rights will establish such patent thickets as to render the commons ineffectual. So the policies of the Coriell Institute explicitly prohibit commercial exploitation of the samples in their custody. Companies using HapMap samples may develop for-profit products such as drugs and diagnostic tests, but HapMap itself promises not to undertake such commercial ventures. HapMap also has guidelines on patenting: no patenting of data without demonstrating ‘specific utility,’ no restrictive patents to be filed by users of HapMap data.

As a public good, then, the Gujarati Indian samples donated in Houston enter the space of the 'biomedical commons,' a subset of a wider intellectual or information commons (Waldby and Mitchell 2006). This is not the idealized commons invoked by HapMap interlocutors and donor recruiters, but a space of common resources cautiously guarded against commercial encroachment: the legally regulated public domain of access, sharing, and innovation. As 'life itself ... is increasingly being penetrated by market relations and productive of wealth,' write Rose and Novak, 'the morality governing the very nature of economic exchange is being reconfigured' (2005: 457). As a result, ethics becomes 'both a marketable commodity and a service industry in its own right' (2005: 457)—a legal mechanism to regulate IPR. Consider the number of important genetics open sources already in the U.S. public domain: GenBank (data from the Human Genome Project), the GDB Human Genome Database and the Single Nucleotide Polymorphism database (dbSNP), in addition to data from the HGDP and the International HapMap Project. With lesser or greater emphasis, each of these initiatives is openly committed to creating 'a vigorous public domain [that] can supply a meeting place for people, information, and ideas that might not find each other in the course of more organized, licensed encounters. Information in the public domain is accessible to users who otherwise would be priced out of the market.'[20] Such scientific databases created as 'community resources'[21] reflect at least one way in which scientists in industry and elsewhere express their ethical obligations and 'challenge entrenched ideas about how one goes about serving the public good' (Fortun and Fortun 2005: 50).

Insofar as the creation of greater numbers of open sources helps serve the public good, it shares some part of the idealized donor commitment to serving 'humanity' by expanding existing bodies of Knowledge. At the same time, the entry of data into the public domain is a pre-emptive publishing strategy: a wholly pragmatic move to protect interests as much as to build common resources. Such forays into the 'public domain' are indeed strategies engineered to protect private (commercial, corporate, professional, institutional) interests—but not only private interests are protected, as a result. The biomedical commons becomes a site from which to practically negotiate the claims of intellectual property, neither rejecting market exchange nor wholly embracing its dictates. As such, the move to take recourse to the public domain develops a model of corporate philanthropy: '*universalistic* conception[s] of purely disinterested exchange' that emerge precisely as a response to the unyielding demands of the market (Parry 1986:486). The biomedical commons offers, albeit via the public domain, a still passable route to something called 'world health.'

Donor Commons

Indians are, of course, no strangers to patent wars, having themselves witnessed the threat of encroachment onto Indian open sources—now classified as Traditional Medical Knowledge (TMK)—in the patents issued on strains of neem, turmeric, and basmati rice. In a widely publicized, lengthy, and expensive legal battle, the Indian government fought and won its case to revoke a U.S. patent on the therapeutic properties of turmeric, granted to (Indian-American) researchers at the University of Mississippi Medical Center. Then in 2001, the 'Neem Campaign' led by a consortium of NGOs working in India and abroad succeeded in revoking a patent issued by the European Patent and Trademark Office after a four-year struggle. Indian news agencies and activist organizations continue to report on the number of other patents on indigenous plant ingredients that remain still to be tackled (Dasgupta 1999). In combination, such cases have spurred some significant preemptive moves: an Indian government collaboration headed by the Council of Scientific and Industrial Research

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[20] http://www.ornl.gov/sci/techresources/Human_Genome/elsi/patents.shtml

[21] As in this NHGRI site with guidelines for pre-publication data release: http://www.genome.gov/10506537

(CSIR) launched an online database known as the Traditional Knowledge Digital Library (TKDL) precisely to establish Ayurvedic medicine as a ‘prior art’ in the face of patent claims; the Indian Council of Agricultural Research (ICAR) has begun DNA fingerprinting of crop varieties in its gene banks in anticipation of future patent disputes; and NGOs like Navdanya bank seeds to ensure ‘seed sovereignty’ in the face of the ‘many distortions’ of U.S. Patent law that runs counter to a ‘fair and honest global Intellectual Property Rights system’ (*Nature Biotechnology* 1999, Shiva 1997).

Our interlocutors in Houston have been well aware of this fraught backdrop. In conversation, Indians are quick to point out that plants like turmeric and neem have been in common use in India for hundreds of years, their medicinal properties widely known. In more than a few casual interactions, interlocutors mentioned with much interest that research labs have demonstrated the anti-carcinogenic and other curative properties of turmeric. The value of such research, however, is clearly in its confirmation of the scientific rationale of ancient Knowledge, not in its fostering of profit-oriented claims to ownership. And yet, ownership and the impulse to profit represent a pragmatics not easily dismissed. Themselves active supporters and users of India's booming ‘medical tourism’ industry, Indians in the United States recognize the value of building medical infrastructure as a service to the local population, as a matter of nationalist pride in increasing India's global stature as a provider of low-cost, good-quality drugs and healthcare (the kind that the United States seems singularly incapable of ensuring), and for all that as a shrewd and timely business venture. One Gujarati businessman was quite plain about his commitments, speaking of his plans to establish diagnostic imaging facilities in Baroda: ‘I like to do social service,’ he said to me once, ‘giving to the community is important and I have been doing something or other all my life. But I cannot only be doing service all the time; I also need to make money! Medical tourism is booming in India. If you establish diagnostic facilities that are not available, then this is both good business and a service to the local community. *Na*?’ The ultimate value of the gift is that it checks all boxes: it is a donation that seeks no returns, it is service to a local community, it facilitates the accumulation, study, and further dissemination of Knowledge about the human genome, and in that it serves a universal purpose. Individual profits, benefits, and gains are the sometimes goals, sometimes byproducts of this process, which nonetheless creates value for collective benefit.

Somewhat ironically, the value of such gifts is that they represent a model of accumulation —of samples, and then of intangible ‘knowledge’ if not fungible wealth, for collective if not individual gain. But accumulation is a means to a broader, circulatory end. Writing of Brahmanical intellectual traditions, Parry has noted that the rules of *dāna* inhere to knowledge, too: ‘what the Brahman [as scholar and teacher, not as priest] takes in, he must at all costs disgorge again, for if he fails to keep in circulation what he has received he will be required to pay the direst penalties in this and future lives’ (1985:210). Without the threat of dire penalties, our interlocutors certainly shared the expectation that information should circulate, like blood, completing the circle of exchange. ‘Especially if the samples are to be used in irresponsible ways,’ one physician remarked, ‘then the researchers should let us know.’ Her comment echoed many others that placed the onus on us as researchers and first order recipients of the collected samples, to bear at least some responsibility for the fate of the samples entrusted to our care and certainly all responsibility for communicating any relevant developments to donor groups. A young Sikh journalist thus observed quite keenly that while the individual decision to donate samples would appear relatively straightforward, our responsibilities as researchers were necessarily more involved. ‘I'm glad I don't have your job,’ he added, smiling.

To some extent, the long-terms plans for HapMap have anticipated this responsibility— conceptualized not as danger of receipt but merely as necessity for follow-up—such that there are already mechanisms for redistribution in place. The Community Advisory Group (CAG) we assembled as a body to consult on the issues of informed consent and sample collection, having outlived the sample-collection phase of the project itself, now remains a group to whom Coriell reports are sent quarterly. The Coriell institute also makes funds available to the CAG precisely to enable their monitoring of sample-usage, to the extent that this is a CAG priority. Built into our project, in other words, is a commitment to redistribution of a kind—of information, updates, opportunities for questions, and further discussion. The NIH's 2005 Public Access Policy then further facilitates such redistribution, by requiring authors to make peer-reviewed publications resulting from NIH-funded projects freely available on the National Library of Medicine's PubMed Central (PMC) catalog. If not a fully developed theory of benefit-sharing, these are gestures toward the establishment of ethical (and political) legitimacy (Hayden 2007).

Such provisions and facilities to institute a knowledge/information commons speak ironically, however, to the difficulties of redistribution and the problems of maintaining open access just as much as they attempt to address these. Although activists like Vandana Shiva speak in idealized terms of the existence of ‘traditional intellectual commons,’ where *gyān* or *vidya* (knowledge) was freely given and taken for collective benefit, the literature on giving in India suggests that such exchanges were rarely unmediated by social hierarchies, obligations, and practical necessities (Copeman 2009, Watt 2005). Indeed, in our research experience, too, the tasks of assembling the CAG once or twice a year, making scientific publications intelligible to lay audiences, even maintaining the relevance of HapMap to Indians in Houston, and generally finding meaningful ways by which to return the gift, have proven tricky, at best, sometimes for the most mundane organizational and networking reasons. Nonetheless, the commons that Shiva tries to reproduce in her work with the NGO and seed bank Navdanya[22] represents an ideal for our interlocutors in Houston, too: in their expectation that ‘Knowledge *should* circulate,’ they nurture a commitment to a commons in which Knowledge *could* circulate. For, in the context of genetic research, the poison in the gift is precisely the foreclosure of its potential to create freely circulating value.

Indian National Commons

Neither HapMap nor our interactions with Indians in Houston may, for all this, have the final word on the place of human genetic material in the emergent Indian commons, as the contest over civic spaces—the need for them, their ideal character, the reasons for their absence—spills over invariably into international scientific discussions about approaches to genomic research. In light of these debates, a few words in closing about the Indian Genome Variation Database or IGVdb. In early 2005, just a few months ahead of the announced completion of the International HapMap Project, the Indian Genome Variation Consortium (IGV) announced the creation of the IGVdb in *Human Genetics* (2005). The IGV claimed (correctly at the time, but not since) that ‘these databases do not include Indian samples,’ and put forward its own rationale for providing ‘data on validated SNPs’ in ‘over a thousand’ candidate genes: a gene-by-gene approach to studying human genetics in sharp contrast to HapMap's strategic survey of the entire human genome (2005: 8, 1). The IGV explicitly declines to identify, in any form, the populations from which their 15,000 samples were obtained to ‘avoid any social backlash that could destabilise the very fabric of Indian society, i.e. unity in diversity’ since the labeling of groups ‘will have implications for all members of the population [who may then] be affected by the interpretation and use of findings of future studies’ (Indian Genome Variation Consortium 2005: 6). In this, the IGV points simultaneously to the common criticisms of sample collection and the controversies that have rocked genetic research in other parts of the world, and possibly also to occasional

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[22] http://www.navdanya.org/about/index.htm

Hindutva references to genetic testing as a means of establishing scientifically that India's Muslim minorities were originally Hindu converts. The gesture elects to preserve at all costs India's ‘social fabric’ defined by a clichéd Nehruvian ‘unity in diversity.’

The sovereignty of the nation-state as a delimited space and participant-claimant within the wider commons of scientific endeavor seems at stake here. Two years earlier, in 2003, IGV participants had declined to contribute samples to HapMap on the grounds that the appropriate genotyping facilities ‘to be a proper partner in this project’ were lacking at the time, and cryptically also because Indian geneticists ‘did not want only to supply samples’ (Jayaraman 2005: 493). Presumably, Indian donations made to HapMap would fall within the purview of international trade agreements, effectively barring Indian scientists from any future claims to intellectual property or profit derived from Indian samples (Knoppers et. al. 1997). Both as a response to HapMap and as an independent conceptualisation of research on the human genome, then, the IGV's work appears inclined to keep Indian ownership of Indian blood in Indian hands for Indian good—however defined—and to set the terms for research design and sample collection strategy and only then to open the IGVdb portal to ‘all academic users around the world’ (2005: 8). But the world here is not, or not *only* one family, to recall the Sanskrit saying *vasudaiva kutumbakam* [the world is one family] from the rhetorics of blood donation. The context in which Indian samples first belong is not automatically the commons of all ‘humanity,’ but the somewhat lesser commons of the nation-state. The IGV Consortium does not acknowledge the ‘Gujarati in Houston’ sample set, claiming consistently that HapMap had no Indian representation (2008: 13). It thus writes out diasporic contributors to HapMap from the Indian narrative-under-construction to establish a national infrastructure, make India's ‘drug-naïve patient pool’ available to MNCs conducting clinical trials, and establish India's ‘genetic sovereignty’ (Egorova 2010; Hardy et.al., 2009). Within the nation-state, too, samples are protected by the caveats that ‘the discoveries arising out of the IGV project will be IPR protected and will be licensed for commercial exploitation’ (2005: 8). Respecting the terms under which the IGVdb is released for public use makes for ‘civic sense’ in this commons of rights and protections, claimants and stakeholders, housed in the nation-state, overseen by the market.

Outside the donor's body, then, between donor and humanity, is the marketplace in which questions of ownership are hotly contested, the nation-state that marks a space of a collective commons as much as it is a stakeholder, and the ultimate beneficiaries of research on the genome both known and completely unknowable. Such ‘outsides’ are hardly context-free, but (as Ramanujan claims for modernity) are part of an environment in which contests are too many and shift too quickly, making them difficult to contain. Into their midst is blood let out, only to be quickly recontextualized into an array of databases representing complementary or contradictory approaches to the study of the human genome. So the IGVdb now sits alongside HapMap, dbSNP, JSNP (a database of Japanese SNPs), and numerous others in the rapidly expanding world of open access scientific databases, each one making the biomedical commons that much more robust, while staking its claim to some vision of the human genome and how best researchers should go about studying it.

Acknowledgments

My thanks first to the ELSI/HapMap group: Rich Sharp, Janis Hutchison, Jennifer Hamilton, Corrie Manigold, and Deanna Guidry, conversations with whom were instrumental in formulating arguments presented here. Special gratitude to Jacob Copeman—without whose keen engagement, friendship, and support this project may never have come to fruition—and to the anonymous reviewers for their invaluable readings.

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