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Animacy and egophoricity: Grammar, ontology and phylogeny

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Abstract

Some results of earlier work on animacy by Kari Fraurud and the author are reviewed, demonstrating the close relationship between (i) the role of animacy as a determinant of grammatical rules and the choice between types of referential expressions, and (ii) statistical regularities in discourse. The idea that animacy is an ontological category is developed further. In the final section, the phylogenetic basis of the notions behind animacy and egophoricity is discussed. It is argued that the grammatical animacy hierarchy corresponds to a three-step cognitive scale: the self is the model for other animate individuals, which are in their turn models for inanimate objects when understood as individual 'things'.
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1. Aim of the paper

The aim of this paper is to relate the role of animacy in grammar and discourse to some broader considerations of the nature of animacy as a category and its phylogenetic history. To this end, I will try to do three things. The first is to review some results of earlier work on animacy by Kari Fraurud and myself, demonstrating the close relationship between (i) the role of animacy as a determinant of grammatical rules and the choice between types of referential expressions, and (ii) statistical regularities in discourse. The second is to develop the idea, presented first in Dahl and Fraurud (1996), that animacy is an ontological category. The third is to speculate on the cognitive and phylogenetic bases for the pervasiveness of animacy in language.

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2. Animacy and grammar

In Dahl and Fraurud (1996), it was argued that there is a close relationship between (i) the role of animacy as a determinant of grammatical rules related to syntactic function, in particular to case marking and word order, and (ii) statistical regularities in the distribution of animate and inanimate noun phrases in different syntactic positions. For instance, accusative case marking is in many languages restricted to animate NPs, and overt ergative marking is at least sometimes restricted to inanimate NPs. This can be seen as a tendency for the atypical fillers of syntactic slots to be the ones that are singled out for case marking: direct objects (the prime candidates for accusative marking) are overwhelmingly inanimate in discourse, whereas subjects of transitive sentences (the prime candidates for ergative marking) are overwhelmingly animate. Thus, in the spoken Swedish material presented in Dahl (2000a), 89% of all direct objects were inanimate, and 93% of the transitive subjects were animate. The connection between animacy and transitive subjecthood, which is statistical in Swedish and English, is grammaticalized in some languages, e.g. Jakaltek (Craig, 1977), meaning that alternative constructions have to be used in the cases where English has inanimate transitive subjects.

It was also shown in Dahl and Fraurud (1996), on the basis of written corpus data, that animacy is a strong determinant for the choice between pronominal and lexical NPs. In written Swedish, we found that the overall percentage of 3rd person pronouns among definite NPs with human reference was 36%, whereas for non-human NPs it was only 8%. These tendencies are even stronger in spoken language: the corpus used for Dahl (2000a) had 92% pronouns among the animate NPs, although this is partly due to the preponderance of 1st and 2nd person pronouns, which I shall return to.

In typological and functional linguistic research, grammatical restrictions related to animacy have often been explained in terms of hierarchies, the idea being that certain generalizations will apply to all and only cases above a certain cut-off point in the hierarchy. The idea of an "animacy hierarchy" HUMAN>ANIMAL>INANIMATE seems to go back to Silverstein (1976). As it turns out, however, phenomena are seldom reducible to one single and well-behaved hierarchy. Rather, animacy tends to interact with a host of other factors, yielding bundles of syntactic, semantic and pragmatic properties that tend to occur together, as exemplified in the following certainly incomplete list:

(1)

Animate	Inanimate
Definite	Indefinite
Pronominal	Lexical
Subject	Non-subject
Count	Mass
Proper	Common
Rigid designation	Non-rigid designation
Independent reference	Dependent reference
Proximate	Obviative
Agent	Non-agent

Not infrequently, scholars include in the animacy hierarchy notions that are not derivable from the notion of animacy in its traditional sense. In particular, it is often said that the members of the

category of person differ in animacy, the first and second person being higher on the hierarchy than the third. Although first and second person referents are necessarily animate in contra-distinction to the third person referents, which can be both animate and inanimate, this gives no reason to think that animate third person referents as such are ''less animate'' than first and second person referents (as noted by Comrie, 1989). Subsuming person under animacy may therefore obscure the independent role that the distinction between speech act participants and third person referents plays in grammar and discourse.

DeLancey (1981) observed that it is more common for cut-off points in grammatical systems to go between NPs referring to speech act participants (SAP) and all other NPs than between animate and inanimate NPs. Thus, whereas restricting ergative case marking to inanimates does occur but not that frequently, ergative case marking on 1st and 2nd person pronouns is strikingly rare. Something similar can be said of systems of inverse marking, in which unexpected subject–object combinations trigger special markings on the verb. Languages where inverse marking is found when objects outrank subjects in animacy do exist but are outnumbered by languages where the inverse marking depends on the category of person—that is, inverse marking is used e.g. when the object is 1st person and the subject 3rd person.

On the basis of data from spoken corpora of Swedish, English, and Spanish, it was demonstrated in Dahl (2000a) that the above-mentioned tendencies in grammatical systems correspond to strong and consistent statistical skewings in spoken discourse. Since the relevant semantic distinction is not exactly one between 1st and 2nd person on the one hand and the 3rd person on the other, or between speech act participants and everything else, I introduced the notion of egophoric reference, under which I subsumed reference to speech act participants, generic reference and logophoric reference (i.e. reference to the matrix subject in oratio obliqua constructions). Egophoric reference would then be opposed to allophoric reference, i.e. non-generic 3rd person (''reference to others''). The reason for putting generic reference together with SAP reference was twofold, the first one somewhat pragmatic, in that in a language like English, generic reference to persons is most commonly expressed by a second-person pronoun and thus difficult to distinguish in a corpus study from SAP reference. More pertinently, however, it turns out that generic pronouns such as English *one* or Swedish *man* are more similar to 1st and 2nd person pronouns than to 3rd person expressions with respect to their syntactic distribution. Semantically, that is not unexpected, since those pronouns in their most common use express generalizations that include the speaker and often also the hearer.

A term like ''non-allophoric'' may be preferable to ''egophoric''—it can be argued that it is allophoric reference that is really the marked case. Thus, as it turns out, allophoric NPs are a minority (about 40%) among animate NPs in spoken discourse. Simply put, we speak more about ourselves than about others. This tendency is strengthened in contexts which favour animates in general. With mental verbs such as 'think' and 'believe', where there are hardly any inanimate subjects at all, egophoric (non-allophoric) subjects make up 80%. Similarly, in contexts which disfavour animate referents, non-allophoric NPs are even more strongly dispreferred—among non-reflexive direct objects I found only 2% non-allophorics in the Swedish material (that is, 20% of the animate DOs). It thus does seem that even if 1st and 2nd person referents are not more ''animate'' than 3rd person referents, they behave in discourse as if they were somehow prototypical among animates. This is obviously something that a theory of animacy has to account for.

Returning now to the role of animacy as a determining factor in grammatical categories, we can see that it is not only case marking and argument marking on verbs that is often dependent

on animacy but in effect virtually any grammatical category that is somehow linked to reference. Thus, the category of number frequently obeys the animacy hierarchy in that in many languages, number marking is restricted to, or obligatory only for, NPs above a certain cut-off point on the hierarchy. Likewise, it was argued in Dahl (2000b) that the semantic core that is a universal property of gender systems (Aksenov, 1984; Corbett, 1991) always involves animacy: in any gender system, there is a general semantically-based principle for assigning gender to nouns and noun phrases above a certain cut-off point on the animacy hierarchy. However, we run into a paradox here. We might blame the pervasiveness of animacy on the fundamental cognitive role played by this distinction between living and non-living things. It would be no wonder if humans felt a need to signal this distinction systematically, one might think. But at a closer look, we can see that the animate:inanimate divide is seldom a Berlin wall. In addition to the fact that the dividing-line may be drawn at quite different points of the hierarchy, ''leakage'' seems to be if not a universal at least a systematic phenomenon. From the grammars of various European languages, we are used to ''masculine'' and ''feminine'' gender being used also of inanimate referents, and cross-linguistically, the spread of animate gender to inanimate referents is a common phenomenon. In a similar way, even if some languages reserve the transitive subject slot for animates, English and Swedish do not: the 93% animate transitive subjects in my Swedish material leave room for 7% inanimates. In other words, inanimates somehow tend to sneak in where they should not be. Let me leave this paradox unresolved for the time being, turning now to the idea that animacy is an ontological category.

3. Animacy and ontology

There is a problem with the term ''category'', in that it can be used in several different ways. Thus, in everyday language, ''category'' tends to be synonymous with ''class'', ''type'', or ''kind'': we would for instance say that cats and dogs represent two different categories. Aristotle's categories, on the other hand, included notions such as Quantity, Quality, Place, and Time, which are obviously at a higher level of abstraction. Similarly, grammarians speak of number as an inflectional category of nouns but also at another level, of singular and plural as two different categories. Thus, categories may be both the results of a process of categorization and the dimension or parameter according to which the categorization is performed. Animacy, then, is a category in the latter sense; applying it results in a division of objects into ''animate entities'' and ''inanimate entities'', which are categories in the senses of ''classes'' or ''types''. The claim that animacy is an ontological category may now be more unequivocally rephrased as the claim that ''animate'' and ''inanimate'' are ontological types.

Ontology is traditionally[1] understood as the branch of philosophy whose domain of inquiry is summed up in the title of Quine's classical paper ''On What There Is'' (Quine, 1948). Ontologists do not try to answer specific empirical questions as whether the Loch Ness Monster exists or not, rather they are interested in the existence and nature of more fundamental types of entities. Examples of such ontological types would be numbers, times, locations, properties, events, propositions, facts, and physical objects. Entities that belong to different ontological types tend to be incommensurable because what one can say about an entity depends largely on the ontological

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[1] In computer science, ontology is a count noun (''an ontology''), somewhat vaguely denoting a system of concepts relevant to a certain domain.

type it belongs to. For instance, it is meaningful to ask about an integer, say 5, whether it is odd or even, but it makes no sense to ask the same thing about a physical object such as a chair. In linguistics, this type of domain specificity has traditionally been recognized under the name of ''selectional restrictions''. In early versions of transformational grammar, selectional restrictions were seen as properties of lexical items; this idea turned out to be problematic (McCawley, 1968) mainly due to speakers' capacity to find acceptable interpretations for almost any combination of words. Ultimately, then, selectional restrictions are not properties of expressions in a language but of the concepts they express, and concern the meaningfulness of the attribution of a given concept to a certain type of entity. The selectional restrictions that have been discussed in linguistics have largely been based on a very limited number of criteria. For instance, in Chomsky (1965), where selectional restrictions play a prominent part in grammar, the features they involve are [±Count], [±Animate], [±Human], [±Abstract]. Thus, the lexical item *frighten* would be marked ''as allowing an Abstract Subject and an Animate Object'' (1965, 114). By contrast, semantic features such as [±Male] or [±Adult] rarely figure in the discussion of selectional restrictions,[2] let alone other possible candidates such as [±Four-legged] or [±Red-haired]. The reasons for the importance of animacy considerations in selectional restrictions are best understood if we move from individual predicates to semantic or thematic roles. A relatively standard list of such roles could be: Agent, Experiencer, Theme/Patient, Instrument, Cause, Location, Goal, and Source. Of these, the two first mentioned can only be filled by animate beings—and that is obviously what is behind the syntactic distribution of animates, since these two roles are also the ones that are normally realized as syntactic subjects. Indeed, the capacity for perceiving and acting upon the environment is more or less what one would see as the defining criterion for being animate. We can thus see that animate entities behave like an ontological type in the sense that membership in this type is important for determining what can be said about an entity.

But there are also other ways in which the ontological character of animacy is reflected, some of which were discussed in Dahl and Fraurud (1996). Thus, it tends to be hard to lump together animate and inanimate entities: there are few if any nouns whose denotation includes both animates and inanimates, and in some languages animate and inanimate nouns cannot be conjoined in a fully grammatical sentence.

One interesting feature of ontological types is the common lack of natural ways of referring to them. For instance, English seems to have no noun that denotes physical objects and nothing else. A word like *thing* can be used to denote physical objects in general but can equally well be used of objects such as propositions and ideas. This seems to be a general property of similar words in other languages. Similarly, there is no generic noun in English for 'animate being'. Even words for 'human' are often problematic in languages: they tend to be identical to or derived from words meaning 'male being'. This takes me to a discussion of the word *person*.

It was suggested in Dahl and Fraurud (1996) that animacy is at the bottom a question of a distinction between ''persons, that is, essentially human beings perceived as agents, and the rest of the universe''. Indeed, the notion of ''personhood'' seems to embody what is quintessential to

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[2] The predicate 'male' will obviously often show up in the semantics of inflectional categories, as well as in what has been called ''lexical presuppositions'' of nouns, as when *bachelor* is said to presuppose of its referents that they are 'male' but assert that they are unmarried. Inflectional categories and lexical presuppositions seem to obey less strict constraints than selectional restrictions in the traditional sense—they are less directly connected with meaningfulness than selectional restrictions.

animate beings, both the roles as agent and experiencer, and the focus on the individual, which I shall return to. At the same time, the word *person* and its translations into other European languages seem to be late additions, which tend to remain outside the core vocabulary. In West European languages, the words used derive from Latin *persona*, the original meaning of which was 'mask'. In Russian, the word for 'person' is *lico*, the primary meaning of which is 'face', and which retains the rather unsuitable neuter gender even when used in the derived sense. I think it can be claimed that we often do not need dedicated nouns for ontologically relevant concepts because these are not really salient to us—if everything outside the ontological type is incommensurable with what is inside, there is no need to contrast the type against anything else. Rather, ontological types work behind the scene, channeling the ways we speak about entities in the world. Given their fundamental nature, we would perhaps also expect them to have rigid boundaries, but in a way, it is rather the other way around: the differences between the types are not of the kind that give rise to misunderstandings and can therefore easily be transgressed in various ways. Among the processes that make it possible to move from one ontological type to another we can distinguish between metaphoric and metonymic processes.

In a metaphorical process, a phenomenon φ in one domain is seen as analogous to a phenomenon ψ in another domain, licensing the use of expressions about φ that would normally be used about ψ. Thus, inanimate forces may be spoken about as if they were animate agents, and abstract relationships may be spoken about as if they were situated in physical space. I said above that languages often lack simple ways of speaking about animacy as such; in many languages, the most natural way of expressing the concept of 'inanimate' is to use an adjective such as *dead* whose primary meaning 'no longer alive' applies to animates. Such metaphorical processes are one (but probably not the only) way in which animate genders are extended to inanimate entities.

Metonymic shifts between ontological types are perhaps less salient in language but no less important than metaphorical ones. By metonymy, a linguistic expression may be used not only about its "proper" referent or denotatum but also about various entities that are associated with the referent or denotatum. These entities often (perhaps normally) belong to other ontological types. For instance, the noun *newspaper* can be used at least to denote the following: (i) a copy of a newspaper (which is a physical object, that you can for instance wrap your garbage in); (ii) an issue of a newspaper (*The Times* of today); (iii) a newspaper viewed as a publication (the kind of thing you can subscribe to); (iv) the company that runs the newspaper. The flexibility in the interpretation of the noun *newspaper* is possible because in most cases, there is little risk for misinterpretation. If, reading a copy of *The Times* for the first time, I say for instance *This newspaper is interesting*, I could in principle mean (i), (ii), or (iii), but neither I nor my listeners will probably care too much. It is rather seldom that we meet sentences like *The tycoon bought the newspaper*, which means quite different things depending on whether we choose interpretation (i) or (iv). (Meaning shifts of this kind were discussed extensively by Nunberg (1979) although he did not see them as metonymical.)

What I have said just now may seem to be at variance with the claim I made earlier when saying that it is hard to lump together entities of different ontological types, e.g. animate and inanimate entities. Notice, however, that although it is possible to be vague about the ontological type of referent of a noun phrase such as the *newspaper*, there are still restrictions on combining entities pertaining to different types: *The tycoon bought two newspapers* cannot mean that he bought a copy of one newspaper and the company that runs another.

By a very general process, seeming violations of selectional restrictions are resolved by metonymically reinterpreting the problematic expression as referring to an entity associated with

the original referent and belonging to the adequate ontological type. In computer science, this has long been used as a device to make programming languages more flexible, under the name of coercion, a term which seems to have been first used in linguistics by Moens and Steedman (1987) and Pustejovsky (1991). Coercion from animate to inanimate or vice versa is common. Much-cited examples such as *The ham sandwich is sitting at table 7* (Nunberg, 1979:149) illustrate coercion of an inanimate NP into an animate one, changing its interpretation to 'the person who ordered the ham sandwich'. Conversely, it can be argued that by ascribing a properties to a person such as *weighs 80 kilos,* we actually coerce him/her into a physical object. At this point, however, we risk getting into a discussion of the relationship between ''body'' and ''soul'' or ''mind'', whether a person is distinct from his/her body or not, which would no doubt take us a bit too far.

4. Animacy and phylogeny: the genesis of the notion of an individual

Is the newspaper I read this morning the same newspaper as the one I read yesterday? Obviously, this depends on which interpretation of ''newspaper'' I have in mind.   A newspaper in the sense of a publication you can subscribe to and have delivered every morning is more abstract as an object than a newspaper in the sense of the concrete copy I read today—it is less tied to a specific time and place. This is even clearer if we think of other examples of the type:occurrence ambiguity: a performance of a symphony is something more concrete and time-bound than the symphony as such. We think of the symphony as being ''the same'' from one performance to another even if they are quite different from the other. In a similar way, if we see a photo of a person at seven and another of him/her at seventy, it may be quite difficult to see the similarity, but this does not keep us from seeing the photos as representing ''the same person''. It is characteristic of our understanding of animate beings that we treat them as individuals persisting over time. For inanimate entities, this is much less often the case.

In the ''cognitive ontology'' presented in Fraurud (1996), humans and other animates are typical ''Individuals'', i.e. ''entities that are conceived of in their own right, independently of other entities, and that are directly identifiable, generally by means of a proper name''. ''Individuals'' are opposed on the one hand to ''Functionals'', entities that ''are conceived of only in relation to other entities or elements'' – a typical example would be someone's nose – and ''Instances'', entities that ''are merely conceived of as instantiations of types'', such as a glass of wine. Fraurud argues that the three ontological classes of Individuals, Functionals, and Instances, to a large extent predict how we choose to refer to an entity—by a pronoun or a proper name (Individuals), a definite lexical noun phrase (Functionals) or an indefinite noun phrase (Instances). In addition, she argues that animacy – or in this case the distinction between persons and non-persons – directly influences the choice between pronouns and NPs headed by basic-level nouns. Under similar contextual conditions, a non-person introduced by a proper name is less likely to be referred to by a pronoun than a person. The following sentences would thus illustrate the typical pattern:

(2) *Ollo-Food has been very successful in the last five years. The company has now over 50,000 employees.*
(3) *John Smith has been very successful in the last five years. He has now over 500 people under him.*

It seems clear to me that an Individual that is conceived of ''in its own right'' must have an identity which is at least partly dissociated from the Individual's properties at specific space-time

locations. (Aristotle would have said that the Individual is a ''substance''.) Our cognitive ontology induces us to think that it is possible to step into the same river twice (pace Heraclit), but then we must disregard the identity of the water molecules that it contains.

The Gestalt psychologist Kurt Lewin introduced the notion of ''genidentity'', which is a relationship holding between two objects not because they have the same properties in common, but because one has developed from the other (Lewin, 1922). Defined in this way, genidentity would hold for the river, and for two sightings of the same person, but not necessarily for two performances of the same symphony. It does appear that Lewin wanted to impose a condition of spatio-temporal continuity on the genidentity relation; as a general condition on the identity of Individuals in cognitive ontology this is problematic, however. Consider, for instance political entities such as states, which certainly seem to fill the conditions on Individuals formulated by Fraurud. Not only may states consist of scattered parts (e.g. Malaysia), violating the condition on spatial continuity, but we also do not have problems accepting temporal gaps in the existence of a state: thus, it is generally said that the Polish state is a thousand years old, although it did not exist between 1795 and 1918. As for persons, the condition on temporal continuity is violated if one accepts the idea of reincarnation, as many people do.

Another potentially relevant notion is the philosopher Saul Kripke's ''rigid designator'' (Kripke, 1982), which is an expression that designates the same individual in all possible circumstances or worlds, with proper names as the paragon example. This makes sense only if we make sameness at least partly independent of manifested properties. For Kripke, that is possible, since identity across worlds is ''stipulated'', not ''observed''. This is in contrast to Lewin's genidentity, which is based upon an actual historical connection between two manifestations. On the other hand, Kripke's ''Causal Theory of Names'', in which an expression can be said to refer to an object at a certain point in time because there is a causal chain from that point to a ''dubbing event'', could be said to imply genidentity in Lewin's sense if not for the individual so at least for its name.

In a different research tradition, Piagetian developmental psychologists have been much occupied with the notion of object permanence which is defined as ''the understanding that objects may still exist even when one has no perceptual contact with them''. The ball that has rolled behind the sofa is still there, and you may be able to get it out if you try. Traditionally, human infants are considered to develop understanding of object permanence at 8–10 months. Obviously, to appreciate the existence of an invisible object you must have an understanding of an object as different from its manifestations. On the other hand, to understand that something that has just disappeared from the visual field still exists should be less cognitively demanding than storing a representation of it in long-term memory. In Fraurud's terms, the ball behind the sofa will probably remain an Instance of the kind 'ball' rather than becoming an Individual worthy of a proper name. But long before infants reach the age where they acquire object permanence according to Piagetian theorists, they are able to distinguish individual human beings: according to some recent investigations reported in the media, even when still in the womb they may be able to tell their mother's voice from that of others. In fact, the ability to mentally represent one's conspecifics as individual beings is phylogenetically quite old and present in many species in mammals and birds, since it is a prerequisite for more advanced social interaction. In the highly successful popularizing movie ''The March of the Penguins'' one could see how imperial penguins recognize members of their family after months of absence—a necessary prerequisite for their intricate system of child rearing, and also for pair bonding. Outside the family, recognition of individuals is also necessary for the maintenance of hierarchical relationships. Notice that all this presupposes that sameness, for these animals, does

not imply identity of manifested properties. Returning after its absence, the penguin parent must accept that the youngster it sees is its child, even if it has grown twice as big in the meantime. In other words, the penguins must be able to recognize and identify animate Individuals.

The recognition of conspecifics as Individuals is thus necessary for the survival of higher social animals. But there is little evidence that the notion of an Individual is useful for anything else at this stage. The inanimate objects handled by non-human mammals and birds can in the normal case be seen simply as Instances—one nut is as good as another, and there is little reason to ask if the nut you see today is identical to the one you had yesterday. Even the identity of members of other species is usually rather irrelevant—if a cat sees a mouse go into a hole it may be relevant to remember that there are mice in that hole, but whether it is the same mouse that comes out is hardly of any importance. I am prepared to be contradicted on this point, but it seems to me that it is only when our ancestors started developing the notion of ownership that the question of identity arose for inanimate objects. It may be quite important to know which knife is mine and which is yours. In Fraurud's taxonomy, however, such objects would still rather be Functionals, defined by their relationship to Individuals, than Individuals themselves.

What we see then is that the ability to handle Individuals cognitively is much earlier in the animate than in the inanimate domain, both phylogenetically and ontogenetically. This suggests, in my opinion, that to the extent that we think of inanimate objects as individuals, persisting over time and abstracted from their manifested properties, this thinking is modeled on our conception of animate individuals, primarily our own conspecifics, i.e. persons, in a way similar to how thinking about abstract relationships tends to be modeled on our conception of concrete physical space. It is thus possible that the original function of the machinery we use in language to refer to objects in the world – I am thinking primarily of pronominal and other kinds of definite reference – was to make it easier to speak about other persons. But there are also possible repercussions for syntax. It is really the need to be able to say things about individual entities that motivates predicate–argument or subject–predicate structures in grammar. It is possible to imagine a language totally lacking definite NPs or pronominal reference (whether expressed by verbal inflection or free pronouns). In such a language, one could still express a large part of the information that is necessary for social interaction, such as '(There is) no food' or 'It is raining'. But as soon as I want to say things like 'My wife is ill' I need subject-predicate structure.

How does the distinction between egophoric and allophoric reference enter into this picture? We have seen that the ability to recognize other members of one's species is a necessary prerequisite for living in a complex social environment. I have to realize that there are others out there who are like myself, individuals who can perceive the world and act upon it. This is probably a gradual process, where the final step is the acquisition of a full-blown 'theory of mind', that is, the realization that other individuals possess beliefs about the world and that those beliefs need not be identical to my own. In an obvious sense, then, we use ourselves as models for others. In conjunction with what I have said earlier, we obtain a three-step cognitive scale, corresponding to the animacy hierarchy: the self is the model for other animate individuals, which are in their turn models for inanimate objects when understood as individual 'things'.

But an essential part of the process just described is the development of self-awareness: I must understand not only that others are like myself but also that I am like the others, that is, I must see myself as separate from the world and as a possible object of other individuals' perceptions and actions. Linguistically, this means taking the step from saying *It is cold* to *I am cold, what about you?*—that is, becoming able to refer explicitly to the participants in the speech act and to their perspective.

There are interesting developments going on in developmental and evolutionary psychology and related areas that may eventually help to explain how we come to an understanding of ourselves and others as individuals. In particular, the discovery of mirror neurons, that is neurons that are fired both when we ourselves perform a certain action and when we see someone else perform the same action, appears to relate directly to the (not necessarily conscious) insight that others are also selves and that the self is another other.

Dahl and Fraurud (1996) opens with the statement that animacy "is so pervasive in the grammars of human languages that it tends to be taken for granted and become invisible". In this paper, I have tried to show how animacy distinctions at the same time stay in the background and act as organizing principles for grammar and discourse. I have argued that the ways in which animate and inanimate reference differ have deep phylogenetic roots and that our conception of individual objects in general may be based on our ability to recognize conspecifics as individuals. What I have said here is far from being a full explanation of the role of animacy and egophoricity in language but I am convinced that we will not be able to understand the way language is organized as long as we do not have an account of the cognitive basis of these categories.

Acknowledgments

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