THE FORM OF THE RELATION, OR ANTHROPOLOGY'S ENCHANTMENT WITH THE ALGEBRAIC IMAGINATION [1]

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ABSTRACT

This article looks at the limitations of the 'algebraic imagination' in anthropology. Much recent work in anthropology focuses on 'social relations' as the prime focus of analysis. Whilst there is much to profit from such a stance, it is argued that the imagery of relations poses its own limits to anthropological exegesis. Relations have become the ontological language of social anthropology, thus constraining our analytical imaginaries. The article suggests a way of moving beyond the relational paradigm by opening the algebraic imagination to humanism, and proposes an analytic based on the 'proportional' scaling of biographical life-projects. Part of my argument is based on a critique of relationality based on an ethnography of 'translucent' historical agency amongst the nitrate mining communities of the Atacama Desert, Chile.

I would like to start with a quote by Galileo Galilei. It is said that late in his life, when Galileo was bed-ridden by his blindness, he once remarked: 'I who enlarged the universe 100,000 times am now shrunk to the size of my body.' I have always been startled by the

Protagorean power of Galileo's painful observation. His words bespeak the vision with which a genius mind was capable of transcend, and connect, otherwise irreconcilable universes: to see beyond what can be seen; to imagine beyond what the powers of man can accomplish. Protagoras famous dictum 'Man is the measure of all things' has not often been read in this light, although, I believe, a not all too dissimilar reading lies dormant in his words. Much has been said about the Protagorean statement, often highlighting its relativistic tone. I, for one, prefer to read in it a pronouncement about relationality – though one should not of course uplift Protagoras from his classical period and bestow upon him postmodern sensibilities. In this relational view all things become proportional to one another by measuring up to Man. Galileo's universe feels bigger and more painful when set against his debilitating body. The cosmic body and the body of man balance and re-size their extensions and powers against one another.

This article explores this idea of balancing or re-sizing. These of course are metaphors for a particular form of relation: the *proportion*. The cosmic body and the body of Galileo are related to one another, but they relate as proportions: each works itself out as a measure of, or in proportion to, the other.

My concern in this article is to explore the idea of the proportion as a particular form of the relation, and to use this to try to rethink what social theory, or sociality, might look like if examined under the lens of what I call 'proportionalism'. I do so by examining the idea of proportionalism in two moments. First, I look at why anthropology has left almost untheorized what could legitimately be argued to be the foundational structure of its theoretical edifice: the idea of the relation. Anthropology's failure to theorize the relation is part of what I call the enchantment of the algebraic imagination. Relations are everywhere; so

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much so, that the *image* of a social relationship has become a shorthand for a form of *analytic*.[2] Ways of life are explained and justified by their connectedness: kinship, or religion, or the economy are forms of relations, anthropologists argue. I am not persuaded this can be so. Kinship is a form of sociality, not a form of relationality. (A proportion, on the other hand, is a form of relationality.) The image of kinship may explain a particular way of making, participating in or inhabiting other people's life-worlds – a particular experience of intersubjectivity –, but it is not an appropriate term for explaining how people relate to one another. Relations are logical abstractions – formal concepts. I may create a link between two people by positing it as a relation, but then I cannot use this creation to explain the link.[3] That is patently tautologous (Cf. Strathern 1995: 14). If we want to use the language of relationality to explain kinship then we need to elucidate what the *form* of the relation is. For the relation, as an abstract tool, has no qualities; and as an idiom of sociality it is equally flat and vacuous. In the first part of the article, I look at some of the issues raised by the anthropological use of the imagery of relations by reviewing some recent work on relationality by Alfred Gell, Eduardo Viveiros de Castro and Marilyn Strathern.

The second half of the article deals with the idea of proportionalism. Proportions are a particular form of relations. They are still conceptual abstractions, sure, but they are abstractions of a *kind*, and if made to work in a social context they can stretch considerably the limits of our social imagination. Intrinsic to the idea of the proportion, for instance, is the idea of scale. A proportion is a relation of magnitude, where one of the elements (*relata*) in the relation operates at a different level or order of magnitude than the other element. In positing a relation of proportionality between two elements we are therefore bringing together and coalescing orders of magnitude that would otherwise remain separate. Translation, for

instance, may be read as an exemplary case of scalarity: two domains (two languages) are brought to bear upon one another, with residual effects. Such cross-sectional or scalar connections between disparate orders bring out the sense of possibility that the work of relations (i.e. proportions) can effect. They are also expressions of consequentiality. If two distinct orders of magnitude are pressed upon one another, the result will yield a residue or remainder – this is the effect or consequence of the encounter. Proportions, in other words, are how relationships emerge as consequences. In the second half of the article I offer a description of one such imaginative reworking of sociality and history by way of a brief ethnographic foray into the notion of biographical personhood amongst the nitrate miners of the Atacama Desert, Chile.

The algebraic imagination

In his extraordinary work *La idea de principio en Leibniz* (Leibniz's idea of principle), Ortega y Gasset locates the birth of the 'relation' as an analytical idiom in the algebraic imagination that marked the birth of Modernism in the 17th century as the exemplary rational and logical mode of thought (Ortega y Gasset 1992). Against the Aristotelian definition of entities as classificatory terms (grouped and/or separated into genus and species), the Modernist algebraic revolution defined, or rather 'elicited' its terms by their position in a purely formal and nominal system of relations. Relationality thus understood emerges in structural orders of deictic references. Referents 'call out' one another, and their mere 'appearance' (or visibility) is proof of their existence.

The birth of modern algebra is attributed to the French mathematician Franciscus Vieta, whose greatest contribution to algebra was the advancement of symbolism, using letters to

represent known constants. Vieta, however, understood the use of symbols as a mere *technical* notational aid. It was left to Descartes to understand the *conceptual* power that lay in the use of symbols. For symbolic algebra elevated relations to the order of logic. If relations between numbers could be expressed in purely formal terms, thus hollowing the symbol from its numerical specificities and allowing it to work as a number-free concept instead, then these formal equations yielded expressions of a new order: pure, or intuition-liberated, logical definitions. This is why Leibniz dubbed algebra *Mathematica Numerorum incertorum*, the mathematics of indeterminate numbers (Ortega y Gasset 1992: 48); that is, a number need not be itself to be itself (e.g. 2 can be defined as the result of 4-2, or 1+1, or 3-1, etc.).

The mode of thought brought about by the Cartesian symbolic revolution is what I call the 'algebraic imagination'. Algebra has no doubt since moved forward, but it seems that the vocabulary and conceptual apparatus of the algebraic imagination has gained currency amongst a most unexpected crowd: anthropologists.[4] Ever since the 1940s, social anthropology seems to have narrowed and defined its disciplinary object as the study of social relations. Early focus on 'social structure' and 'social organization' was premised on the idea of a 'relation' lying at their heart (Cf. Strathern 1995). In his Presidential Address to the Royal Anthropological Institute in 1940, Radcliffe-Brown defined anthropology as 'the theoretical natural science of human society, that is, the investigation of social phenomena by methods essentially similar to those used in the physical and biological sciences.' In this context, social phenomena was to be understood as 'relations of association between individual organisms.' (Radcliffe-Brown 1940: 2) Eleven years later, Raymond Firth noted that '[i]f it be argued that form is nothing but a specific order of relations, then it can be said

that what the anthropologist compares are differences of relational order.' (Firth 1951: 19) And around the same time, in his extraordinary *The Theory of Social Structure*, S. F. Nadel stated that the study of society entailed studying the rules under which people 'stand and which impose on them regular, determinate ways of acting towards and in regard to one another.' (Nadel 1957: 8) He then glosses this statement by adding: 'For 'determinate ways of acting towards or in regard to one another' we usually say 'relationships' ' (Nadel 1957: 8-9). (It is worth noting here that in this book Nadel actually introduced symbolic logic to help clarify his argument.)

But of course the most fervent adherent, and proponent, of the algebraic turn was Edmund Leach, who in *Rethinking Anthropology* expressly advocated the use of algebra in anthropological analysis. Here Leach argued for a kind of mathematical functionalism that was '*not* concerned with the interconnections between parts of a whole but with the principles of operation of partial systems.' (Leach 1961: 6, emphasis in the original) What anthropology needed, he claimed, was an analytical vocabulary that enabled the argumentation to come forth stripped of all value laden concepts. This is why '[t]he merit of putting a statement into an algebraic form is that one letter of the alphabet is as good or as bad as any other. Put the same statement into concept language, with words like paternity and filiation stuck in the middle of it, and God help you!' (1961: 17)

This of course all sounds a little archaic today. Long gone are the days of scientificism and structuralism in anthropology. Part of my argument in this article, however, is that laden with the semantics of symbolism and binary arrangements or not, the modes of argumentation that anthropology deploys today are every bit as inflected by the algebraic imagination as they were in the past. Let me give you some recent examples.

In *Art and agency*, Alfred Gell explicitly defines the subject-matter of anthropology as the study of social relations: 'My view is that in so far as anthropology has a specific subject-matter at all, that subject-matter is 'social relationships' – relationships between participants in social systems of various kinds.' (Gell 1998: 4) Although Gell leaves the notion of 'social relationship' untheorized, he does expressly situate his understanding of the work of social relationships within a Maussian framework, claiming that 'Mauss's theory of exchange is the exemplary, prototypical, 'anthropological theory' ' (1998: 9). In this context, relationships are to be seen as 'transactions', or even more narrowly as 'interactions' of some kind, and Gell indeed uses the term 'social interaction' as a substitute for social relationship throughout the book. Perhaps more remarkable is Gell's resort to symbolic language in his own representation of the work (or agency) of social relationships. Like Nadel and Leach before him, Gell realizes that the nature of social relationships lends itself rather neatly to its expression in algebraic symbolic language. Algebra is, after all, a vehicle for the self-explication of relations. In Gell's work, then, the work of social relationships, what they can and cannot do, and therefore the boundaries of sociality, thus emerges as being dictated and circumscribed by the algebraic imagination – by what the imagination can say within the constraints of an algebraic mode of expression.

This is perhaps an unfair assessment of Gell's intellectual orientation, for in the final section of the Introduction to *Art and Agency* he does in fact outline the 'silhouette of an anthropological theory' that moves beyond the limitations of the algebraic paradigm. Here he argues that

Anthropology differs from [sociology and social psychology]… in providing a particular *depth of focus*, which perhaps one could best describe as 'biographical', that is, the view taken by anthropology of social agents attempts to replicate the time perspective of these agents on themselves, whereas (historical) sociology is often, so to speak, supra-biographical and social or cognitive psychology are infra-biographical. […] The fundamental periodicity of anthropology is the life cycle. (Gell 1998: 10)

In this context, he goes on to maintain, '[a]nthropological relationships are real and biographically consequential ones, which articulate to the agent's biographical life-project.' (1998: 11) This is in my view the book's most powerful moment. Here Gell radically shifts perspectives and abandons his concern with relations for an approach that emphasizes and attempts to elucidate the workings of life-projects instead. But the momentum does not last long and Gell concludes the chapter by noting that '[t]he aim of anthropological theory is to make sense of behaviour in the context of *social relations*.' (1998: 11, emphasis added) Once again, Gell reverts, one would say almost by default, to an algebraic mode of thought. A faithful rendering of his call for a 'biographical depth of focus' would maintain that the proper context for making sense of behaviour ought to be that of biographical orientations, not social relations. A biographical depth of focus like the one Gell advocates materializes in a form of existential anthropology and not in a relational or algebraic form of analysis. I shall come back to the idea of biographical orientations, and its expression in a weak form of existential anthropology, later.

Perhaps the most famous proponent these days of a relational anthropology is Eduardo Viveiros de Castro. In his recent after-dinner speech to the Association of Social

Anthropologists of the UK and Commonwealth Viveiros de Castro remarked: 'I believe anthropology must escape self-imposed doom and keep firmly focused on its proper object: social relations in all their variations.' (Viveiros de Castro 2003: 5) Appropriately, the title of the talk was *And*, the 'minimal relator' by definition (2003: 2). Here and elsewhere Viveiros de Castro has argued for a reconceptualization of the 'relation' as the realm of ontological possibilism. Things happen relationally, and it is our anthropological mission to elucidate the terms of their relational coming-into-being.

A mode of analysis that posits the relation as an ontological category is a dangerous affair, however, for it risks self-reducing itself to an abstract system of conceptual self-references. This echoes the old scholastic debate about Entities and Essences, about the make-up and ultimate foundation of Reality. Taking stock of this classical debate, I would like to argue here that there is an important difference between relational and ontological possibilism, and therefore about the need to source 'indigenous ontologies' in relational analyses. Leibniz, for instance, centred the study of Being (i.e. ontology) on the study of its *modes* of being. For Leibniz, there are three modes of Being: possibility, necessity and contingency. That which *is* (*essentiae exigentia*, an entity), is requested into Being from its status as a possibility (*realitas possibilis*, an essence). This modal take on ontology allows Leibniz to bestow upon the idea of possibility an ontological status (Leibniz 1990, Woolhouse 1993). Possibilities *are* something: the possibility of becoming something (Ortega y Gasset 1992: 346-349, 359). Leibniz's is a theory of ontological possibilism and as such is very different from Viveiros de Castro's model of possibilism, for the ontological enterprise is here conceived as the study of what can be and is (a possibility is still something), as opposed to the study of how things come to be. Viveiros de Castro's

perpectival relationism works along similar lines to Leibniz's model of ontological *contingency*, where the issue is not what the world is but why and how this world, of all possible ones, came into being. Leibniz's views on contingency, however, are only one parcel of his work on ontology, and the question of ontology is by no means exhausted by the question of contingency. My argument, then, is that relational possibilism is not quite the same as ontological possibilism, for it foregrounds not what the world is or could be (ontology), but what the world is *against that which is not*. And this is not ontology but perspectival focus and calibration.[5]

Viveiros de Castro's argument regarding Amerindian perspectivism and cosmological deixis is a case in point. This is a nuanced and sophisticated reinterpretation of Amerindian ethnography on totemism, hunting, and shamanic practices. The essay describes what he calls 'perspectivism' and 'multinaturalism', the idea that humans, animals and spirits see both themselves and one another differently from different kinds of bodies. What interests me is the way in which these agencies, that is, humans, animals and spirits, are seen to *relate* to one another; that is, the role that the relation – the algebraic imagination – plays in conceptualizing the shared life-world of these human and nonhuman beings. In Viveiros de Castro's account this world is imagined in pronominal or indexical terms. 'Amerindian souls', he writes, 'be they humans or animal, are thus indexical categories, cosmological deictics whose analysis calls not so much for an animist psychology or substantialist ontology as for a theory of the sign or a perspectival pragmatics.' (Viveiros de Castro 1998: 476) [6] Based on this form of cosmological deixis – where the world is activated by the taking of subject-positions, and where anyone or anything that takes a point of view is already a subject; thus the mere having a view on (or thinking about) the world implies being-in-the-

world (as agent); based on this form of cosmological deixis, then, '[a]nimism is not a projection of substantive *qualities* cast onto animals, but rather expresses the logical equivalence of the reflexive *relations* that humans and animals each have to themselves: salmon are to (see) salmon as humans are to (see) humans, namely, (as) human.' (Viveiros de Castro 1998: 477, emphasis in the original)

I have two observations to make regarding the relational paradigm that underlies Viveiros de Castro's model of cosmological deixis. On the one hand, the model calls for its own self-logical closure, for perspectives are incapable of pointing out to anything other than the system that logically self-refers them. Deictic perspectives can only be completed by the relations that constitute them in the first place; in other words, perspectives mutually necessitate of one another *to work as perspectives*. But if this is the case, then Viveiros de Castro's rendering of the model is surely a *merographic* one (Strathern 1992: 72-81, Strathern 1999a: 246-249); that is, a 'perspective' that opens up the model's ontology by resituating it and changing its scale; connecting to it as it works out its connections. Like a shaman, Viveiros de Castro travels between worlds (the Amerindian and the Euro-American), and his own travelling shifts the ontological axis (Strathern 1999a: 252) from perspectivism to possibilism: from talking about and elucidating different orders of being, to the *possibility of talking* about different orders of being. In other words: the ontological axis emerges and moves with the possibility of imagining these worlds; it does not reside, nor moves up or down the structure of relations that makes up these worlds.

My second point builds on this and has to do with the *qualities* of the relations that this system, insofar as it works itself out as a logical system, is perforce stripped bare of. Recall Viveiros de Castro's comment regarding animism: it is not 'a projection of substantive

qualities cast onto animals, but rather the logical equivalence of the reflexive *relations* that humans and animals have to one another.' (1998: 477) The notion of the logical equivalence between *reflexive relations* (between humans and animals) is not that straightforward, however. Humans are humans because they *know* they are not salmons. That surplus of knowledge (knowing what one is *and* what one is not) makes the notion of 'humanity' a non-logical concept, which further impedes it from functioning within a system of logic. Logic is autarchic: everything fits together; there is no room for surplus or residual knowledge. Reflexivity, however, exudes surplus knowledge. It is unconstrained; it works in too many dimensions (Overing 1985). The steps that a reflexive 'style of reasoning' (Hacking 2002) takes to construct an argument are therefore not signposted by logical relations but by a sundry stock of intellectual operations.[7] Salmon might relate to and see salmon as humans relate to and see humans; but 'relating to' is not quite the same as 'reflecting upon', and the deictic position of humans is first and foremost a reflexive location – some humans might mistake trout for salmon. It is not *deixis*, then, but *apodeixis* that we need to use in the explanation of human affairs. For the apodeictic perspective, in always calling out for a proof outside itself (i.e. in working merographically), is essentially reflexive and pragmatic: it tells us how people get along and engage with the world of 'things' (*pragmata*) around them. The apodeictic is possibilistic by definition.

So having reached this point we can do one of two things: we can agree that social life is neither logical nor reducible to algebraic expressions and yet agree to preserve the language of relations as a somewhat valid vocabulary for describing what the social is all about; or we can drop the conceptual language of relations altogether.

I, for one, do not think that dropping the language of relations will get us very far. Too much has already been invested in it and, in any case, I do not know myself of a better alternative. (Although a viable *qualification* would be to pay more attention to humanism and the values of an existential anthropology – but more of this later.) The other alternative is to take stock of the limitations of relationism and try to push the limits of what relations can do. This is, for instance, my reading of the work of Marilyn Strathern.

Although the language of relations does indeed permeate and guide Strathern's analytical orientation, it is no coincidence, I think, that Strathern often turns to an idiom other than that of 'relations' to explain or describe the association between two terms, 'connection' being a favoured descriptor. Connections evoke the 'idiomatic possibilities of resonance', charting out a culture's potential lines of flight (Strathern 1995: 8). But connections are not relations (although all relations are connections). For a relation to work (itself out), it is not enough that a connection be established between two entities. A concept needs to frame the connection. If I think of a unicorn I have somehow positioned myself vis-à-vis that mythological figure, thus creating an intellectual connection of a kind; but I have not established a relation, unless, of course, I can justify the link *conceptually*. This I can do by mapping out the nature of the effects that the relation has upon the unicorn and upon myself – say, by sustaining that the unicorn is a mythological ancestor of mine. Only then is the connection made explicit and emerges as a relation – a genealogical or kinship relation of some kind. Kinship is of course the paradigmatic case of a kind of connection turned, conceptually, into a relation – here a relation of relatedness. Strathern's own work has pointed to the new conceptual idioms that keep relations alive: knowledge, transparency (audit), even 'conceptualization' itself (Strathern 1995).

Perhaps more importantly, Strathern's work has shown that relationships work *in a particular way*, and in this sense pointed to the fact that there may be other, non-relational ways in which sociality works. In the mid-twentieth century relationality became the way anthropology systematized both its data and its abstractions – the way it routed connections between people (ethnography), and the way it elevated such connections to a second-order level of analysis (theory). This double constituency of the work of relations has in fact eclipsed the forcefulness of relations as self-organizing principles – a force that makes relations work to, now organize themselves internally, now reorganize themselves by crossing scales and creating new connections.

Holography and complexity are two of the properties of this self-eclipsing relational imagery (Strathern 1995). Holography means that relations automatically summon their own fields: the relationship between a father and his son summons, by extension, the field of kinship (it may of course summon other fields too[8]). It also allows relationships to work across any scale, a point to which I shall return shortly. Complexity, on the other hand, is a virtue of relations simply pointing to orders of phenomena other than themselves (Strathern 1995: 18-20).

In pointing to the ways in which relations work, Strathern has unveiled the extent to which anthropologists naturalized the concept and lost sight of its subterranean effects. Relations became a metonym for sociality, rather than a way to think about the social. She showed how far we had gone into reading the social in relations, rather than using relations to read the social. In seeing relationality as *one* mode of analysis, Strathern thus opened the way to thinking of sociality in terms other than the algebraic paradigm – or at least to rethink the properties of the paradigm.

I said above that Strathern had identified holography as a property of relations. Holography points to the capacity of relations to cross scales, that is, to connect orders of knowledge and meaning otherwise kept apart. The local and the global, for instance, are in this view not tangible orders of relations (of a certain size), but an expression of the capacity of relations to work along particular kinds of dimensions and bring about particular kinds of effects. The work of relations places the issue of scale on the map, rather than scale being the map (of varying size) where relations are placed. This, I have no doubts, is an important insight. But I would like to note that that there may be in fact another way in which scale becomes relevant to the work of relations, although to visualize it we may need to rethink the notion of relation itself.

Rather than scale being the outcome of a particular way of thinking about the work of relations, it is conceivable to imagine scale as a *constitutive dimension of what a relation is*. The kind of relation that I have in mind is the proportion. Proportions are relations of magnitude. Magnitude, or size, or weight, is inherent to what proportions bring to their connections – recall the saying 'blood is *thicker* than water'… Proportions do not therefore simply set up links between entities or orders of knowledge that had hitherto remained separate, but they actually 'measure up' those links by positing their degree of commensurability, and by emerging in the shape of a new proportional field. You may be reading this and thinking, 'this is not very interesting'. If that is so, you are in fact reproportioning your ideas against mine by 'sizing down' my views. And this of course all happens at once. You are not simply creating a relation between two different orders of knowledge (yours and mine). You are in fact *moving integrally* through such orders with a *sense of capacity* (and the term is not arbitrary, for capacities are magnitudinal categories)

and thus rebalancing your own (intellectual) powers, the biographical order wherein these are constituted, and the wider sociohistorical project wherein your biography takes shape. It is the emerging capacity that creates the space for understanding; and in this sense meaning arises in the shape of a proportional field, rather than simply in the form of a link or relation between two different equations (your knowledge and mine). Proportions, in other words, work scalarly: everything resizes everything else. I go back to Galileo: the universe may be of the same size for all, but not all people measure up to the universe in the same way – sometimes, like it happened to Galileo, measuring up hurts.

Gigantism

James Weiner has recently shown some of the limitations of social constructionism by noting its failure to answer some of the following questions:

What is gigantic in human life? If we consider nature itself as only a social construction, we lose the sense of a domain that lies beyond the power and limits of the human and that is therefore large in comparison to it. We might then want to ask, what confronts human life with something that exceeds it? What lies beyond human life but nevertheless exerts an influence on it? (Weiner 2001: 163-164)

The gigantic resizes life by delineating its proportions, by showing that all things are scaled through forms of personhood, although some things are scaled out with larger and greater effects than others. Proportions allow this kind of imaginative resizings because they create links between otherwise distinct orders of knowledge. Proportions allow for the

residues of knowledge that reflexivity always brings with it: Making the other human by humanly thinking about it, or humanly acknowledging the limitations of thought – that is, by becoming aware of the residues that thought proportions *out* of itself. As always, Nietzsche said it best: human, *all too* human.

Following a proportionalist reading of Weiner's call, our anthropological task could be redefined thus: How do our visions of humanity become gigantic? Or inversely: how does the gigantic resize what it means to be a person? In my ethnography, gigantism took a gigantic shape itself. Gigantism emerged as the proportional form that people employed to hold and measure up to a particular historical landscape.

Giants and hollowed out landscapes

I arrived in María Elena just over three years after Pedro de Valdivia closed down. 'Pedro', as it is still known, was closed in 1994, following a decision by its current owner, SQM (Sociedad Química y Minera de Chile), to transfer all productive operations to María Elena. Today people thus speak of María Elena as 'the last nitrate refinery', a nostalgic formulation whose eschatological ring is further accentuated by the town's anticipated closure. Hector, a former labour unionist, explained the consequences of the foreseen closure to me: 'Saltpetre was mined nowhere in the world but in Chile. Only Chile has natural saltpetre deposits; only Chile has had a nitrate industry; and only here, in María Elena, is the industry still alive. The *pampa* is alive here. If Maria Elena closes, the pampa dies.' (Pampa is the name given in Chile to the nitrate desert; *pampinos* are the pampa's inhabitants, although the term is almost exclusively used to refer to the nitrate and copper workers and their families.)

My reference to eschatology above is not arbitrary, for it is indeed in the language of life and death that most people refer to and think about the nitrate industry and about the pampa: 'The pampa is dying', I was often told; 'It was here, the pampa was here, full of life, and now there is nothing, it is back to desert, to nothing.' The language of translucence and disappearance is well captured in the title of a 1999 Belgian documentary on Victoria (another former company town and nitrate refinery). The film is titled 'The ghosts of Victoria', and in its opening sequences we find an old pampina telling the cameraman, 'The pampa no longer exists… there is despair, the sun, the cemeteries… only our memories are left.' (Ramirez 1999) This concern with the visibility and invisibility of history, with the disappearance of the pampa and its replacement by the desert and nothingness, is in fact a recurrent theme in the history of the miners' relationship to the desert. It is the case that from the late nineteenth century onwards the history of mining in northern Chile has been represented in terms of loss and abandonment. The landscape of wealth of the nitrate desert plays a fundamental role in this vision, expanding the miners' sources of agency to a not-always-controllable environment of powers. It has mediated imaginaries and narratives of sacrifice, transience and fragility, where people's fleeting sense of historical agency has all too quickly been overburdened by simultaneous feelings of dispossession and destitution. The pampa has thus historically been referred to as a fugitive land; a land where no history can take effect, no history can be held.

The modern history of the pampa goes back to the nineteenth century. Chile annexed the nitrate territory in 1883 following a four-year war with Peru and Bolivia over the riches that the desert hoarded. The mineral treasures notwithstanding, the desert had long been regarded a distant and peripheral tract of land, to the extent that some political quarters questioned the

whole warring venture. Even for some time after the war, Chileans' image of the pampa was that of an inhospitable and hostile territory, and they were still wary of its aridity and harshness (Vicuña Urrutia 1995). These images were soon to blend with those of the exploration and exploitation of the region, and were to give rise to an ambivalent discourse on the relationship of man to nature. A recent collection of turn-of-the-century (19th to 20th century) popular poetry speaks eloquently of this ambiguity (Gonzalez Miranda, Illanes, and Moulian 1998).

The poems talk about the hostility of the environment, of the overpowering sun and wind, and of the deserted and barren landscape. There are endless references to the dust of the desert and to the mysterious forces of the veins of mineral that suck the men into the depths of the earth. There are also plenty of references to the ways in which the miners master these forces. These point to the physical power and strength of the workers, and in particular to their bodies, which are often described as made of iron, of mineral bravura and strength. An undated, turn-of-the-century poem says it thus (cited in Nuñez Pinto 1998: 227):

> The broken arm of steel
>
> Masters hard ores
>
> Extracting treasures
>
> from the proud Andes.
>
> On matters of human progress
>
> He [the miner] is a victorious soldier…

> El roto brazo de acero

Domina duros veneros

Arrancándole los tesoros

a los Andes altanero.

En el progreso humano

Es soldado victorioso…

In this and other poems the mineral landscape and the mineral body of man are conflated in tropes of wealth and power. There is a sense in which the miners stand for the wealth of the nation, embodying the mineral powers that bring about the nation's progress. The concern with the body and power of the miner is further noted in the abundance of terms that pampinos used to characterize the size and strength of fellow workers. Writing in 1936 and looking back to the turn-of-the-century mining days, Augusto Rojas Nuñez, a former pampino, talks for instance of the variety of *hombres-toro* (bull-men), *fortachos* (strong men), *mulas* (mules) and 'Hercules' that populated the pampa (Rojas Nuñez 1936: 7-14). The names of the tools that workers used were also heavily sexualised and gendered: the giant hammers employed to crush the outer layers of mineral were known as *machos*, males (Gonzalez Miranda 2002: 415).

Rojas Nuñez's prose is weighted with admiration toward such strong men and we find similar approving remarks about those workers whose fist fighting or boxing skills were known across the region. The popularity of fighting was such that in the nitrate refineries of La Noria and Cocina, for instance, people had the custom of getting together for communal fights on Sundays (Rojas Nuñez 1936: 56). Each refinery had its reputed fighter, and these would look out for one another, travelling the distance between oficinas to measure up their

forces (Rojas Nuñez 1936: 38-39). In this early period, social life in the pampa became organized around men's self-assertiveness and independence, and images of bravura and power emerged to mark the presence of man in the desert.

Rojas Nuñez's comments echo the popular view that admired and praised men's capacity to express and assert their autonomy and haughtiness, even when such abilities were dangerous to others. He recalls for instance the story of El Arañita y Panchito Herrera, two men famous in the pampa for their skill at fighting with knives. Men with such abilities received the name of *guapos a cuchillo*, beautiful knife-fighters (Rojas Nuñez 1936: 17-19). Equating beauty and, more generally, morality and affection, with danger and evil was in fact a widespread cultural practice in the pampa. People who distinguished themselves for their smart appearance and dress were known as *futres*, a term also used to refer to the devil (Gonzalez Miranda 2002: 402). The word *niño*, boy, was used amicably to refer to fellow workers; but applied to supervisors the term stood for 'thief'; and in the compound form *niño diablo* (devil boy), the term was used to talk of workers whom one could not trust (Gonzalez Miranda 2002: 419). An aesthetic of ambiguous measurements, of men turned boys, beauty turned wickedness, thus shaped people's images of sociality, as well as the image they had of the desert. Common to this period, for instance, was the depiction of the desert as a maleficent territory, which stole people's virtues from them, and turned decent men into drunkards and criminals (e.g. Martinez 1895).

The turn-of-the-century poems and literature also rehearse voices of abandonment and solitude, a denunciation of life in a remote and ostracized region. This is mixed with knowledge of working under exploitative conditions: for the foreign-owned nitrate

corporations, for the centralised state administration, for the country at large. Thus, a poem

written in 1908 reads (cited in Gonzalez Miranda, Illanes, and Moulian 1998: 413):

I sing to the Pampa, the sad land,

doomed land of damnation,

never in green clothes to be seen dressed

not even at a season's best

….

Year after year

across the desolate Tamarugal [the northern pampa]

march in thousands

the sad pariahs of capital,

bitter sweat down their foreheads,

their eyes in tears, their feet bleeding,

the miserable men piling

heaps of gold for the bourgeois

Canto la Pampa, la tierra triste,

réproba tierra de maldición,

que de verdores jamás se viste

ni en lo más bello de la estación

....

Año tras año por los salares

del desolado Tamarugal,

lentos cruzando van por millares

los tristes parias del capital,

sudor amargo su sien brotando,

llanto sus ojos, sangre sus pies,

los infelices van acopiando

montones de oro para el burgués

As seen, the miners' political awareness provides them with yet another indication of the extent of their sacrifice, which they measure up against the government's shameful neglect of their living conditions and its humiliating disregard towards their demands for improvement.

The image of sacrifice is one that keeps coming up in the workers' writings, often in connection with a sense of geographical disempowerment and solitude. Around this time, miners' sense of alienation found expression particularly in relation to their incapability to communicate their hardships and hard work to their loved and dear ones. Most miners came from the south of Chile, thousands of kilometres away from the pampa. In this context, their isolation proved especially alienating because of the difficulties they found at making their sacrifice visible to their relatives. Miners feared that their families would misunderstand their struggle, their difficulties at remitting money, or simply at keeping in touch, often unbeknown to them. The pampa coerced and constrained the distribution of sacrifice, and was thus imagined as a depletive landscape, extracting from miners both their labour power and their life-relations to the outside world (Corsín Jiménez 2004).

To my surprise, a good part of the register of themes and tropes used by the miners at the turn of the century was still resonating when I arrived in María Elena and Antofagasta (a financial and service capital to the mining industry, where a good number of former pampinos have resettled) ninety years later.

Not unlike the turn-of-the-century poets, most of my informants' accounts of their times in the desert revolved around images of solitude and abandonment. They spoke of the desert as a forgotten and ungrateful territory, where one's life would wane away into oblivion. Some people, for example, spoke of 'giving one's life away to the mineral' (Cf. Nash 1992). Others, with a smile on their face, rehearsed the anachronistic saying that their efforts had *hecho patria*, made fatherland/nation. This view of giving away for nothing, or giving to an abstract, grander cause, was often connected to the idea of the region's sacrifice and the government's blind politics of centralism. The idea here was that the mining region was contributing to the national economy way in excess of what it was getting back. The imagery of giving was also often expressed with the powerful idiom of 'emptying' (*vaciar*). The workers emptied the landscape of its wealth; but the landscape also emptied and took their life away from them. In another sense, the pampa itself could be emptied, as indeed had happened with the final closure of the nitrate industry. The mines closed, the workers left and the landscape was left moribund, empty of life. Finally, the desert was also said to be devoid of the traits that were thought to nurture life. Workers spoke of the desert as a pale environment, without the lush vegetation and greenery of Chile's southern valleys, where most men came from. Some of my informants, for instance, recalled with affection the times when Mexican films were screened in the theatres of the pampa, because of the abundant images of verdant fields and beautiful meadows they contained. The images reminded them

of their hometowns in southern Chile: 'It was a sweet melancholy', an informant said, 'to walk out of the desert and into a cinema and be refreshed by the smells and bloom of the south.' History waxed and waned, and the desert coerced people into keeping up with, or sizing down, their own biographical projects.

In one way or another, emptying always seemed to lead to images of barrenness, exhaustion or death. And death purchased saliency in almost any story about the pampa. There were stories of people who had died in detonations, blown apart along with the flying saltpetre; or who had fallen into one of the giant vats where the mineral was liquefied, and were melted alive. There were stories of people who had died *empampados* (literally, 'soaked in pampa'), people who had been spellbound by the pampa and lost their way in the desert. And there were of course stories of the famous dust of the desert, the deadly clouds of silica that cloaked everyone's lungs and killed you in an agonizing final breath.

References to a land of the dead, or a landscape of death, often ended up with people talking about the cemeteries of the pampa. Scattered across the desert's territory are dozens of abandoned cemeteries that were once attached to the nitrate refineries. Most people speak with great distress about the state of neglect of these grounds. All of these sites have been damaged by the erosive forces of the desert, some even despoiled by tomb raiders. Some people, especially old pampinos, are very sensitive to this issue. A woman, in an emotional and disturbing remark, told me that the pampa had taken everything away from her, left her to wander like a ghost. 'Where is my past?', she said, 'where has my life gone if I cannot touch my past, if I cannot walk out to it and show it to people like you.' Her feelings over her spectral past were not unique. It is quite common, for instance, to hear people speak of the abandoned nitrate refineries as 'ghost towns' (like Victoria, in the Belgian documentary

mentioned above), and the landscape of the desert is plagued with stories and legends of *animas* (wandering souls) and other spectral beings. A great number of these *animas* are women spirits, who suffered a great loss, or were violently dispossessed of something precious whilst alive. Some were savagely raped and left to die in the pampa; others lost their partners in some kind of unfortunate mining accident; and yet others lost their children. Dead children are in fact generally referred to as *angelitos* (little angels), a term again reminiscent of spectral states.

These visions of spectrality, of wandering souls and little angels, evoke the theme of the pampa's visibility of which I spoke above. During the early years of the twentieth century, discourses on nitrate mining evoked a particular land-person relationship that centred on images of labour-power and strength, on the one hand, and on an unstable and fearful landscape of wealth (populated by devils and animas), on the other. People confronted the gigantic (the fearful and unknown desert) by making themselves gigantic (self-assertive and independent). This is best expressed in the local legend about Tolololampa, a 'giant' (his foot prints were 45cm long, his foot steps 180cm apart) whose trail people kept coming across in the pampa but who no one had ever encountered (e.g. Rojas Nuñez 1936: 68-69). The giant stood against the extractive and depletive economy of mining as an elevated figure of power and self-containment. Tolololampa is an exemplary archetype of manpower, capturing the miners' struggle to mark their presence in the desert in the early 1900s. In this sense, the giant Tolololampa represents that which was gigantic about human life in the pampa: the human effort at making history and at resisting the depletive and erosive forces of industry and the desert.

The legend of Tolololampa, like the images of the handsome devil or *futre*, or of the incontrollable and wandering *animas*, speaks also about the extent to which the pampa was regarded as a fearful and unstable territory. The desert was too vast a territory to be known; too many life-forces unfolded in its interior. Such lack of purchase or control over the environment of the pampa is further signalled by the element of translucence that runs through most of these stories. What is common to the devil, the wandering souls and the invisible giant is their transparency to light: they are known to exist but resist apprehension; they can be visualized but are not visible. The paradigmatic case of translucence is La Huasicima, a legendary magic mine, incidentally encountered by different people on different occasions, but never found when returning to properly exploit it (Rojas Nuñez 1936: 77-80). La Huasicima became visible only to those who were lost in the desert (Rojas Nuñez 1936: 78), underscoring the purposelessness of all historical enterprises in the pampa.

Conclusion

Visibility has of late become a fashionable analytical idiom in the social sciences. 'Seeing things hidden', as Malcolm Bull puts it (Bull 1999), is what the scientific enterprise has been all about for the past three hundred years. Today the gaze has shifted, however, and our concern is expressed instead as that of unveiling the processes through which the invisible reveals itself. Where once the object of knowledge was hiddenness, now it is visibility. What remains to be answered, however, is how and why visibility itself is a thing made visible (Cf. Strathern 1999a: 258-259). Tales and legends about invisible giants and magic mines are a way of bodying forth and making distinctive – and visible – a particular image and set of assumptions about social life in the nitrate desert – a vision, as I said above, about the

purposelessness of historical agency in the pampa. They are also, however, a particular mode of querying the nature of what becomes visible. For these visions of culture are visions of *translucence*, of things that now appear, now disappear. They bring a sense of retroprojectiveness to human agency: 'think you saw me, think again; for you might, or might not, see me again.' Translucence marks the frailty and uncertainty that characterises life; the delicate and trembling mirages through which people attempt to make themselves available to, or present in, history. In this sense, the imagery of translucence problematizes the naturalness of the relation between the present and the past, between visibility and hiding, revelation and concealment (Strathern 1999b). Here the relation between the visible and the invisible is not a direct one but a problematic one, for the difficulty at making things visible (hence their translucence) shows that not all scales can be matched – some, like people's capacity to hold and make their history present, may be unmatchable, and thus become existentially significant. The visible and the invisible are therefore not necessarily *related* as perspectival inversions of one another, but may emerge instead in a new form of proportional life-work: translucent historical agency.

Translucence is also made significant by the *size* of what it hides. It is a *giant* not a dwarf that remains unseen; a *golden* mine not just any rock that disappears. But size should not be taken for granted either, which is why stories are told about fantastic measurements that nobody can quite get their hands on. Rather than suspending disbelief, people are constantly being asked to refocus and reproportion their visions. Relationships that ought to be important (say, people's relationships to place, or to history) are thus re-qualified by leaving open the degree of aperture through which we look at them. We try to bring relationships into focus, to project them to the right size: the right figure-ground relationship between man and

the environment; the right presence-absence relationship of man in history. Getting the size right – obtaining righteousness – is not easy, however, and an ambiguous sense of magnitude and magnification (or their contraries) is brought to bear upon these relationships.

Ambiguous magnification is of course a measure of proportionalism. Of relationships that now measure up, now measure down, and rescale the world in the process. The Protagorean dictum, to which I referred to in the introduction, may now be read in a different light: Man is the measure of all things, yes; and things change size depending on the size of Man's grandeur or the size of his humbleness. Moreover, sometimes, like the in the case of the disappearing giant, things change size only to tell us that it is *change*, not size, that is rescaling our powers. A Protagorean anthropology of this kind thus takes the category of the person as the centre of all forms of analysis (Cf. Strathern 1991: 118).[9] It sees relationships as folding out proportionately from an expanded notion of personhood; of persons working themselves out by weighing and proportioning their life-projects. This is the kind of weak existential anthropology to which I referred earlier, and this, I think, is what Alfred Gell had in mind when he said that the proper locus of anthropological analysis ought to be the biographical life-project: finding the factor by which people scale (i.e. proportion) their relationships out, and mapping their worlds accordingly.

My aim in this article has been to show some of the limitations of the algebraic imagination as a mode of argumentation in anthropology. The language of relations lends itself too easily to its use and application in logical and pseudo-logical explanations; but social life is not logical, and there is only so much social knowledge that can be fitted into and accounted for by a relational matrix. In its place, I have argued that there may be some merit in looking at social life as the apportioning of human projects; of social relationships

worked out as proportions. Proportions are inflected by estimations of magnitude and importance, and as such mark how relationships emerge as consequential life-projects (the remainders of knowledge to which I referred earlier). Such attempts at pulling together, or making sense of, disparate orders of knowledge can also help us re-centre the anthropological project around the person. Knowledge about the social may be rescaled by seeing how notions of personhood and biography are scaled out: how far out and in what measure do people see themselves as social and historical actors. This is not to argue that all anthropology should be about the category of the person, but rather that there can be no proper anthropology that does not convey a sense of what it means to be a person. Such person-centred (Protagorean) anthropology shares many-a-one concerns with existentialism, and may indeed be dubbed a form of 'existential anthropology'. I do not oppose such a label; in fact, I do think there is much to profit from an existential analytic, so long as this is not conflated with, or mistaken for, a politics of the individual (Cf. Rapport 1997, 2002), or for an anthropology of self-consciousness (Cf. Cohen 1994, Cohen and Rapport 1995). What I do think this is, however, is unabashed humanism (Cf. Gell 1998: 3), for I believe that social theory and research is ultimately impossible without a sense of the human – or, as Weiner puts it, a sensibility for the gigantic that redefines the human. Good anthropology keeps the biographical project within sight, and makes sure that descriptions of people and things do not get out of proportion.[10]

NOTES

[1] I am very grateful to Marilyn Strathern for her comments and encouragement and the central stimulation of her work. Warm thanks also to Eric Hirsch for his acute observations

and questions. I would also like to thank Goran Janev for his comments on an earlier draft. A version of this paper was presented at the weekly seminar of the Department of Social Anthropology, University of Manchester. I am grateful to students and staff there for their insightful comments and criticism. Much of the work done for this paper was carried out whilst I was a British Academy Postdoctoral Research Fellow at St Hugh's College, Oxford. I am thankful to both institutions for their support. The usual caveats apply.

[2] A curious reversal from its original use: the notion of a relation made its way into the language of kinship from its prior use in designing logical (conceptual) links (Strathern 2001). My thanks to Marilyn Strathern for bringing her Harvard Distinguished Lecture to my attention.

[3] '[R]elations are invariably people related through some other criterion. To hear an English-speaker call someone a 'relation' tells you there is some other reason for the connection than simply acknowledging it' (Strathern 2001: 73).

[4] Marilyn Strathern has written on the cultural use of the imagery of 'logical' relations to elucidate forms of sociability in the English-speaking world (Strathern 1995, Strathern 2001). What is most striking is how little attention have sociology and anthropology paid to this cultural-cum-linguistic inflection. This is what I mean by the term 'algebraic imagination': the use of a specific historico-geographical analogy (between logical and social relations) to build theories of the social.

[5] Perspectival focus and calibration is another name for obviational analysis, after Roy Wagner (1986a, 1986b); see also Strathern (1991: 79-82)

[6] *Deixis* is a Greek word that means 'proof'. Aristotle opposed *deixis*, the proof that is self-demonstrative, that is, that needs no further explanation, to *apodeixis*, the proof that is

deduced by syllogism. Deictic proofs, then, are *evidential*: self-given and self-accountable. Social life, however, is not logical, and social forms though self-given are not self-accountable. (Social *life* may be self-accountable, but that is an entirely different matter.)

[7] The question of the logicism of concepts is far more problematic than this, however, and I can hardly start exploring it here. Let me say, though, that a reasonable view holds that logic requires *logical concepts* to work. In algebra, *x* and *y* are logical concepts, because they work in the abstract, so to speak. They are mathematical concepts, free from the determination of concrete numbers (recall Leibniz's definition of algebra). Now, Viveiros de Castro may well be arguing that indigenous concepts are *logical* concepts because they are self-sufficient within their own relational matrix – which is why they work *deictically*. This does indeed seem to be his position for elsewhere he has argued that what anthropology needs is an 'anthropological concept of the concept, i.e. an anthropological theory of the imagination.' (Viveiros de Castro 2003: 14) But there are too many shifts in scale here. For not all concepts are *logical* concepts (and if some *are* that means that some are not), and thus not all *conceptual* thought is logical. Moreover, it is not at all clear how and what is conceptual, let alone logical, in the workings of the imagination.

[8] I thank Eric Hirsch for prompting me to make this clarification.

[9] Protagoreanism in not new in anthropology, except for its name, perhaps; e.g. 'Dobuans take the person as the measure of all things. Personifications have, we might say, a holographic effect, that is, one can encounter 'persons' in all forms of life.' (Strathern 1995: 17). The emergence of forms of personhood through the work of relationships is a constant in Strathern's writings, e.g. (1999a).

[10] 'If there is any value in carrying the discussion forward, it is because the question of

proportionate description remains in the anthropological account.' (Strathern 1991: 53-54,

emphasis added)

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