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Animal research unbound: The messiness of the moral and the ethnographer's dilemma

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Abstract Interspecies intimacy defines an inescapable reality of lab animal research. This essay is an effort to disentangle this reality's consequences—both in and outside the lab—as framed by the quandaries of ethnographic engagement. Encounters with lab staff and, in turn, with audiences unfamiliar with laboratory life, together provide crucial entry points for considering how the "messiness of the moral" might facilitate an "unbounded" approach to lab animal worlds. Within the lab, one encounters specialized ethical principles—often codified as law—that delimit strict boundaries of in/appropriate human thought and action. Such principles determine quotidian practices of welfare and care that, in peculiar ways, privilege animal health (as key to reliable data) while obscuring, erasing, or denying human forms of self care. As such, they presuppose a regulatory ability to formulate, shape, and (re)direct human action. Yet attentiveness to the "messiness of the moral" of lab work exposes other realities: indeed, lab personnel regularly engage in a host of subversive responses that test or cross the boundaries of mandated behavior that (re)invigorate the meaning of moral acts of care as interspecies responsibility. The ethnographer's ability to witness, record, and write about these actions within the lab rests comfortably on the relativist principle of suspended judgment. Once one moves outside the lab, however, I ask, wherein lies ethnographic responsibility, when one's accounts of the moral messiness of quotidian lab practices become unbounded and go public? I argue that a dialectical inter- and intraspecies framework—inspired by the existential anthropologist Michael Jackson—offers the ethnographer (and still other scholars) possibilities for forging a productively "unbounded" methodological analytic in and beyond domains of animal science.

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1 Introduction

In his essay "On the Work and Writing of Ethnography," the existential anthropologist Michael Jackson describes human existence as a "continual interplay between the hypothetical poles of being-in-oneself and being-with-others." As Jackson explains, the ethnographer's task is an ethical project [(Jackson, 2012), p. 167] dependent on one's inevitable entanglements with others. Within this essay, Jackson tacks back and forth between those core ethnographic techniques of attentive listening-as-witnessing and his own internal, private thoughts of who he is, and where he himself belongs, as a moral being in the world [see also: (Jackson, 1995, 1998)]. As he illustrates throughout, the exchange between self and other is often neither direct nor unidirectional, nor does it respect a presumed boundedness of two beings inhabiting discrete realms of existence. Furthermore, the other, as "an other," need not be human, a sensibility that invites both intra- and interspecies encounters. For Jackson, associated exchanges entail ongoing, constantly evolving, dialectical processes that bear promises for simultaneously reconfiguring the ethnographer's knowledge of others alongside self-knowledge. As such, we might easily gloss such dialectics as unstable—yet productive—"circulations" that encompass intersubjectivity, categories of being, and possibilities for transformative experience.

Within this article I experiment with Jackson's existentialist method and associated ethics-of-self, applying these to my own ethnographic work within academically-oriented, experimental animal laboratories in the United States, domains that rely on the cohabitation, co-circulation, and co-dependence of humans and animals. As such, my associated research sits snugly within an established, and ever-growing, body of immersive scholarly work addressing the moral underpinnings of interspecies encounters in laboratory contexts [see, for instance, (Birke et al., 2007; Friese & Clarke, 2012; Greenhough & Roe, 2011; Lien, 2015; Moore, 2018; Svendsen & Koch, 2014)]. My goal here, however, is a *methodological analytic*, one that entails tacking back and forth, or in and out of the lab, in an effort to expose, grapple with, and

The U.S.-based academic labs within which I have worked are relatively small, comprised of a handful to no more than two dozen staff members. The animals housed at any one time in these labs range from under ten to several hundred or, even, tens of thousands, depending on the species (i.e., eight macaques, twelve beagles, 500 mice, 10,000 zebra fish). In labs of this size, personnel generally interact with one another on a daily basis, know each another well, and they may well work collaboratively on animal management and care. Research interlocutors span the full range of a typical lab labor hierarchy, consisting of established scientists (known as Principal Investigators or PIs), students (from undergraduates to post-doctoral fellows), animal caretakers, and custodial technicians. The names and locations of individuals and their institutions remain unnamed throughout this essay, as is standard, ethical practice in anthropology in order to protect the identities of those who consent to participate in ethnographic research.



¹ The data that inform this essay are derived from sustained ethnographic fieldwork (2010–2021) within—and with personnel from—academic labs in the United States and, to a lesser extent, in the United Kingdom. Regulations and practices relevant to the management and treatment of lab animals can vary significantly between the two countries; the American context is the focus of this essay.

address associated quandaries of research representation and responsibility. Although I speak as an anthropologist-ethnographer, my observations and urgings are intended for still others from an array of disciplines whose work, likewise, addresses interspecies encounters in science and beyond. As I seek to demonstrate, Jackson's ethical framework provides a powerful means for unveiling otherwise obscured categories of thought and action, not merely among lab personnel, but, importantly, for the ethnographer, too.

As I have argued elsewhere (Sharp, 2018a), research laboratories are morally fraught worlds. This inescapable reality is informed by the complex interplay of human and animal life as framed by experimental pursuits sequestered behind the walls of myriad domains of science. Significantly, within the United States (and elsewhere) mandated secrecy-or what Arluke has described as "the dilemmas of information control" (Arluke, 1991) and Holmberg and Ideland as "selective openness" (Holmberg & Ideland, 2012)—squelches talk with outsiders about what happens within labs. This is especially true when certain animal species, and/or procedures, are involved. Yet, and as I have learned over time, within the context of lab-based interspecies research such as mine, secrecy (and associated silence) can track inversely, too, shaping methods of inquiry, moral frameworks of research, and ethnographic representation.

In response, I propose regarding a secret as an interpersonal effort to control the movement of information relevant to the ties that bind humans to animals, and, further, humans to each other, within American experimental science. Although secrecy certainly characterizes many forms of scholarly research, laboratory contexts are especially fraught environments. Furthermore, the realities of lab life affect both the tenor of research encounters among lab personnel, and the shape of ethnographic research. As illuminated by Jackson's framework, the respective work entailed in the "continual interplay between the hypothetical poles of being-in-oneself and being-with-others" can be a high-stakes venture in scientific domains where humans and animals coexist.

2 Ethnographic terrain: tracking "animal talk"

For roughly a decade, my ethnographic endeavors have addressed moral thought and action in experimental animal science, especially within American contexts. I am especially interested in the "everyday" or "ordinary" (Brodwin, 2013; Das, 2012; Lambek, 2010) dimensions of moral thought and action, and how associated behaviors might enhance, alter, or subvert mandated, regulated, required, or codified bioethical frameworks that circumscribe animal use.² Whereas lab animal research is replete with bioethical frameworks (evidenced in guidelines, guidebooks, online training, seminars, and conferences designed to teach and test associated knowledge

² In the broader context of my research I regularly distinguish between "ethics" (as a means to gloss bioethics) and "morality" (understood as personal, private, and situational). Throughout much of this article, and for simplicity's sake, I use "ethics" and "morality" interchangeably, as is the custom within philosophy, much ethnographic writing, and Jackson's own works. On occasion I will employ "bioethics" in order to flag instances of codified and mandated behaviors as they figure specifically in the training and behavior expected of lab personnel within and beyond the workplace.



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and skills), many domains are devoid of a lexicon for speaking in personal, every-day, and moral terms. As I slowly realized over a decade of engagement, it is through the prism of what I have come to think of as "animal talk" [(Sharp, 2018a) pp. 6, 40–42] that moral sentiments begin to emerge. I argue that attentiveness to ordinary talk enables the "surfacing" (Taylor, 2005) of otherwise obscured, subjective traces of what it means to be a moral person both within science and in the broader world. Importantly, "animal talk" and associated sentiments are shared cautiously with a few trusted familiars and, most often, only with one's immediate co-workers.³

As such, lab-related, inter- and intraspecies encounters are morally messy affairs. This is readily evident to anyone employed in a lab who regards themselves as both a scientifically ethical and personally moral being, most pronounced when one's thoughts and actions are bound to research protocols that require injuring⁴ and killing animals. As I detail elsewhere (Sharp, 2018a), species preference plays a pivotal role in shaping moral thought and action in animal labs, where mammalian species—and most often canines and non-human primates—easily inspire strong emotional responses among humans (be they researchers, veterinarians, or animal care technicians or, as they may prefer to be called, animal caregivers). Yet reptiles, a host of aquatic species, and even the lowly worm can likewise exert affective power on those responsible for their welfare, care, use, and demise.

Laboratories, then, are affective domains of science, and the demands of interspecies encounters engender both private and collective responses that are simultaneously bounded by and extend well beyond the lab. These responses, when they surface, might augment, redirect, or subvert the mandated regimes that define proper handling, housing, and still other forms of managing non-human creatures who are key sources of research data. For instance, whereas within established protocols

⁴ I employ the terms "injury" and "harm" to encompass only those approved procedures that are part of research protocols with the intent of producing specific bodies of data; examples might include surgery, pathogen infection, social isolation, or deprivation of nutrition or hydration. Within the U.S.-based academic institutions where I have conducted research, all proposed procedures liable to cause pain, suffering, or harm must go through elaborate forms of assessment by bioethics committees known as Institutional Animal Care and Use Committees (IACUCs) and, once approved, these are subject to oversight by IACUC personnel, institutional veterinarians, and government agencies such as the U.S. Department of Agriculture (USDA). As I have learned in the course of my research, if one moves beyond a regulatory and into an activist, lay, or private lexicon, animal death (be it an unintended consequence or a result of scheduled euthanasia with anesthesia) is regularly cited among those interviewed as the most egregious of harms.



³ The importance of "transparency" (or the "opening up" of labs, at the very least, to select representatives of the lay public) in reference to one's animal research defines a significant, emergent trend in the UK. Thus far, however, "transparency" has found relatively little traction in the States. [For a comprehensive review of the discourse of lab transparency in both countries see: (McLeod and Hobson-West 2016).] For the purposes of my discussion here I distinguish between transparency and secrecy: the former references *institutional* shifts in policy, whereas the latter—which is the core focus of this essay—glosses *personal* struggles and decisions. For anthropological and sociological discussions of secrets as social, interpersonal phenomena see: (Favret-Saada 1980; Hirsch et al. 2009; Simmel 1906; Taussig 1999).

animals should be numbered only,⁵ lab personnel regularly name animals of a host of species. Furthermore, determined animal caregivers frequently go far beyond the minimum standards for animal enrichment, lobbying for larger enclosures, social housing, and funds to invest in rich assortments of toys and climbing apparati. In other quarters, prior to the scheduled euthanasia of a favorite animal, a lab team might congregate beside a beloved creature's enclosure to offer a plethora of otherwise forbidden treats, reminiscent of a convict's last meal before an execution. Or staff might insist that none of their animals be euthanized but, instead, be "retired" and "adopted out" to schools, private households, or sanctuaries. Some labs go so far as to partner with rescue groups to do so. In basic terms, these are moral acts of kindness toward animals, but they do other work, too: they signify the building and bolstering of an interior self and, thus, of oneself as a moral being who is "at work and in the world" (Jackson, 2012). Moral work, then, is simultaneously about interspecies relationships, private subjectivity, and a broader sense of one's social worthiness in the world beyond the lab.

The affective power of research animals is palpable out in the world, too, most readily evident in activists' longstanding efforts to end animal research. In response to—and, frankly, fear of—activists' campaigns, a widespread, though sometimes unspoken, understanding among lab personnel is that "what happens in the lab best stays in the lab." I underscore that this rule of thumb does not reflect the need to cover up, say, brutal and sinister procedures. Indeed, all lab personnel with whom I have worked—regardless of their station, status, or training—pride themselves on their high standards of care and, for some, the frequency at which they exceed these standards. Instead, this rule of thumb exposes the pronounced sentiment that one must establish clear boundaries around both personal and shared efforts at moral thought and action in reference to one's lab involvement, such that the adage itself regarding silence reinforces the presumption of one's pariah status in the eyes of a misinformed public.

When one attends to the boundaries that delineate public from private, one realizes how labs are morally bounded and, even, secretive worlds. For example, whereas within the lab an inquisitive ethnographer might encounter creative animal care strategies at every turn, public accounts of associated moral actions are rare. According to lab personnel, the amorphous "general public" is fraught with false judgments—instilled by activists—that insist that animal research is by very definition uncaring, cruel, and unjustified. In other words, others unfairly regard "humane lab animal care" as an oxymoron of the most egregious sort. In response, many lab

⁶ In some quarters one encounters efforts to push back against this cardinal rule, taking on a muted activist tenor of its own [see for instance: (Buckmaster 2016)]. Although I know of a handful of labs that welcome visitors, this practice remains far from the norm in the States. In those instances when lab staff push back and call for greater openness, institutional administrators inevitably either squelch such efforts or reassign them as the purview of communications and public relations staff, who then (to the dismay of lab staff) generate web pages featuring upbeat text and flashy photos that neatly erase details about animals in favor of celebrations of institutionally-based scientific achievements. In addition, the iconic public face of lab science is a student-in-training or a lab director, but not an animal caregiver or cage-cleaning technician.



⁵ This mandate presupposes an ability to formulate, shape, and direct human emotion through practices that presumably help objectify and reify living creatures.

personnel refrain from speaking outside the workplace of their quotidian lab-based lives; indeed, some may not even mention their lab employment at all to either close friends or intimate kin. Such responses are not unusual, but typical, driven by a strong ethos that entangles intra- and interspecies responsibilities. That is, this ethos entwines perceived needs to protect oneself, one's coworkers, and one's animals from scrutiny, verbal abuse, or physical attack (be such anticipated reactions real or imagined). Within this framework, the moral boundaries of care extend outward and well beyond the confines of the lab, such that associated moral actions collapse the well-being of research animals with personal forms of self-care and self worth.

3 The messiness of the moral

If secrets silence animal talk, then the act of divulging a secret to an outsider can rattle key premises that inform one's research as an ethically sound pursuit. I underscore that this is equally relevant whether one is a lab-based researcher or an interloper social scientist. This rattling of assumptions defines the core of what I reference throughout this article as "the messiness of the moral." I underscore at the onset that my purpose is not to destabilize assumptions that bolster lab work and justify animal research. Instead, my goal is of a different order: that is, after Jackson, to think critically about how the unpredictable interplay between self and other (as human or animal) might germinate a productive recalibration of our intentions, presumptions, and outcomes in our own research regarding intra- and interspecies encounters in science.

In an effort to make sense of, and order, my arguments, the remainder of this article is comprised of several sections. First, I consider a specific passage within Jackson's essay "On the Work and Writing of Ethnography." Intra- and interspecies encounters figure prominently in Jackson's work, marked by a collapsing of research goals and private struggles, a relationship that grounds his efforts to situate himself in the world as both an attentive ethnographer and a moral human being. As we shall see, the affective power of empathy figures prominently throughout. I then turn to a story of my own—drawn from my fieldnotes—that involved an unintentional and abrupt uncovering of a laboratory secret. As I will show, this secret worked to obscure the lab's use of animals who engender strong affective responses in the outside world. My attempt to engage lab personnel on this subject exposed, simultaneously, the moral messiness of both lab research and ethnographic work, and led me to rethink the secrets that we ethnographers keep. In light of this, I address the consequences of "going public" with my own work. I conclude this article by asking how—within our respective disciplines—we might employ oscillating, introspective dialectics as both method and theory, whereby our attentiveness to circulating bodies in science might emerge as productive, morally messy projects of our own.



4 Toward a dialectic of self and other

As a dialectic, Jackson's ethical framework resonates elsewhere, sharing common ground with, for instance, Hacking's notion of "looping" (Hacking, 1995) and Strathern's "figure-ground reversal" (Strathern, 2002) in that each insists on various forms of dynamic "oscillation" [again, (Strathern, 2002), see also: (Taussig, 1980)] across domains of knowledge, perception, and action. Oscillating analytics prove fruitful to my own efforts because they offer provocative means for destabilizing perspectival and moral assumptions about animals, persons, categories, and things. In reading Jackson, one realizes he is equally comfortable oscillating from one pole to another as he is in inhabiting "the ground between" [see (Das et al., 2014)], a movement that sparks empathy and transformative thought. In response, I ask, how might these sorts of destabilizing efforts engender new ways of thinking about, with, and through animals in science? Oscillation offers a productive entry point to the messiness of the moral in such contexts.

In realms of animal research where I myself have been an ethnographic interloper, contrasting perspectives are so pronounced, and associated discourses so fraught with assertions of misunderstanding, that much of my work is grounded in two core commitments: first, by asserting personal neutrality on animal use in science; and, second, by oscillating between, among, or across divergent perspectives. I regularly interview those who display opposing points of view, with corresponding "hypothetical poles" readily represented by lab professionals on the one hand and animal activists on the other. Against this backdrop, I understand my task as a social scientist as entailing engaged, self-reflexive forms of oscillation if I am, put plainly, to get it right. Such conditions need not entail polarized political debates: indeed, even mundane categories of things, or meanings, may oscillate, too. For example, within lab science, one cannot presume to know the definition of an "animal" or, even, which creatures or species might qualify for this category (in the U.S., a lab mouse, for instance, does not). Associated logic springs from a complex set of legal and regulatory apparati that manage, filter, and maintain core definitions; the history of a species' use in science; and, even, the rigidity or flexibility of human/animal boundaries within labs [(Sharp, 2018a), pp. 120-121]. In light of such complexities, the ethnographer-interloper must remain cognizant of the importance of asking what, and how, categories and kinds of animals are employed, managed, and thought about within and across laboratories and, further, that these sorts of questions can easily spark both creative and troubling moral thinking. Associated responses, in turn, bear possibilities for jostling, redirecting, and recalibrating species boundaries, self-perception, and subjectivity [for example, see: (Sharp, 2018b)]. Such entangled sensibilities are what lie at the heart of Jackson's essay "On the Work and Writing of Ethnography."



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5 The animal other

What I enjoy most about Jackson's essay is his acute attention to invisible, unmarked qualities of quotidian modes of being-in-the-world, and how he moves within that ground between self and an other. Jackson is acutely aware of the conditions under which encounters with other creatures—both human and non—destabilize and, then, recalibrate his own sense of empathy, responsibility, and (one may presume) care. Of special importance—with my own intentions here in mind—is how he attends not merely to *intrahuman*, but to *interspecies* encounters. This is startlingly clear throughout his essay as he pulls us on a journey along a road in Sierra Leone. A poignant section, entitled "The Beef," serves as an important anchor for my discussion because it is here that Jackson purposefully elides human and animal. As we shall see, the animal—as simultaneously non-self, other, and an other—offers a potent counterpoint that initiates a dialectic capable of inspiring self-reflection, the reconfiguration of self and, ultimately, the transformation of ethnographic researcher as ethical being as expressed through the art of writing.

Jackson opens "The Beef" with a description of a steer who is tethered tightly to a mango tree and in preparation for slaughter. Here, Jackson attends to the minutest of details: how the animal strains unsuccessfully to reach anything edible; how he labors to do something as simple as lick dew from nearby strands of grass; how he holds his tail when he defecates; and, after urinating, how he twitches an underbelly tuft of hair. The mood is melancholic, Jackson employing a slow, deliberate pace such that his eye-witnessed account exerts a strong, emotional pull on the reader. On reflection, Jackson explains, "so forlorn did this animal seem that I became convinced that it knew its imminent fate" (p. 181). The affective power of the account is palpable, evidenced in the poignancy of sensing what the animal must already know. That is, "The Beef" is initiated by an empathetic proclamation that involves an animal other.

We then leave this scene of the steer by the tree, the essay progressing through a series of interrelated scenes and conversations that unfold as Jackson and other companions traverse the countryside in a Toyota 4Runner. We soon learn that the vehicle's cargo includes the flesh of the now butchered steer. In other words, whether the steer sensed his fate is unknown, but we now realize the presumed premonition to be true. Jackson's and our knowledge of the steer's death then become entangled with other vignettes: a young man's reflections on political power and rights to animal slaughter; the site of laundered clothes drying by the roadside; the vehicle's brake failure and jerry-rigged repair; Jackson's flashback to a layover at Gatwick Airport and the nature of travel; and, then, back by the roadside, a fellow traveler's sardine sandwich and his incredulity that Jackson does not eat animal flesh; talk of child messengers in the recent civil war; and the sight of another truck crammed full of twenty-five other exhausted steers, some badly injured, all dehydrated, and how this jolts within Jackson a childhood memory from England of "bobby calves" "baying mournfully in the night" in a rail car bound—like these steers in Sierra Leone—for slaughter [(Jackson, 2012), p. 185]. Near the end of this section, Jackson gazes upon a man who cradles the head of his joyful son, inspiring Jackson to write, "One and



one another. The two of them mirroring my relationship with my own son. Myself a part of *and* apart from their life-world, at once close and distant" (p. 187; italics in original).

The brief vignettes scattered throughout "The Beef" extend well beyond Jackson's own (re)configuration of self: they are intended as a roadmap for us, too. Of special significance here is his layering of analytical frameworks, a process that involves, in essence, a triple dialectic: that is, Jackson urges synchronous engagement of human with human; self with an animal other; and, thus, intersubjectivity with interspecism. When taken together, these analytical processes inspire within the reader—as an additional witness—both empathy for others and self-introspection. Further, and as Jackson himself recognizes, the complexities inherent here comprise an ethical project for the ethnographer. This ethical project entails not merely introspection, but taking action through self-conscious modes of writing. As Jackson explains at the essay's conclusion, "Anthropology can only become a truly dialectical science when it finds ways of doing justice to the interplay of particular and universal perspectives, singular and shared modes of human being, in fieldwork analysis, and writing alike" (p. 188). In response, I ask, how might the responsibility of "doing justice" inform and redirect scholarly writing on the entwined circulation of humans and animals in lab science; the affective dimensions of intra- and interspecies boundaries; and the controlled movement of associated knowledge? In an effort to address these questions, I now turn to an event drawn from my own fieldnotes.

6 The secret of animal talk

I have just entered a spacious room at a suburban hotel in the northeastern U.S. that is designed as a flip space for corporate events, wedding receptions, small conferences, and modest trade shows. Scattered throughout the space are elegant luncheon roundtables that can seat up to ten people, and servers are circulating the room carrying trays of iced drinks and preordered salads and sandwiches for a group that comprises perhaps 200 participants. We are here to attend a talk by a speaker well known for a passionate delivery style reminiscence of an evangelical preacher. Although I am there at the invitation of the event's organizers, I have traveled here from out of state and do not recognize anyone in the room, and so I ask if I may join a table that still has a few empty places available. I soon learn that my lunch companions—consisting of six women and two men, whom I estimate range in age from their late twenties to early fifties—work together in the same lab. What is unusual about the group is that, unlike two other similar events I have attended that were hosted by cognate organizations, my tablemates are not all lab animal caregivers. Instead, two of the women are researchers and supervisors, and one of the men is a fledgling lab veterinarian. Their lively conversation is indicative of a group of coworkers who enjoy one another's company, a hunch later confirmed during follow-up interviews a few months later. Several have heard the speaker before, and the excitement among them that the talk will soon begin is palpable. The topic for the day is lay resistance to animal research, the reluctance among lab professionals to speak



publicly of their work, and creative strategies for addressing both "on the outside." As one of the supervisors explains to me, "You're in for a real treat." After I introduce myself and my purpose for being there (an anthropologist interested in how lab personnel think in personal and moral terms about the animals they employ in in the lab), I ask a question that, in spite of the event's focus, I realize immediately was inappropriate: "What animals do you use in your research?". My query is met with resounding silence. Two members of the group stare directly at me, while the others uneasily look away—at another table, at their hands, at one another, at their meals. I realize I have inadvertently probed a domain I subsequently come to regard as "the secret" of lab animal talk. Their silence tells me that they work with non-human primates (and, more specifically, macaques), and that I have committed a terrible gaff. This is because, in posing this question, I have asked them to break the barrier of silence about a kind of animal whose experimental use is widely considered, "on the outside," to be reprehensible.

Admittedly, when transcribing my notes from this event, I did not engage in Jackson's form of free association, as evidenced in his series of brief vignettes that include a steer tied to a tree, the sight of fresh laundry, and thoughts of cradling his son in his arms. Instead, I exercise some license here by employing Jackson's approach retroactively. As I reread my fieldnotes—and summarized them for the sake of this article—I allowed other memories to surface. I recalled my curiosity during other encounters while shadowing caregiver staff in a rodent vivarium; my apprehensiveness and wonder when sitting beside neuroscientists during experimental sessions with adolescent macaques; the values we assign to the concept of trust as a core ethnographic practice and ethical principle; my realization that animal flesh is always a menu option at lab research-related events, whereas gatherings of social scientists and ethicists whose scholarship addresses lab animals are regularly, and, even, exclusively, vegetarian or vegan; and what I have learned, too, of lab animal diets and how favored creatures receive special treats, especially when death is imminent, thoughts that then bring me back to the steer in "The Beef." I then think back on my earlier work in Madagascar, where I have witnessed countless cattle sacrifices, and about how deeply entrenched food taboos there define personhood. These reminiscences prod me to rethink my assumptions about taboos in animal laboratories, and how eating animals and the secrecy about animal use in labs are conflated in curious ways as evidence of moral personhood among lab workers.⁷

I then wonder how secrecy might also be a form of care—that is, of and for animals, one's colleagues, and oneself. These oscillating thoughts enable me to reconsider the ethics of my own action (or, better put, gaff) in asking my lunch companions about the animals in their lab. I ponder, too, wherein lies ethnographic

⁷ A consideration of eating habits is beyond the purview of this article. Briefly, Leach has argued that taboos associated with the eating of animal flesh may align categories of non-human creatures with intrahuman notions of social proximity (Leach 1964). Whereas this sort of logic may inform social scientists' and activists' vegetarianism or veganism, among lab personnel I suspect that eating animal flesh signals a deliberate elision of an animal's utilitarian worth in the lab with its value within the human food chain. That is, eating animal flesh in the public domain (or the outside world) reconfirms the morality of animal use inside the lab.



responsibility within that "continual interplay between...being-in-oneself and being-with-others." That is, how might such attentiveness inform notions of ethnographic (and other research) engagement as ways of "doing justice" to others, to oneself, and in written form? And, finally, how might we allow for the messiness of the moral in the recalibration of our own research objectives?

7 The messiness of a world unbound

Jackson stands apart, certainly, from a host of other theorists who more typically direct scholarship in the field of animal studies. Indeed, it is impossible to neglect Donna Haraway, whose sustained engagement with consequences of interspecies entanglements (Haraway, 1989, 1991, 1992, 1997, 2003, 2008b) has inspired a plethora of scholarship within anthropology and beyond [see, for instance: (Franklin, 2003, 2007; Friese, 2019; Friese & Clarke, 2012; Kirksey & Helmreich, 2010; Svendsen, 2015; Svendsen & Koch, 2014; Taussig, 2004)]. In Staying with the Trouble, Haraway calls for a simultaneous ontological and moral shift, one that entails moving away from "self-making" and toward a "making-with" non-humans [(Haraway, 2016), pp. 3, 32]. More precisely, in her ongoing call for interspecies kinning, she urges us to reconfigure how we approach, manage, and think through multispecies co-existence in what she proclaims to be the contemporary Age of the "Chthulucene" (Haraway, 2016).

Unquestionably, Haraway's proposal has generated significant traction in many quarters. My intent here, though, is to resist the full body of her proposed tenticular interspecies embrace. My concern is that Haraway—at least in the context of her most recent move-privileges interspecies care and responsibility to the neglect of certain core aspects of human subjectivity in what might be imagined as still other, "what if" sorts of world-making. What troubles me is that, all too often, her work reads as a call to abandon the self for the animal other. In all fairness, self care does figure in her earlier scholarship, most notably on lab animal use, and best exemplified in her essay "Sharing Suffering" (Haraway, 2008a), which aligns fairly neatly with Jackson's own ethical project.8

Nevertheless, a conclusion I have reached during the course of my own ethnographic work on lab animal experimentation is that Haraway's positioning of humans vis-à-vis animals works best as long as one remains in the lab (or "stays" with "the trouble" of laboratory life). That is, Haraway inadvertently disables possibilities for "doing justice" in Jackson's sense because interspecies entanglements always supersede intraspecies ones (save, of course, for directives intended for her readers). In other words, a dialectical oscillation remains relevant only when humans circulate among animals. Doing justice, then, entails those responsibilities we bear to our animal others, and far less so to one another. In response, my goal is to loop back around to subjectivity's power-via Jackson-to redirect and reshape the moral underpinnings of both inter- and intraspecies encounters. This approach



⁸ See (Gruen 2015) on the political commitment of "entangled empathy."

also provides a means for wrestling with one's own ethnographic responsibilities and broader scholarly pursuits. In light of this, I propose returning to the secret of animal talk, this time as evidenced by the moral messiness of research unbound as it unfurled during several public presentations of my own before scholarly audiences.

8 Ethnographic quandaries: going public

In spite of my efforts to adhere to a non-judgmental, ethnographic stance (or to my two core professional, disciplinary commitments mentioned earlier—namely, personal neutrality and attentiveness to oscillating and divergent perspectives), the messiness of the moral of lab research has borne with it unanticipated consequences. Although I do not fashion myself as an applied or practicing anthropologist—that is, a consultant for hire intent on transforming behaviors—increasingly over time I have been called on by lab personnel to step in and translate animal activists' concerns, weigh in on public condemnations of their work, and, most recently, provide insights on the phenomenon known as "compassion fatigue" that is gaining traction as a lab concern in various quarters [see, for example, (Kelly, 2015; Pavan et al., 2020; Scotney et al., 2015)]. I find myself explaining, for instance, that, unless one is based in California, lab research has fallen off the radar of U.S.-based animal activists, many of whom currently are far more concerned with racehorses, circuses, and industrialized food production. I also try to underscore that transparency and honesty should go farther than institutionally-generated, flashy ads that feature photogenic animals as proof of their wellbeing. I am also a steady advocate of open, honest discussions across lab labor hierarchies about the emotionally trying aspects of daily work requirements as imposed on one group by others in authority. Each of these responses is intended to engender greater awareness of how the entanglement of inter- and intraspecies lives affect intersubjective experience and personal self-worth both in and outside the lab.

Another unanticipated, and troubling, consequence of my work has involved my engagement on the outside specifically with anthropologist-colleagues whose scholarship does not lie at the intersection of animal and science studies. When delivering talks in academic venues I always underscore that, as a sociocultural anthropologist, my project concerns the people who work with animals, not the animals themselves. This assertion can generate sometimes gut-wrenching responses among some audience members. As I have learned over time, their reactions demonstrate that animal experimentation defines an emotional, academic Rubicon of sorts, wherein the privileged ethnographic stance of suspended moral judgment quickly falls apart.



9 Bounded expertise

By way of illustration, I offer two additional, brief examples that arose during professional talks about my research findings. The first occurred during an event sponsored by an anthropology department in a large research university. Following my talk, and during the question and answer period, a colleague, whose career involves longterm engagement in conservation work, broke down and sobbed and struggled to speak. Once composed, she explained how difficult it was for her to voice her question. She explained that she was upset because, for her, animals' lives were more valuable than those of humans. In essence, her intended question transformed into a proclamation that my research fell out of bounds of what she considered ethical work because, in her mind, my research interlocutors' pursuits were immoral. Soon thereafter, yet another colleague, who is an expert on oppressive state regimes, spoke of her struggle and the "shame" she felt in knowing how, at first, she had enjoyed the talk, but that midway through she had found a way to self-correct when she realized that research labs are "nothing more than concentration camps for animals." She explained that anthropologists, after all, would "never write sympathetically about prison guards." Each of these scholars, in her own way, was expressing, first, the strong sentiments lab personnel encounter among members of the general public about interspecies responsibility and, second, a specialized condemnation of animal research as an illegitimate field of anthropological study.

I pause to underscore that I offer these examples not to chastise two colleagues, but, instead, to employ them in my efforts to surface ethnographic dilemmas associated with the entanglement of inter- and intraspecies work. Initially, I found their responses perplexing: the ethnographer's ability to witness, record, and write about the lives of others hinges on the anthropological commitment to relativism and suspended judgment, and this has proved crucial for me during various research projects, including realms of cadaveric organ donation and, more recently, the use of animals in science. I have developed opinions on what I have seen and heard, but these are private, and not professional, thoughts. Not unlike the consequences of a divulged lab secret among my tablemates at the luncheon event described earlier, it was now my turn to be rattled by this anthropological refusal to suspend one's emotions within a department where talks on military torture, the violence of warfare and conquest, migrants' deaths, and child trafficking elicit questions about theory and methodology devoid of emotional display. In effect, "doing justice" to intraspecies violence is a legitimate scholarly pursuit; interspecies harm is not.

Within laboratory worlds, associated staff have developed intricate ways to think through the inescapable harm of invasive procedures; culling surplus animals; and euthanizing research subjects once an experiment ends. From the point of view of lab personnel, condemnations of their work on the outside are laced with

⁹ I spend my summers teaching in a prison program and, as Fanon's writings taught me the value of doing so long ago, I strive to assume an empathetic stance toward both inmates and corrections officers. See Fanon's chapter on "Colonial War and Mental Disorders" in (Fanon 1963); see also (Conover 2001).



misinformation that originates with activists who inspire polarized stances among the lay public. (I note that lab personnel's descriptions of activists' ideas and actions are themselves fraught with hyperbole.) In response to both real and imagined critiques, lab personnel employ an array of strategies to foreground the moral complexities of their work and lives, and these tend to fall along four intersecting axes. For a moment I wish to step back and consider these strategies because they offer insights on how, from the inside, associated professionals typically address the challenges I faced during my own presentation on the outside.

First, staff evoke the medical necessity of animal sacrifice in saving other lives (especially those of children), whereby lab animals emerge as the heroes of associated research. The second strategy involves what I reference as "temporal justice": that is, when asked to reflect on moral thought and action, one underscores the temporal dimensions of lab work, driven by the promises of medical breakthroughs over the longue durée, whereby successful research outcomes might one day serve to improve, extend, or save both human and animal lives. Third, staff foreground the prevalence of interspecies affection, offering examples of how the intensity of working with animals can inspire for them strong, and sometimes inescapable, affective responses. Associated examples underscore the moral messiness of lab research because the associated work is simultaneously emotionally-fraught and rewarding. Nowhere is this more pronounced than in contexts that require killing animals, and this is especially pronounced when one has developed a strong attachment to a specific creature. It is important to underscore that the messiness described here is tethered to procedures and practices designed to discourage emotional ties. Fourth and finally, lab personnel regularly reference the mandates of responsible care as defining the bedrock of quotidian lab life: they must follow welfare practices that are determined by law, their respective institutions, and within their own labs. Indeed, a common refrain is that "healthy, happy animals produce quality, reliable data," and, thus, the emotional work of animal care is entwined with bureaucratic requirements. In the best of labs, serendipitous inventiveness can—and many would say should outpace and exceed the baseline of required actions around animal management, use, handling, daily enrichment, and, even, methods of killing [see, for example, (Gluck, 2016; Niemi, 2017)].

Once one moves outside the lab, however, the moral boundaries of engagement can become less clear. As my vignette above reveals, these are ethnographic challenges, too, albeit of a different order. For whereas lab personnel imagine their strategies as bearing promise of swaying public opinion (and sometimes, they do indeed prove successful), these may have little effect on academicians who regard the brutality of our species as an inescapable truth, and one manifest in pronounced fashion when secreted away behind the walls of scientific research. What, then, of those contexts when lab professionals themselves develop sentiments that approximate those of my academic audience?

Oddly, a week later, I was called on unexpectedly at a conference comprised primarily of lab researchers and regulators to offer advice on how to combat "compassion fatigue" among lab personnel. This arose in conjunction with an emergent movement among animal caregivers and others, one that seeks to address the emotional trauma associated with regularly injuring and killing animals. A primary goal



is to provide confidential, nonjudgmental counseling to affected lab personnel of all walks and ranks. Framed as such, the importance of guarding the secret of lab research is palpable. In response, I underscored I was no expert, but I suggested that perhaps identifying, anticipating, and eliminating the sources of private suffering might render the need for treatment obsolete. Members of the audience were dumbfounded; several participants then stood up and took turns explaining how such preventative strategies had never occurred to them. Not unlike my experience with the anthropologists, I felt like an alien on a foreign planet. Stranger still, it was as if experts in the two spheres had switched places, because I had assumed that lab regulators and the like would discredit my advice, whereas the anthropologists would respond with curiosity (a pattern that typified my earlier work on cadaveric organ donation). When taken together, these two final vignettes offer possibilities for how our own scholarly endeavors might become productively unbound if we attend to the messiness of the moral in our respective research domains.

10 Doing justice: intersubjectivity as moral responsibility

As I trust my varied examples make clear, moving in and out of the lab as an ethnographer can generate moral quandaries reminiscent of those faced by lab professionals. The circumstances and expectations differ, of course. Whereas lab professionals, wary of a hostile public, opt for silence and guarded secrets, a requirement of academic scholarship is that one share one's findings with others. 11 As an ethnographer, one works hard to offer informed critiques of cloistered realms of human experience. As I have sought to demonstrate, within lab science, and regardless of one's affiliation, once one steps outside the lab one will encounter strong opinions be they heartfelt, confused, or accusatory—about what qualifies as legitimate moral work whenever experimental animals are involved. Indeed, a cacophony of moral frameworks might well surface once animal research becomes unbound. In conclusion, then, I ask, how are we to render some order here? Wherein lie our responsibilities, as scholars, and to others? How might such quandaries loop back to inform our own sense of moral responsibility in such unbound contexts as these? And, how might we understand our own actions as attempts, in Jackson's sense, of doing justice in one's works and writings?

As evidenced in the series of vignettes that make up "The Beef," Jackson urges us to tack back and forth in deliberate and self-conscious fashion "between one and one another," a process that can involve an interspecies and/or intersubjective dialectic. This is not a process of "self-making" via new forms of "kinning" in Haraway's

¹¹ Indeed, this has long been part of the code of ethics of the American Anthropological Association (AAA).



¹⁰ It is possible this springs in part from how we approach Post-Traumatic Stress Disorder (PTSD) in war and other quarters in the U.S.. Dominant therapies include reconditioning those affected so they no longer respond in fear, etc. by relying on drug therapies that dampen and haptic/virtual programs that redirect emotional responses. Currently, efforts to eliminate stressors in order to prevent future or repetitive trauma do not figure in the bulk of PTSD models that dominate the therapeutic landscape.

sense (Haraway, 2016), but instead as a call for a more complicated entwinement of one's responsibilities to one's research subjects (be they human or animal), to one's audiences, and to one's self. Thus, a first step of doing justice entails a commitment to oscillating perspectives.

Marilyn Strathern's idea of an "oscillating" "figure-ground reversal" (Strathern, 2002) proves especially productive to such pursuits. As she explains, "Interpretation [normally] implies taking something—an event or location or artifact or whatever—and specifying its singular qualities" (89). In contrast, "figure-ground reversal involves an alternation of viewpoints" marked by "stability and instability coexisting in a correlative relationship, each implicated in the other, [and] produce[ing] complex phenomena" (92). Jackson and Strathern, in their respective oscillating modes, each propose alternative frameworks that are simultaneously methodological and theoretical. In so doing, each calls for a self-conscious awareness of what one witnesses, what one presumes to know, and how such processes, when bundled together, might reconfigure one's analytical trajectory.

Whereas Strathern's provocation is locked in as an analytical framework, Jackson, ever the existentialist, alerts us to the added possibilities of an ethnographic methodology unbound. Within Jackson's dialectic, the paired ethnographic acts of witnessing and engaged discourse with others instigate self-reflection, which in turn informs interpretation and, ultimately, a self-conscious (re)shaping of one's own writing. More precisely, Jackson's unbound approach calls upon us to contemplate—in both interspecies and intersubjective terms—"where am I in this world of research?" and "what are my own moral responsibilities here?" as set against a backdrop of competing claims over who may assert legitimate, moral rights of representation in realms of lab animal science. Although Jackson does not use the term, throughout "The Beef," the significance of *care* surfaces at every turn, whereby one's caring for others (be they human or animal) becomes entangled with self-care.

Thus, I return one last time to my own encounters, set within an oscillating framework: a sobbing colleague enables me to realize how she herself imagines the suffering of lab animals; this then sparks my own private memory of watching a postdoctoral student work for hours with a patient though increasingly fatigued lab macaque; I consider, in turn, a multitude of conversations I have had with lab-based animal caregivers and their creative, renegade, or oddball efforts to enrich animals' lives; this then leads me to reconsider a personal account of psychological damage sustained by a mid-level researcher whose supervisor treated all animals as objects and expected others to feel nothing while killing them, even when a colleague botched a procedure. These thoughts then force me to wrestle with the politics of representation, my own ethnographic responsibilities, and where I place myself in this moral morass. In my mind, the most significant—yet unspoken—lesson embedded in Jackson's work is the importance of both interspecies and intersubjective empathy. At the end of the day, empathy is the bedrock of "doing justice."

As ethnographers, historians, science studies experts and the like, we all must manage and negotiate how best to represent the inner lab worlds we know to those outside. As instigators of unbound lab science, we must remain alert to the moral messiness that we witness and that we ourselves might foster. Ethnography is by its very nature an unbounded field of practice, in that it regularly crosses thresholds



in efforts to discover, uncover, and decipher others' ways of being-in-the-world. Indeed, an overworked description of anthropologists is that we specialize in translating different modes of thought and action, or that we are cultural brokers. But these descriptions overlook the high-stakes responsibilities engendered by research in complexly unbounded realms of science, whereby the care, management, enrichment, killing, and rescuing of animals all have serious interspecies and intersubjective consequences.

I suspect, given the nature of our respective research projects, we might all have encounters reminiscent of my own vignettes. As Jackson and Strathern teach us, such moments of destabilization offer daring, constructive ways to rethink what it means to be "at home in the world" of lab research unbound, precisely because they encourage us to recognize, ponder, and reconfigure our own ethical frameworks as a means of "doing justice" to the moral worlds of others. In closing, I loop back once more to Jackson's own words: that our research should entail being "a part of and apart from [another's] life-world, at once close and distant." Such is the nature of care unbound in the morally messy realms of lab animal science.

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References

Arnold, A. (1991). Going into the closet with science: Information control among animal experimenters. Journal of Contemporary Ethnography, 20, 306-330

Birke, L., Arluke, A., & Michael, M. (2007). The sacrifice: How scientific experiments transform animals and people. Purdue University Press.

Brodwin, P. (2013). Everyday ethics: Voices from the front line of community psychiatry. University of California Press.

Buckmaster, C.A. 2016. "You're heroes--Share your truth!" Laboratory Animal Science Professional June:16-18.

Conover, T. (2001). Newjack: Guarding sing sing. Vintage.

Das, V. (2012). Ordinary ethics. In D. Fassin (Ed.), A companion to moral anthropology. (pp. 133-149).

Das, V., Jackson, M., Kleinman, A., & Singh, B. (Eds.). (2014). The ground between: Anthropologists engage philosophy. Duke University Press.

Fanon, F. 1963. The wretched of the earth. Translated by Richard Philcox. New York: Grove Press.

Favret-Saada, J. (1980). Deadly words: Witchcraft in the Bocage. Cambridge University Press.

Franklin S (2003) Kinship genes and cloning life after dolly. In A. H. Goodman, D. Heath M. S. Lindee (Eds), Genetic nature culture anthropology and science beyond the two-culture divide. University of California.

Franklin, S. (2007). Dolly mixtures: The remaking of genealogy. Duke University Press.



Friese, C. (2019). Intimate entanglements in the animal house: Caring for and about mice. *Sociological Review*, 67(2), 287–298

- Friese, C., & Clarke, A. (2012). Transposing bodies of knowledge and technique: Animal models at work in reproductive science. *Social Studies of Science*, 42(1), 31–52
- Gluck, J. P. (2016). Voracious science and vulneable animals: A primate scientist's ethical journey. Chicago University Press.
- Greenhough, B., & Roe, E. (2011). Ethics, space, and somatic sensibilities: Comparing relationships between scientific researchers and their human an animal experimental subjects. *Environment and Planning D: Society and Space*, 29, 47–66
- Gruen, L. (2015). Entangled empathy: An alternative ethic for our relationships with animals. Lantern Books
- Hacking, I. (1995). Rewriting the soul: Multiple personality and the sciences of memory. Princeton University Press.
- Haraway, D. J. (1989). Primate visions: Gender, race, and nature in the world of modern science. Routledge.
- Haraway, D. J. (1991). Simians, cyborgs, and women: The reinvention of nature. Routledge.
- Haraway, D. (1992). The promises of monsters: a regenerative politics for inappropriate/d others. In L. Grossberg, C. Nelson, & P. Treichler (Eds.), *Cultural studies*. (pp. 295–337). Routledge.
- Haraway, D. (2003). The companion species manifesto: Dogs, people, and significant otherness. Prickly Paradigm Press.
- Haraway, D. (2008b). When species meet. University of Minnesota Press.
- Haraway, Donna (2008a) "Sharing suffering: Instrumental relations between laboratory animals and their people." In *when species meet. Chapter 3*, 69–93. Minneapolis: University of Minnesota Press.
- Haraway, D. (2016). Staying with the trouble: Making kin in the chthulucene. Duke University Press.
- Haraway, D.J. 1997. Modest_Witness@Second_Millennium.FemaleMan^c _Meets_ OncoMouseTM: Feminism and Technoscience. New York: Routledge.
- Hirsch, J. S., Wardlow, H., Smith, D. J., Phinney, H. M., Parikh, S., & Nathanson, C. (Eds.). (2009). The secret: Love, marriage, and HIV. Vanderbilt University Press.
- Holmberg, T., & Ideland, M. (2012). Secrets and lies: "selective openness" in the apparatus of animal experimentation. *Public Understanding of Science*, 21(3), 354–368
- Jackson, M. (1995). At home in the world. Duke University Press.
- Jackson, M. (1998). Minima ethnographica: Intersubjectivity and the anthropological project. University of Chicago Press.
- Jackson, M. (2012). Between one and one another. Princeton University Press.
- Kelly, H. 2015. Overcoming compassion fatigue in the biomedical lab: how four top managers are managing burnout in the vivarium. *ANL Magazine* July/August, *13* (5):12–15
- Kirksey, E., & Helmreich, S. (2010). The emergence of multispecies ethnography. Cultural Anthropology, 25(4), 545–576
- Lambek, M. (Ed.). (2010). Ordinary ethics: Anthropology, language, and action. Fordham University Press.
- Leach, E. (1964). Anthropological aspects of language: Animal categories and verbal abuse. In E. H. Lenneberg (Ed.), *New directions in the study of language* (pp. 23–64). MIT Press.
- Lien, M. E. (2015). Becoming salmon: Aquaculture and the domestication of a fish. University of California Press.
- McLeod, C., & Hobson-West, P. (2016). Opening up animal research and science-society relations? A thematic analysis of transparency discourses in the united kingdom. *Public Understanding of Science*, 25(7), 791–806
- Moore, L. J. (2018). Catch and release: The enduring yet vulnerable horseshoe crab. NYU Press.
- Niemi, S. (2017). Notes in the category of C: Reflections on laboratory animal care and use. Elsevier.
- Pavan, A. D., O'Quin, J., Roberts, M. E., & Freed, C. L. (2020). Using a staff survey to customize burnout and compassion fatigue mitigation recommendations in a lab anial facility. *Journal of the Ameri*can Association for Laboratory Animal Science (JAALAS), 59(2), 139–147
- Scotney, R. L., Mclaughlin, D., & Keates, H. L. (2015). A systematic review of the effects of euthanasia and occupational stress in personnel working with animals in animal shelters, veterinary clinics, and biomedical research facilities. *Journal of the American Veterinary Medical Association*, 247(10), 1121–1130
- Sharp, L. A. (2018a). Animal ethos: The morality of human-animal encounters in experimental lab science. University of California Press.



- Sharp, L., A. (2018b). "The other animal of transplant's future." Hastings Center Report; special report "Defining death: Organ transplantation and the fifty-year legacy of the harvard report on brain death" 48 (6):S63–66.
- Simmel, G. (1906). The sociology of secrecy and of secret societies. *American Journal of Sociology*, 11(4), 441–489
- Strathern, M. (2002). On space and depth. In J. Law & A. Mol (Eds.), *Complexities: Social studies of knowledge practices* (pp. 88–115). Duke University Press.
- Svendsen, M. N. (2015). Selective reproduction: Social and temporal imaginaries for negotiating the value of life in human and animal neonates. *Medical Anthropology Quarterly*, 29(2), 178–195
- Svendsen, M. N., & Koch, L. (2014). Potentializing the research piglet in experimental neonatal research. *Current Anthropology*, 54(S7), 118–128
- Taussig, K.-S. (2004). Bovine abominations: Genetic culture and politics in the netherlands. *Cultural Anthropology*, 19(3), 305–336
- Taussig, M. (1980). Reification and the consciousness of the patient. *Social Science and Medicine*, 14B(3), 3–13
- Taussig, M. (1999). *Defacement: Public secrecy and the labor of the negative*. Stanford University Press. Taylor, J. S. (2005). Surfacing the body interior. *Annual Review of Anthropology*, *34*, 741–756

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