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STS.060J The Anthropology of Biology

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### Dissolution of Identity and the Commodification of Biology

The wide variety of living organisms and our increasing ability to resolve their structure has intimately connected biology with the ability to probe scales. Mimicking the developments of the physical sciences, existing biological narratives purport to provide understanding through greater resolution in both time and space. Scale, in both the vernacular and the scientific sense, represents a unique pseudo-boundary. By its definition it represents a continuum yet one whose utility is almost entirely dependent on its ability to demonstrate (or construct) exaggerated difference. We therefore implement this metric to distinguish between one second and the next, or between one second and one lifetime. References to scales, both temporal (a day, a life, a lineage) and spatial (the gene, tissue, organism, population), depend entirely on the metric associated with their crossing. In this paper, I argue that the traversal, transversal, and inversion of natural scales enables the objectification and commodification of the biological body by means of a spatio-temporal delocalization of identities and personhood. Scale, then, is as much an actor in the capitalist narrative as it is an indicator of emerging trends in the transformation of the biological. Furthermore, this relationship is reciprocal. As the muddling of scales effects the commodification of the body, so to does commodification of the body necessitate the creation of a corresponding ambiguity in spatio-temporal status. This paper, perhaps unlike our understanding of the body, must begin somewhere. I therefore start with perhaps the most celebrated example of biological engineering: Dolly the sheep. I follow the identity of this entity as clearly as I can through its various spatial and temporal transformations, seeing how conceptions of its biological

identity (or perhaps biological conceptions of identity) transform in accordance with its respatialization and retemporalization. I then progress to examples further removed from such blatant bioengineering to demonstrate that the relationship between delocalization and commodification is maintained even in instances wherein human influence on the biological is not as readily apparent.

Donna Haraway attributes our fascination with engineered organisms to the manner in which they “cross a culturally salient line between nature and artifice.” Prior conceptions of the cultural as that which is non-natural begin to erode when culture begins to produce animated organisms which in their own right act and reproduce in an apparently natural manner. As Rabinow suggests, our power over biological substrate and the subsequent emergence and advancement of biosociality has introduced an reciprocity between nature and culture that has nature obeying human ambition as much as humanity has traditionally obeyed natural impositions. In her 2007 work *Dolly Mixtures*, London anthropologist Sarah Franklin uses the term *Dolly morphism*, invoking the infamously “cloned” sheep, to describe “a kind of mutational space in which cultural and biological categories, presumptions, and expectations are warped” (Franklin 27). Speaking with reference to the biological world, the process that made Dolly's birth possible marks innovation in human procedure but not so much markedly innovative on behalf of nature. As Franklin convincingly argues, in no true sense does Dolly the sheep even satisfy our vernacular criteria for being a “clone,” though her name and existence have permanently embedded themselves in that dialog.

Indeed, the process of enucleation and genetic transfer has been regularly reproduced in petri dishes prior to Dolly's birth. Indeed, it seems that the most harrowing thing about Dolly's existence is the ambiguity in her lineage. Her temporal continuity reaching backwards in time does not begin spatially within another sheep but rather within a laboratory. Franklin, describing a popular line diagram of Dolly's creation, notes that the image invites us to “move in and out of the sheep's bodies, making sense of their novel interiors, while they are normalized by their perfectly ordinary external

appearances” (Franklin 45). Dolly's substrate (both genetic and material) becomes separate from her self, partitioned by scientists in time and space so as to culminate in her existence. Her body is a laboratory funded by venture capital constructed for the sole purpose of providing genetic material that could prove her relation to another sheep. There exists an expectation (or more realistically, a hope) that Dolly's identity did not begin with her own life but with that of the sheep that provided her original nuclear DNA. Dolly, distinct from the donor of the genetic material, is therefore spatio-temporally isolated from what could culturally be considered as herself (especially if one takes her to be a literal clone). Bred as a means to this end, she is reduce to a part-of-herself, a being whose existence lacks any natural place in space or time but at the same time is consummated by its own substrate. Just as Dolly is both discretely the living lab product as well as the cryogenically frozen source of her DNA, so too does her identity extend beyond her own death to her offspring. Franklin comments that Dolly's “sexual significance is also notable in the way her own ability to reproduce sexually confirms the scientific legitimacy of her vitality,” somehow serving as ex post facto authorization of the scientific procedures that wrought her into existence (Franklin 23). Dolly is tangibly objectified, her very existence again justified only after her creation by the direct intervention of the scientific community and her genetic information transformed into a commodity that is distributed to that same community for its ritual assessment and verification. This transformation from biology into biocapital and from life to living fragment is intimately connected with the reorganization of her identity in time and space.

Neglecting her unique origins, it is not expected that Dolly's commodification should be a topic of interest. Sheep, after all, are regularly exchanged as goods with their bodies whole or fragmented. We are perhaps anthropologically fortunate that history has produced no shortage of commodified organisms. I speak particularly of those organisms which we raise, whose produce we sell and whose flesh we regularly consume. Cristina Grasseni has documented those practices employed by farmers in the Italian Alps to manage the biological substrate of the local Swiss Brown cattle population. These

cattle farmers, in order to assist their efforts in “improving the breed” meet with some regularity at “cattle fairs” to parade select specimens of their stock. The cattle is presented and subjected to a visual inspection whereby farmers employ a mathematical scoring system (a “linear evaluation protocol”) to obtain a measure of the cow's (im)perfection. At once, the animal bodies become “self-standing, controllable units subject to the skilled vision of taxonomy, classification, and evaluation” (Grasseni 35). The specimens in question are visibly “lead” by their owners in a practice that has become an art in the cattle breeding community. Perhaps the most telling sign of their commodification is the criteria for this scoring, which is concerned not with the animal's life but rather with traits that are assumed to “testify to a good productive potential” (37). In practice, the farmers measure the value of an organism with an undue interest in a particular organ (the udders) and corresponding tissue. Here we see that this visual body fragmentation has been employed in order to ease a process that assigns an organism's value to that of its organ function. The temporal continuity of the animal's life only becomes a concern where it affects the present conditions of an existing fragment portrayed as having the ability to produce independently of the whole. The cattle's life is then fragmented both spatially and temporally, at once the reduction of an organism into an organ and then the reduction of a life into the duration of a farmer's presentation.

The chief aim of these cattle fairs is not to identify those cows with the superior milk output, but rather to assemble a reliable guide for producing future generations of producing cows and the corresponding genetic stock for doing so. A specific slice of time and space, an udder at a cattle fair, represents not only an entire cow but also an entire lineage, connected by vague assumptions on the correlation between form, heredity, and productivity. There are two characters at play: the identity of the cow and the object of the farmer's concern. As this organism lacks the autonomy to make a claim on its own biology or identity, its identity is precisely shaped by those those concerns regarding its ability to produce and reproduce. That identity is at once cut down in space though expanded in time, made

diffuse by its increasing multiplicity. These considerations are only compounded by the practice of substitution, where a cow produces milk only until its offspring can outproduce it, at which point the daughter takes the place of its parent, whose maintenance requires more labor than is economically justifiable to the farmers. As the very term “lineage” implies, there is a naturally understood linear progression between one generation and the next, with the replacement of one generation by the next an almost archetypal cultural convention. This process is accelerated by biotechnological intervention (generally some combination of artificial insemination and hormone injection). Each cattle is then an obscure combination of a self-animated organism, a collection of productive and reproductive organs, as well as a genetic sequence that also represents its potential offspring. Indeed, the influence of these reproductive tactics has spread to the region's traditional farmers, who have taken to using a mix of typical breeding and artificial insemination in order to invest in the genetic improvement of their stock and avoid the stigma associated with purely “natural” breeding. The Swiss Brown cow, perhaps more mundane than Dolly the sheep, is a product of similar “mixed reproductive strategy, hybridizing transgenesis and conventional crossbreeding” (Franklin 36). The cow's identity, often compressed to its genetic information, is as much an amalgam of biovaluable fragments- both naturally and artificially selected.

We find in both Dolly and the Swiss Brown cows of the Italian Alps the commodification of divided fragments and the resulting ambiguity in identity (of self and species). An ethical analysis of sheep and cows, even in those pieces that defend passionately their rights, do not reference any sort of culturally accepted autonomy, as with humans. A proper treatment of the effects of autonomy enters our discussion when we turn to the fragmentation of human forms. Nancy Scheper-Hughes begins her discussion on the global traffic of human organs with an assessment of the ethical concerns surrounding transplant technologies. The narrative begins, we're told, with “a radical redefinition of death,” one that allows an individual to be in a state that permits “live” transfer of organs that will ultimately be fatal to

the “donor.” The scale along which one measures life acquires a peculiar smearing at the point of “brain death,” with the vitality of the individual in an indeterminate state at the same time that the vitality of the organs is clear: for some lucky recipient, they carry life in addition to being alive. Very vividly, the potential spatial separation of body components results in competing states of death for one individual. It seems appropriate to note that the very word “individual” implies a bodily integrity and indivisibility that is not reflected in daily expressions cultural understandings. Scheper-Hughes describes the case of an individual with a failed kidney, not resigned to the “medical trash-heap” who goes in search of a healthy replacement. The patient's self worth is reduced to the functionality of a particular organ: in this case, the kidney. The scale of his identity shifts from organism to an aggregation of organs, one of which must be replaced in order to restore the bodily integrity and allow the patient to ascend back to the scale of a whole organism. This shift in scale, and particularly the market force attempting to make it possible on demand, almost always requires the commodification of the organ being moved. The rare exceptions are those instances in which an individual donates an organ to a friend or family member, where the particular spatial and temporal continuity are further respected due to the nature of the transaction. In general, however, the history of the organ is lost, and just like the Swiss Brown cow, its past is only a subject of concern where it affects the functionality of the organ in the present. As Scheper-Hughes poignantly describes the relationship between the market and the body: “[f]ree market medicine requires a divisible body with detachable and demystified organs seen as ordinary and 'plain things,' simple material for medical consumption” (Scheper-Hughes 155).

Indeed, within the organ transplant debate there is a growing consensus (or convention) that the medical practices are principally or even solely concerned with the well-being of the patient, obscuring the organ donor. Here we see the inflating and deflating components of competing medical/clinical concerns. The global kidney trade is something that requires not just an organ and an organism but rather entire populations acting with varying levels of friction and unity to acquire the use value or the

exchange value of a human kidney. We see, for example, the cultural investment in the organ trade made by the inhabitants of the destitute Moldovan city of Bangon Lupa, where “‘coming of age’ now means that one is legally old enough to sell a kidney” (Scheper-Hughes 152). Those seeking a fresh organ look onto these entire communities as a collective source of raw materials, a commodity which serves to ease the scarcity that exists in the “market.” The kidneys become valuable biocapital. For those looking to sell, they represent (typically inaccurately) an enhanced quality of life. For those in need, the kidneys become fetishized, taking on new life which can then be absorbed into one's own body. The market begins to express preferences based on existing cultural prejudices and emergent medical considerations, pricing kidneys not necessarily by the health of the bodies that house them but by the genetic identity contained within their cells. The identity of those donors, clearly organisms in their own right, is simultaneously made a part of a much larger entity (a population), with the connection being a much smaller entity (the gene). This mixing of scale is particularly intriguing as it manages to patch over the organism by connecting two disparate ends of the biological scale. Much like the Swiss Brown cows, the connection itself is forged more by cultural assumptions than by any medical considerations.

The implications of such fragmentation become more clear. Our biotechnologies enable us to interfere with the spatial and temporal progression of biological units, resulting in a mixing and remixing of biological identity and subsequent commodification and objectification of forms. Whether the physical fragmentation in a laboratory or the visual fragmentation that occurs at cattle fair, fragmentation facilitates the exercise of influence which in turn suits economic (typically capitalist) desires.

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