Globalization and Biomedical Technologies: Circulation, Appropriation and Diversion

This seminar series broaches two striking aspects of biomedical technologies: their ubiquity and their profound ambivalence. The intensification of transnational exchanges since WW2 contributed to the diffusion of these technologies on a worldwide scale. They became a medium for a vast array of practices found in medical institutions globally. We aim to explore the processes of this diffusion while emphasizing the role of globalization in biomedical technologies, both as a transformative agent and as a vehicle. We focus on the adjustment of practices and knowledge in relation to these technologies, and especially on their appropriation or even hijacking under particular social and cultural conditions. We will address the unfortunate links between obstetrical sonography and sex-ratio imbalance; the fetishization of medical imaging; the deliberate failure to respect protocols in medically assisted procreation; the use of biomedical technology for political ends; the hazardous proximity of genetics and biological / social discrimination; the blurred boundary between healthcare and clinical trials set up in resource poor settings; and the moral dimension of clinical research when applied to alternative healing practices. This seminar series deals with biomedical technologies and their related knowledge and uses. It is intended to provide fertile grounds for the historical and anthropological study of norms, transgressions and moral orders, as well as some of the more unexpected impacts of therapeutic globalization.

This seminar series is supported by the **IFRIS** (Institut Francilien Recherche Innovation Société, Paris, http://www.ifris.org) et the **Cermes3** (Research Center on Science, Medicine, Health and Society, CNRS/EHESS/Inserm/Université Paris Descartes, http://www.cermes3.fr).

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PROGRAMME

The series will be held the second Tuesday of each month, from Novembrer 2012 to May 2013, from 2 to 5 pm (CEAf, salle de réunion, 2e étage, 96 bd Raspail 75006 Paris)*
** Unless indicated otherwise*

Session 1 : Introduction + Medical Diagnosis
*7 Nov. 2012

General Introduction
Laurent Pordié, CNRS - Cermes3 ; Claire Beaudevin, Cermes3 / Ifris

Us et abus d'une technologie obstétricale: considérations sur le travail dirigé (active management of labour) dans les maternités en Jordanie
Irène Maffi, Université de Lausanne

Haptic iterability and credibility: extra-diagnostic x-rays, body parts and distributed agency - with a 'bonesetting' clinic in Hyderabad city
Guy Attewell, French Institute of Pondicherry

Session 2 : Medically Assisted Reproduction
11 Dec. 2012

Banque de sperme en ligne ou la tentation de l'eugénisme
Corinne Fortier, CNRS, LAS (CNRS-EHESS-Collège de France)

Bemixt and Between: The Circulation of Gametes in Indian IVF Clinics
Sandra Bärnreuther, Cluster of Excellence, University of Heidelberg

Sessions 3 & 4 : Genetics
*8 Jan. 2013 (Salle de Réunion, Cermes3, 7 rue guy Môquet, Villejuif – 9h30-16h30)

Ancestry and the Molecular Optic. Making Cancer Genetics as Public Health in Southern Brazil
Sahra Gibbon, University College London

Making Time: On Race, Relations and Circulations in Genetic Practices
Amade M'charek, University of Amsterdam

Des GWAs au DTC. De la recherche de facteurs de risque génétiques au commerce des mesures personnalisées de risque génétique
Catherine Bourgain, Inserm, Paris

Wayward Relations: Subversive Search Endeavours of the Donor-Conceived and their Families for Genetic Kinship
Maren Koltz, Humboldt University, Berlin

Session 5 : Clinical Research

12 Feb. 2013

Technologies in Transit: Truth Seeking by way of Tibet
Vincanne Adams, University of California San Francisco

The social uses of medical research in a Franco-African ruled research area. From scientific rules to strategic care
Ashley Ouvrier, Institut de Recherche pour le Développement (IRD) / University Paris Diderot-Paris 7

Session 6 : Neurosciences

12 March 2012

Mapping identities: what do you find when you locate self, culture and agency in the brain?
Andreas Roepstorff, Aarhus University

Soigner, explorer, améliorer : Expérimentation et régulation des technologies médicales en neurosciences
Baptiste Moutaud, Cermes3

Session 7 : Organ Transplant

9 April 2013

Islam et greffe d'organe. Peut-on parler de compatibilité culturelle ?
Anne Marie Moulin, CNRS

Kidney transplant in contemporary Egypt: risk perceptions among patients and clinicians
Sherine Hamdy, Brown University

Session 8 : Stem Cells

14 May 2013

Cultivar: Political anatomy of stem cell therapeutics in India
Aditya Bharadwaj, University of Edinburgh

Experimental stem cell therapy: between guided missiles and hit-or-miss
Margaret Sleeboom-Faulkner, Sussex University

ABSTRACTS

Technologies in Transit: Truth Seeking by way of Tibet

Vincanne Adams, University of California San Francisco

Technologies have a way of being treated as passage points for the production of objective medical truth. How technologies come to hold this status, and whether or not they do, is a matter of debate in several fields, including anthropology, history and social studies of science and technology. The encounters between Western biomedical technologies and Tibetan medical and religious practices offer compelling evidence that this process of truth making is neither straightforward nor predictable. In fact, these encounters suggest a type of ontological misrecognition is required for them to work this way. Using the cases of ultrasound technologies in Lhasa's Tibetan Medical Hospital (Mentsikhang) and fMRI (and other) technologies in American laboratories for Contemplative Sciences Research, this paper explores the uneven and unpredictable pathways that allow technologies to both affirm claims to scientific objectivity while simultaneously posing alternatives to Western versions of truth. It is in the slippery moment of misrecognition that the technologies do their best globalizing work for us

Haptic iterability and credibility: extra-diagnostic x-rays, body parts and distributed agency - with a 'bonesetting' clinic in Hyderabad city

Guy Attewell, French Institute of Pondicherry

This paper engages with the diversions of technologies designed for diagnostic scanning among practitioners who perform fracture-reduction and related manual interventions around bodily pain outside the mainstream orthopedic sector in Hyderabad. Focusing on one well-known clinic in the old city, the study attends to a technology-practice ensemble, in which the x-ray and other media have been mobilized for the primarily haptic skills at the heart of the technics of bonesetting in order to show how evidence is produced that 'proves' the effectiveness of their treatment, and can capture establishment medicine. The paper develops the concept of iterability in the performative dimensions of these practices. It shows how the enactments of fracture-reduction as viable and credible practice have been enabled, in part, through a distributive agency, afforded by scanning technologies, that works within conventions of recording, repetition and particular ways of knowing and communicating the body. The x-ray and its products are not, in this disposition, so much 'silent witnesses' as resonant partners in choreographies of capture.

Bemixt and Between: The Circulation of Gametes in Indian Fertility Clinics

Sandra Bärnreuther, Cluster of Excellence, University of Heidelberg

The exchange of substance and its effects on giver and receiver has been a prominent theme in anthropological writings on South Asia. In In-Vitro Fertilization clinics where biological substances move freely in the laboratory, their potential mixing and circulation outside of kinship networks often constitutes a grave concern for patients undergoing IVF procedures. Moreover, in the case of IVF gametes and embryos themselves embody the potential for personhood – a fact that renders the possible transgression of caste, class and religious boundaries even more problematic.

In this presentation I will follow prevalent rumors and anecdotes regarding the illicit transmission of gametes and embryos, thereby shedding light on the entanglement of biology and morality: What kinds of circulation are considered to be improper and what is at stake when gametes and embryos travel to realms out of place? How do stories of mixing influence therapeutic trajectories? And how do clinicians and embryologists counter allegations through narratives of purity and codes of conduct?

In a second step, I will illustrate the circulation of substances in the laboratory as a transitional space by the example of third party donation. This demands an interrogation of how biological material is transformed from particular form to general matter and vice versa thereby creating new forms of relatedness. In this sense, I will depict the liminal status of laboratory substances as similar to the condition of ambiguity and paradox that Victor Turner designated as "betwixt and between".

Cultivar: Political anatomy of stem cell therapeutics in India

Aditya Bharadwaj, University of Edinburgh

The paper explores the political anatomy of stem cell therapeutics in India. In so doing it (re)locates cellular techno-science as both gestating in local culture and hibernating in global processes. The paper traces the co-production of gestational and hibernating potential of cell based therapeutics to suggest an emerging cultivar with a fraught provenance and contested identity. It is argued that the notion of cultivar tropically instantiates the global landscape of biotechnologies increasingly caught between practical contingencies and expedient certainties.

Des GWAs au DTC. De la recherche de facteurs de risque génétiques au commerce des mesures personnalisées de risque génétique

Catherine Bourgain, Inserm,Paris

Des années 70 aux années 2000, l'approche génétique est devenue une stratégie de plus en plus prisée pour étudier des maladies ne répondant pourtant pas aux critères classiques de définition des maladies génétiques (maladies cardiovasculaires, auto-immunes, neurologiques…). De façon générique, ces techniques consistent à analyser l'ADN de nombreux individus dont certains sont atteints et d'autres non, en ciblant les régions d'ADN susceptibles de varier d'une personne à l'autre. Des corrélations statistiques sont ensuite calculées entre ces variations de l'ADN et le statut clinique des personnes, afin d'identifier des variants plus souvent retrouvés chez les malades. Ces variant ont en effet toutes les chances d'être localisés au sein de gènes jouant un rôle dans la physiopathologie de la maladie. L'objectif de ces études étant d'obtenir des indices sur les mécanismes biologiques sous-tendant ces maladies, la technologie utilisée n'était donc pas sensée sortir des laboratoires académiques.

Pourtant, à partir du début des années 2000, une nouvelle industrie émerge qui commercialise sur Internet des tests de susceptibilité aux maladies multifactorielles, vendus directement au consommateur. La technologie utilisée mobilise les mêmes outils que ceux des études académiques précédemment évoquées. Les variations sur l'ADN d'un consommateur donné sont mesurées et utilisées pour calculer le risque qu'il développe une maladie en utilisant les corrélations variants/maladies obtenues dans les travaux académiques précités. La logique est bien inversée.

Longtemps, les chercheurs académiques du domaine ont considéré que ces calculs individuels de risque constituaient un détournement d'usage sans utilité clinique et donc sans intérêt. Mais l'arrivée des biotechs du risque a changé la donne. Grâce notamment aux liens étroits entre recherche académique et firmes privées qui caractérisent ce domaine et surfant sur la montée en puissance du concept de médecine personnalisée, ces mesures individuelles de risque génétique acquièrent une forme de légitimité et semblent être en passe de s'installer dans le paysage biomédical.

Banque de sperme en ligne ou la tentation de l'eugénisme

Corinne Fortier, CNRS, LAS (CNRS-EHESS-Collège de France)

La tendance à donner naissance à un enfant « idéal » physiquement selon des canons de beauté qui privilégient en Europe la blancheur de la peau, le bleu des yeux, et la blondeur des cheveux, est rendue possible depuis qu'une banque de sperme en ligne permet de se procurer par internet le sperme d'hommes danois, s'inspirant du modèle davantage américain qu'européen qui permet de sélectionner son donneur « à la carte ».

Cette banque de sperme en ligne est accessible en Europe mais aussi dans le monde. Cette situation inédite, la possibilité, par le medium d'internet, de se procurer du sperme d'un homme danois pour féconder une femme de n'importe quel pays, a suscité bien des peurs. Certains journaux européens, en particulier français et anglais, y ont vu le retour de « l'invasion viking » en Europe, et plus largement dans le monde, invasion qui passe cette fois par le fait de répandre ses gènes. Au-delà du fantasme journalistique, on peut s'interroger sur les dérives eugéniques que rendent possible ce site en choisissant de faire naître des enfants plutôt de type aryen.

Progressivement, cette banque en ligne qui diversifie sa clientèle de donneurs pour répondre aux demandes mondiales a développé une typologie « raciale » et « ethnique » de donneurs sur laquelle nous reviendrons.

Ancestry and the Molecular Optic. Making Cancer Genetics as Public Health in Southern Brazil

Sahra Gibbon, University College London

The last ten years has seen an explosion of scientific interest in population genetics linked to both understanding histories of human migration and the way that population difference and diversity may account for and be implicated in health differentials. Ancestry has taken centre stage here as a site where knowing the past or understanding and intervening in future health risk is being actively pursued across the global transnational research space of genomics , also linked to the rapidly expanding business of commercial ancestry testing. In the US concerns to address health disparities have also begun to intersect with an emphasis on identifying the 'ethnic minority spectrum' of gene variants and understanding how ancestry maybe implicated in differential cancer risk, incidence or prognosis. Social science has highlighted the potential here to moleculralize 'older' cultural categories of difference and/or reproduce or misrecognize the bio-social basis of health inequities. This paper drawing on ethnographic research in cancer genetic centres in the South of Brazil working with patients, families and health practitioners examines the ambiguities that attention to ancestry generates in this context and the disjunctered ways this is put to work in developing appropriate breast cancer risk interventions and the efforts to constitute cancer genetics as public health

Kidney transplant in contemporary Egypt: risk perceptions among patients and clinicians

Sherine Hamdy, Brown University

This article re-conceptualizes poor patients in Egypt, whose reluctance to pursue high-tech end-stage medical interventions are too often cast as "ignorant," "fatalistic," or merely in terms of lack of access to cost. I draw on experiences of poor patients in Egypt who are aware of the ways that socio-political inequalities can predispose them to particular forms of disease, in which case particular biomedical interventions would be too risky. In so doing, I critically dissect how "culture" as explanatory mechanism in biomedicine often (mistakenly) elides the ways in which social forces can shape both biomedical knowledge and biological processes themselves. In this way, what is perceived as poor patients' "ignorance" is actually an alternative form of biomedical knowledge that calls into question biomedicine's presumed universalism, and that have been validated by recent clinical studies.

Wayward relations: Subversive search endevaours of the donor-conceived and their families for genetic kinship

Maren Koltz, Humboldt University, Berlin

My talk will focus on subversive search activities and novel ways of establishing kinship among persons conceived via clinically administered gamete (i.e. sperm or egg) donation and among parents who have used such reproductive technologies. Usually such practices aim to put in touch so-called donor-siblings – children of the same donor – or also the parents of these children. More seldomly they focus on finding the officially anonymous donor. The search activities make use of internet platforms and DNA testing services, ranging from cites operated by those personally affected to the subversive utilisation of Internet-based genetic genealogy services. I shall present the most relevant infrastructures for such searches and discuss several cases of "wayward relations" based on my own ethnographic research with persons concerned, the monitoring of internet activities, and further media searches. I will argue outside of a classic "geneticisation framework", although the activities discussed clearly reaffirm notions of kinship as genetically grounded. I shall underline that the newly established relationships should be viewed as complementary (not colonising as implied through the geneticisation framework) in the face of other, often failed relationships. The subversive searches are also a means to assert agency over the past for persons concerned. Ultimately, I shall argue, the subversive searches display a socio-material uncontainability of genetic kinship information at odds with anonymous donation regimes and challenging national regulation.

Us et abus d'une technologie obstétricale: considérations sur le travail dirigé (active management of labour) dans les maternités en Jordanie

Irène Maffi, Université de Lausanne

Le travail dirigé est une technologie obstétricale développée en Irlande au début des années 1970 afin d'accélérer les accouchements considérés comme trop longs. Cette technologie a connu un succès extraordinaire et s'est vite diffusée dans les hôpitaux européens et nord-américains. Par la suite elle a été adoptée dans le reste du monde où son usage a été sujet aux contraintes des divers systèmes de soins et aux exigences sociales dictées par des représentations de la naissance spécifiques.

Dans cette intervention, je me propose d'abord d'analyser les caractéristiques fondamentales du travail dirigé au moment de sa conception par K. O'Driscoll et son équipe pour ensuite examiner ses mutations locales dans le contexte des maternités jordaniennes. J'entends ainsi montrer que la circulation transnationale de cette technologie finit par modifier de manière importante sa conception et ses objectifs à cause du remodelage qu'elle subit dans le contact avec les divers systèmes de naissance (*birthing systems*). En Jordanie, le travail dirigé est utilisé de différentes manières selon le type d'établissement afin de satisfaire les exigences des professionnels, de garantir le bon fonctionnement de l'hôpital et/ou de répondre aux demandes des parturientes et de leurs familles. En conclusion, je mettrai en relation les différentes pratiques du travail dirigé observées dans les maternités jordaniennes avec le modèle originel de cette technologie.

Making Time: On Race, Relations and Circulations in Genetic Practices

Amade M'charek, Dept. of Sociology & Antropology, University of Amsterdam

Time is central in studies of diversity. The so-called molecular clock is a crucial device to estimate evolutionary changes in a species or in the DNA. This clock has to be 'calibrated' in order to interpret the mutation rate and to relate 'mutation events' to a historic time. In this sense the molecular clock is a crucial means for understanding genetic diversity.

In this paper I want to explore time as a technology of making similarities and differences. However, contrary to the evolutionary approach sketched here, which relies on a model in which time flows in a linear mode,[1] I will take my inspirations from Michel Serres's notion of topological time, a folded and crumpled time. In Serres' universe time does not flow, but percolates. It does so in a rather turbulent, chaotic and anachronistic way. Serres gives us a stunning example of anachronism by recounting a story of two brothers, in their seventies, who were burying their father aged some thirty years. When these two brothers were still young boys, their father had an accident in the high mountains and went missing. Over the decades to come his body and youth were conserved in the coldness of the glacier valley.[2]
This example is somewhat exceptional, but the mechanism and the folding of time is much more common as I will argue. I will take some examples from medical genetics, genetic genealogy and archaeogenetics to examine how time is deviced to make relations including racial ones.

Islam et greffe d'organe. Peut-on parler de compatibilité culturelle ?

Anne-Marie Moulin, CNRS

La transplantation est un domaine clé de la modernité biomédicale. La diffusion de la chirurgie des greffes et la recherche de "compatibilité biologique" entre donneur et receveur s'est accompagnée d'une interrogation sur la « compatibilité culturelle » selon les sociétés. L'intervention proposée comparera les expériences de la transplantation dans différents pays musulmans, explorant ainsi les confrontations de l'imaginaire et des réalités dans un monde globalisé.

Soigner, explorer, améliorer : Expérimentation et régulation des technologies médicales en neurosciences

Baptiste Moutaud, Cermes3

La stimulation cérébrale profonde (SCP) est une technologie neurochirurgicale utilisée comme traitement symptomatique pour tout un panel de troubles neurologiques et psychiatriques. Elle consiste en l'implantation dans le cerveau de micro-électrodes de stimulation devant permettre la modulation de l'activité des zones visées. Développée dans des cadres expérimentaux ou non, la SCP est devenue l'un des grands espoirs thérapeutiques des neurosciences. Ces dix dernières années, le volume de publications concernant son application s'est accru de manière exponentielle.
En retraçant l'histoire de son application dans un centre de neurosciences français, nous souhaitons ici éclairer les différentes logiques de pratiques et usages qui soutiennent, structurent ou freinent le développement et la circulation de cette technologie biomédicale. Ainsi, nous montrerons comment, au-delà de ses effets thérapeutiques, la SCP est le premier outil d'exploration fonctionnel du cerveau humain *in vivo*. En permettant de (re)produire temporairement des modèles humains expérimentaux de symptômes ou syndromes neurologiques, émotionnels ou cognitifs, de nombreux neuroscientifiques, chercheurs et cliniciens, trouvent leur intérêt dans son développement. Parallèlement, certains patients implantés sembleraient souhaiter, au cours de leur suivi clinique, détourner l'usage de la SCP pour en faire une technologie d'amélioration de soi, de ses capacités, ou d'états subjectifs aux formes variées.
Si l'usage expérimental de la SCP constitue l'un des premiers facteurs de son rapide essor, la question de son appropriation par les patients vient parasiter leur prise en charge et perturber sa diffusion en tant que technologie de soin.

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[1] On the naturalization of linear time, see e.g Geoffrey Bowker (2006) *Memory Practices in the Sciences* Cambridge: MIT Press; Zara Mirmalek (2009) "Working Time on Mars" *KronoScope*, Vol. 8, No. 2., pp. 159-178

[2] In Michel Serres & Bruno Latour (1995) *Conversations on Science, Culture and Time* Ann Arbor: University of Michigan Press.

The social uses of medical research in a Franco-African ruled research area. From scientific rules to strategic care

Ashley Ouvrier, IRD / Université Paris Diderot-Paris 7

Created in 1962 by researchers from the French Institute for Development (former ORSTOM) in order to build a national demographic surveillance system, the franco-african ruled "research area" of Niakhar very soon host medical research (vaccine trial, therapeutic trials as well as epidemiological studies). As a result, people living in the area have been experiencing a long term interaction with experimental projects that are connected to a wider global and transnational history. Within this context, current research practices may be analyzed as " a local micro-culture of research" which is partly based on a set of appropriation (by inhabitants, local staff members as well as researchers) of international scientific and institutional rules. Ethnographic narratives related to the long lasting social uses of logistic vehicles for local emergencies and to the popularity of clinical trial's ability to build health care facility will help us understand how experimental logics can be diverted into developpmental ones. The communication will take into acount the globalization of clinical trials through the notion of "strategic care".

Mapping identities: what do you find when you locate self, culture and agency in the brain?

Andreas Roepstorff, Aarhus University

During the last decade, the number of brain imaging studies has exploded. Increasingly, studies are moving away from exploring low-level processes to engage in key discussions on the nature of culture, agency, and other stuff, which is key to telling us who 'we' are. One instance of this is the nascent field of cultural neuroscience, which on one hand appears to challenge key assumptions on the cognitive unity of mankind, on the other hand may appear to reify very simple identity markers, literally by finding these in the brain.

I will outline some of this global flow of brain scanners, experimental paradigms, and personal and cultural identities to approach the question: what do you find when you locate self, culture and agency in the brain?

Experimental stem cell therapy: between guided missiles and hit-or-miss

Margaret Sleeboom-Faulkner, Department of Anthropology, Sussex University

High acclaim of and generous funding for research on regenerative medicine have led to high expectations about the effective clinical application of stem cells of various kinds worldwide. In wealthy 'first' world countries, innovative applications of stem cells are meant for serious and currently incurable conditions. Their application involves elaborate preparation and requires the availability of highly sophisticated and expensive equipment, the use of state-of-the art knowledge, commitment to high levels of strict and complicated ethical review, and the creation of labour- and knowledge-intensive SOPs, which specify how exactly the stem cells are acquired, treated, manipulated, administered, traced and affect the precisely diagnosed and detailed condition of the patient. Such applications are rare.

In a large part of the world, with lower levels of wealth and healthcare access, and with considerably worse funding conditions for life scientists, we find life scientists applying stem cells to a wide range of conditions under less than ideal circumstances. The question is, should we just speak of the *hijack* of stem cell research as a hit-or-miss method for a wide range of conditions for lucrative purposes or is there something going on that has not yet met our eye?

PARTICIPANTS

Chairs

Laurent Pordié is an anthropologist and a pharmacologist, Senior Researcher with the French National Center for Scientific Research (CNRS) at the Cermes3, a unit focused on medicine, science, health and society, and a member of the Center for South Asian Studies (EHESS), both in Paris. Laurent also maintains an affiliation the Cluster of Excellence in Heidelberg, where he has been leading research on transnational health and medical travels. His current research examines the advent of science and technology in herbal pharmaceutical production. His works generally concern the social study of science and medicine in South Asia, including the recent books *Tibetan Medicine in the Contemporary World* (Routledge, 2008 – winner of the ICAS Book Prize 2009), *Healing at the Periphery* (in press with Duke University Press) and *Les nouveaux guérisseurs* (with E. Simon, in press with Editions de l'EHESS).

Claire Beaudevin is an anthropologist, post-doctoral fellow at the Cermes3, a CNRS unit located in Paris and focused on the study of health, medicine, science and society. Her current research is dedicated to anthropology of clinical genetics and genomics: in the Gulf (Sultanate of Oman) where she studies the social stakes of the development of genetics within public health, and online, through an ethnography of the uses of direct-to-consumer genetic testing (UK, USA, France).

Speakers

Vincanne Adams is Professor of Medical Anthropology in the UCSF Department of Anthropology, History and Social Medicine and the UCSF/UC Berkeley Graduate Program in Medical Anthropology. She is the author of *Tigers of the Snow and Other Virtual Sherpas* (Princeton), *Doctors for Democracy* (Cambridge), co-editor of *Sex and Development* (Duke), and *Medicine Between Science and Religion* (Berghahn). Her most recent book is *Markets of Sorrow, Labors of Faith* (Duke) and she is currently working on the globalization of Tibetan medical sciences in the context of postcolonial occupations.

Guy Attewell is currently a researcher in the Social Sciences Department of the Institut Français de Pondichéry, before which he was a lecturer at University College London. He is trained as a historian, specializing in the history of medicine and health in South Asia. He currently leads a multi-sited programme on asymmetries in medicine and health, entitled: "Margins/thresholds: practices, resources, governance in modern and early modern India", which is funded by the Wellcome Trust. He is currently working on historical ethnographies of practices dealing with injury and pain, including bone-setting. Other projects include studies on skin; transregional substance trajectories; Tamil-Muslim healing practices; urban health. His first book was a study of the formations of yunani medicine at the turn of the twentieth century, *Refiguring unani tibb: plural healing in late colonial India* (Hyderabad: Orient Blackswan: 2007).

Sandra Bärnreuther is a PhD candidate in social anthropology at the Cluster of Excellence 'Asia & Europe' and the South Asia Institute, University of Heidelberg, who held a Fulbright scholarship at the Department of Anthropology, New York University. Her research interests revolve around medical anthropology and science and technology studies. Her fieldwork-based M.A. thesis on reproductive health in rural Ladakh, India was awarded the

Advancement Award of the South Asia Institute and resulted in the publication of a monograph entitled *Where Lhas cannot see it: Childbirth in Ladakh between local practices, biomedicine and biopolitics* (2011). Sandra's current research explores conflations of biology and morality in In-Vitro Fertilization clinics in Delhi.

Aditya Bharadwaj is senior lecturer in the School of Social and Political Studies, University of Edinburgh. His principal research interest is in the area of Assisted Reproductive, Genetic and Stem Cell Biotechnologies and their rapid spread in diverse global locales ranging from South Asia to the United Kingdom. Aditya has authored and co-authored several peer-reviewed journal articles and book chapters. He co-authored *Risky Relations: Family, Kinship and the New Genetics* (Berg, 2006) and is the lead author of the research monograph *Local Cells, Global Science: The Proliferation of Stem Cell Technologies in India* (Routledge, 2009). His forthcoming research monograph is titled *Conceptions: Infertility and Technologies of Procreation in India* (Berghahn, 2013).

Catherine Bourgain est spécialisée dans les approches statistiques de la génétique humaine. Elle a soutenu a soutenu en 2001 une thèse portant sur les études génétiques de maladies dans les populations humaines isolées. Associée de recherche à l'Université de Chicago, elle a poursuivi ce travail en collaborant aux études menées chez les Huttérites. Recrutée à l'Inserm, elle entreprend des collaborations avec des équipes qui étudient la composante génétique de diverses maladies (hémochromatose, maladies auto-immunes articulaires, maladies cardiovasculaires…), tout en poursuivant des travaux plus théoriques en statistiques. En 2009, elle obtient un master d'administration publique à l'IEP de Lille. Elle s'intéresse depuis aux enjeux sociétaux entourant la génétique humaine, et en particulier aux tests génétiques pour les maladies fréquentes. Catherine est chargée de cours à l'Université Paris Sud, et membre du Cermes3 depuis septembre 2012.

Corinne Fortier est chargée de Recherche au CNRS et membre du Laboratoire d'Anthropologie Sociale du Collège de France. Elle a reçu en 2005 la médaille de bronze du CNRS. Ses recherches portent sur les thématiques du corps, de la sexualité, du genre et de la filiation, au travers, entre autres, du prisme des procréations médicalement assistées. Parmi ses nombreuses publications sur ces thématiques, on note les travaux récents « De troublantes ressemblances : un sentiment de parenté » (*Corps, corps des affects, corps en migrations*, 2012). « "Des gamètes de couleur" : phéno-type, race ou ethnie ? », (*L'Autre*, 2011) et « Tentation eugénique et ethnicisation biologique de la différence physique : le cas du don de gamètes » (*Ethique et famille*, E. Rude-Antoine et M. Pievic, eds., 2011).

Sahra Gibbon is a lecturer in the Anthropology Department at University College London. She has carried out research in the UK, Cuba and more recently Brazil. She has written a number of single and joint-authored monographs and articles examining the social and cultural context of developments in genetic knowledge and technology. This includes *Breast Cancer Genes and the Gendering of Knowledge* (Palgrave Macmillan 2007) and a coedited collection with Carlos Novas entitled *Biosociality,Genetics and the Social Sciences; making biologies and identities* (Routledge 2008). Her more recent work examines the transnational context for cancer genomic research and medicine, particularly the way that questions of genetic ancestry have begun to inform aspects of this field of inquiry and clinical practice in contexts such a Brazil.

Sherine Hamdy is an anthropologist (Ph.D. New York University 2006) with interests in cross-cultural approaches to medicine, health, and the body. Her first large research project was based on two years of fieldwork in Egypt, and centered on ethical debates around organ transplantation. This culminated in her book *Our Bodies Belong to God: Organ Transplants,* *Islam, and the Struggle for Human Dignity in Egypt* (UC Press, 2012). Sherine has been a professor of anthropology at Brown since 2008, and was a Mellon postdoctoral fellow at Brown's Cogut Center for the Humanities from 2006-2008. She serves on the faculty committee of Science, Technology, and Society and the faculty committee on Middle East Studies. In 2009 she was named the Kutayba Alghanim Assistant Professor of the Social Sciences. Her article "When the State and Your Kidneys Fail: Political Etiologies in an Egyptian Dialysis Ward" (*American Ethnologist* 2008) won the 2009 Rudolph Virchow Award from the Society of Medical Anthropology. She was a Member of the School of Social Sciences at the Institute for Advanced Study in Princeton from 2011-2012. She is currently a Greenwall Foundation Scholar in Bioethics as she continues to research and teach medical anthropology at Brown. Her new research critically engages anthropological approaches to cousin marriage and kinship in the Middle East from the perspective of clinical genetics' impacts on such marriages.

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