

What do animals do all day?: The division of labor, class bodies, and totemic thinking in the popular imagination[☆]

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Abstract

This article uses relatively new methods of the analysis of qualitative data to investigate the socio-logical relation between animal species and occupation in the popular imagination, specifically in the world of children's literature, in order to test a claim that the class habitus that naturalizes the division of labor, erasing the contingent nature of class domination, does not simply arise via the internalization of objective social divisions into a subjective social vision, but rather begins with the application of a totemic logic which maps differences between people onto differences between animals, thereby exaggerating and naturalizing them. Children are evidently instructed in the reality of class bodies and the logic of social structure before they have any first-hand acquaintance with these social processes; indeed, by working the embodied relations of class domination into the role play and role learning of the pre-school years, we make it difficult for them to have any unmediated first-hand experience that would militate against these habitual distinctions. © 2000 Published by Elsevier Science B.V. All rights reserved.

Keywords: Animals; Totemism; Class body; Busytown; Symbolic domination; Division of labor

1. Introduction: The problem of the division of labor

Let us consider the first and last major topics considered by Emile Durkheim, namely his work on the moral significance of the division of Labor (Durkheim, 1933

[☆] An earlier version of this paper was presented at the 1997 Rutgers-Princeton Conference: Dialogues in Culture and Cognition. I would like to thank the participants, especially Paul DiMaggio, Viviana Zelizer, and Eviatar Zerubavel, for their comments and suggestions. I would like to thank Lucien Preuss for his helpful comments on and discussions of the methodology involved, John Mohr for his comments and suggestions, and both Les Editions Minuit and Random House for permission to reprint illustrations.

[1893]) and his work on Australian totemism (Durkheim, 1954 [1912]). These projects are often seen being representative of Durkheim in two extremely different modes, the ‘young’ Durkheim and the ‘old’ Durkheim, though the young Durkheim appears more stodgy than the old. In this understanding, Durkheim goes from being the last Comtian positivist to being the first social phenomenologist (see Parsons, 1968: 306f.). But both of these projects really orbit around the same central set of concerns, namely (1) the nature of divisions between classes of persons in society; (2) how these divisions are subjectively understood; (3) the moral and social implications of this. Indeed, it may be that Durkheim’s approach could have profited from more deliberate integration of these themes. This paper begins with the intellectual problem posed by the division of labor, at least as it first appeared to Durkheim, and then considers the problem of totemism with which Durkheim ended his researches.

Enlightenment political theory had seen the division of labor as inseparable from the mutual *dependence* of persons upon one another (Smith, 1937 [1776]: 14–16), a dependence which Rousseau (1967 [1755]) claimed had reduced human beings to craven sycophants, who begin to associate for mutual improvement and end associating to gossip, backbite, and put on airs. Durkheim’s (1933 [1893]) task was first and foremost to improve the image of the division of labor, by linking interdependence to the higher, if not the highest, moral feelings, establishing a new type of moral order within the very division of labor that was previously seen as morally corrosive.¹ The issue of the moral significance of the division of labor was key to Durkheim’s sociolatriy: while today’s readers may look asance at this blatant huckstering of the division of labor, at least Durkheim took the issue head on (as opposed to Marx, who denied the necessity of the division of labor: one labors, fishes, then philosophizes). Indeed, Durkheim was forced to do consciously and sociologically what most stratification systems seem to do unconsciously; since to favor socialism over individualism required the rehabilitation of the division of labor, Durkheim had to come up with a general justifying explanation of social divisions.

Our evaluation of society, in other words, tends to turn on how we interpret the division of labor. Like the first Enlightenment thinkers, we are skeptical of any social division that is not based on a *natural* division,² and hence there are always pressures to naturalize such social divisions. This is a more subtle issue than simply the *legitimizing* of inequality (which can be accomplished simply by linking it to inexplicable divine decree or ‘systems’ imperatives); the social divisions must seem

¹ Hence his brilliant rhetorical move of taking the emotionally loaded distinction of ‘organic’ as opposed to ‘mechanical’, tied by Tönnies (1957 [1887]), from his first paragraph on, to *Gemeinschaft* and *Gesellschaft* respectively, and reversing the order, so that the ‘good’ kind of social organization was not the *old* one, but the *new*.

² Rousseau (1967 [1755]: 246) ends his *Discourse on the origin of inequality* as follows: “Moral [i.e. social] inequality, authorized, solely by positive right [i.e. sanctioned by political laws], clashes with natural right, whenever it is not in proportion to physical [i.e. natural] inequality; a distinction which sufficiently determines what we are to think of that kind of inequality which obtains in all civilized nations, since it is evidently against the law of nature that children should command old men, and fools lead the wise, and that a handful should gorge themselves with superfluities, while the starving masses lack the barest necessities of life”.

as natural as the division between night and day, or between east and west – in other words, as natural as *other* arbitrary social divisions which we have naturalized to such an extent that they are no longer perceived as social creations. More specifically, such divisions need to be made natural in two senses of the word; they must be rooted both in nature and in ‘second-nature’. The first requires that the social division between persons seem to reflect an underlying division in nature (and therefore legitimate); the second requires that this social division be experienced as non-problematic – expected, understood, navigable – i.e. second-nature.

Pierre Bourdieu (1984 [1979]) has argued that such a naturalizing process is only to be expected, since we learn about types of persons in such a way as to make the division of labor seem both navigable and natural, namely by incorporating an affectively charged representation of social space in the form of *habitus*. What Bourdieu calls “the *dialectic of the internalization of externality and the externalization of internality*, or more, simply, of incorporation and objectification” (Bourdieu, 1977 [1972]: 72, emphasis his, cf. pp. 84, 90) is a beautiful formal vision of the process whereby our minds internalize the objective distinctions of the social world, allowing us to skillfully – and with objective strategy, though not necessarily subjective strategizing – navigate this world. The lack of friction between cognitive instruments expressly designed to fit the objects they are to catch and manipulate serves as proof positive that there is no alternative conceptual scheme worthy of consideration – or rather, it prevents such an issue from even being brought to consciousness. But the formal elegance of this answer is linked to its drawback – in this case, Bourdieu offers no substantive statement about how real people actually learn real divisions.

In particular, this dialectical vision is silent regarding the fact that much of what we know about the social world we learn indirectly, as children.³ That is, we are *taught*, by one means or another, about the social world; we do not, as full fledged adults, learn it ourselves. The question of how these distinctions are actually internalized then must involve attention to the mind of the child, not just the abstract adult. More specifically, children learn about the division of labor in a number of ways, such as approved role play. Preschoolers are generally given a dress-up corner, containing among other things clothing representing different occupations, so that the children may, as George Herbert Mead (1962 [1934]: 159) says, try on one self after another through play. But even before this stage, children are presented with affectively charged representations of the division of labor, both in disorganized fashion via occasional remarks by adults, and in organized fashion through literature, oral and written. Is it possible that such representations of the division of labor contribute to the naturalizing of the division of labor? To explore this, I wish to turn to

³ While Bourdieu emphasizes the necessary homology between the inculcation of *habitus* via formal schooling (the subject of his attention) and the pre-existing one formed via the family, he has tends to reduce this pre-school development of *habitus* to the primary pedagogic action whereby linguistic capital is developed in some youngsters (e.g. Bourdieu and Passeron 1990 [1970]: 42f.). But it is not simply cultural capital which is formed early, it is the outlines of the ability to make affectively charged distinctions.

the other element of Durkheim's thinking mentioned above, namely the meaning of totemic logic.

2. Totemic logic

Durkheim's first major contribution was to the study of the division of labor; his last was to the study of totemic logic, which we might see as the idealization of social division *per se*. Durkheim was struck by two things (which he didn't try to keep separate, as Boas, 1916: 323, pointed out) – that many societies in the Americas and Australia were divided up into sub-groups, each subgroup identified with a certain animal (less often a plant or other feature of nature), and that the persons often stressed that they were related in some way to the animal that was the 'totem' of their subsection. Durkheim (1954 [1912]; also Durkheim and Mauss, 1963 [1903]) concluded from this that the first mental classes were nothing but these social divisions, and hence when the Bororo say, 'we are parrots', they really mean that they are a subset of the class of parrots (at least to the extent that the Bororo have a notion of class).⁴ Most anthropologists, even those greatly influenced by Durkheim, dissented from his claims here, leading to a debate over the nature of totemic logic. Evans-Pritchard (1974 [1956]), for example, argued that the point was that the person and the animal stood in a similar relation to something else; Radcliffe-Brown (1952) argued that it was a spiritual relationship; Levy-Bruhl (1985 [1910]: 77, 91, 247, 366–368) that it was a different type of logic based on participation – when the Bororo say they are parrots, they do not mean 'Bororo = Parrot' the way we do, though they do indeed affirm an actual identity. And finally later writers, like Barry Barnes (1981), completed the circle by implying that there is no difference between totemic logic and our logic at all – who knows, maybe they *are* parrots.

Barnes seemingly ethnocentrifugal analysis, however, simply repeated Durkheim's original mistake of thinking that totemic classification was at some level equivalent to scientific classification – that to the Bororo saying 'we are parrots' is the same thing as saying 'parrots are birds' (for either Westerners or the Bororo).

⁴ "The Bororo sincerely imagines himself to be a parrot [...] The Trumai are genuinely thought to be aquatic animals" (Durkheim and Mauss 1963 [1903]: 6f.). The alleged identity of the Bororo and the parrots has become a staple of sociologies of knowledge – in fact, the reason the Bororo refer to themselves as parrots (or macaws or red araras) is quite a long and interesting story, one that has nothing to do with the generalities of relativist socio-philosophies. First of all, the red macaws to which the Bororo assert identity are not 'totems' in the classic sense (the Bororo have somewhat atypical relations between animals and taboos, see Lévi-Strauss 1966 [1962]: 99); instead, they are *pets*, the only pets kept by the Bororo. Furthermore, they are kept by *women* – "admired, well fed, groomed, given proper names from the owner's matrilineage, taken on trips", etc. (Shepard, 1996). Second, the Bororo are matrilocal – the newly married man moves to his wife's uncle's house, which is ruled by the women, there to dwell among her kin. "By controlling food and procreation, the women bind masculine loyalties and fetter their freedom just as surely as they domesticate macaws". Hence, when the Bororo say they are "macaws", "they are making a familiar and ironic comment on their own social circumstances by means of reference to the macaw's situation". (Shepard, 1996)

Not only do rather unremarkable ethnozoologies coexist with totemic arrangements in societies with totems, but similar statements equating a class of persons with a class of animals may be found in contemporary Western society alongside our quite different zoological classification. Consider the admittedly unusual case of the work of William Sheldon, the notorious Somatotyper (inventor of the ectomorph/mesomorph/endomorph classification scheme) whose (1954) *Atlas of men* assigned each discrete body type a precise animal equivalent, within a more general type.⁵ Thus somatype 4–2–4, a subdivision of Marsupials, would be ‘Opossums’, with the helpful appended description: “Delicate, furtive marsupials who hunt beetles at night, or whatever such scraps they can find [...] Nearly innocent of mesomorphy, their most effective defense against attack is to ‘play ‘possum’” (Sheldon, 1954: 193). The exactitude of some types (‘The Florida spotted under-the-barn kitty’, a sub-type of the more general classification UNDER-THE-BARN KITTIES) is similar to the meticulous classification of some North American tribes (Blackbirds with white heads, blackbirds with red heads, etc.).⁶

Like the Bororo, then, Sheldon might also say that a number of persons were parrots, but he certainly understood this neither in a literal sense, nor in a ritual sense (as suggested by Radcliffe-Brown, 1952, and others). Instead, it is clear that he used the animal categorization as a *metaphorical system*, which had two properties. The first was that the *content* of any animal metaphor was used to direct the interpretive faculties of the reader’s eye – that is, the vehicle’s attributes are used to train the reader in seeing the tenor. After learning that a certain type of body is a leaping gazelle, one looks at that body in a different way from when one is told that it is a squatting frog. Certain musculature assumes interpretative prominence, some commonalties across persons are highlighted and others ignored. The second property of this metaphorical system is wholly formal; it is simply the analogic hyperbole of likening differences between human beings to differences between animals. That is, two sub-groups of one species are to each other as two different species are. The strength of this analogic hyperbole is wholly separable from the particular metaphoric content linking any particular vehicle and any particular tenor.

The hypothesis that totemism is fundamentally analogic hyperbole – a kind of explication through exaggeration – offers an extremely simple explanation for one half of totemic thinking, namely the division of a group into sub-groups each linked to a type of animal or plant. While bracketing the other question of the spiritual link to the totem (as well as the awkward existence of totems like the wind), this account suggests that at the root of totemic logic might be an extremely simple motion of going *up* one level in the tree of life – from sub-species to species, from species to genus, from genus to family, etc.⁷

⁵ Sheldon recently re-achieved notoriety as it was re-discovered that many Ivy League schools had all of its entering classes – including many of today’s power elite – pose naked for Sheldon’s team of anthropometric photographers.

⁶ This example is from a clan of the Omaha.

⁷ Lévi-Strauss (1963 [1962]: 13, 16, 77, 95, espec. 89–91, also 86) made this basic point about this formal property of totemism, namely that it is about relations between groups, not the groups them-

This totemic movement of analogic hyperbole – ascending a level to accentuate and systematize difference – seems well suited to perform the task of accounting for social divisions. Indeed, it is an idealization of the differentiation of the social group (as well as an explanation of the nature of this differentiation) so breathtakingly bold yet simple in construction that it makes Durkheim’s tortuous idealization of the ‘organic solidarity’ created by the division of labor look positively amateurish in comparison. Further, it is such an application of Durkheim’s interest in the formation of the categories of social thought, especially the category of class, to the problem of the naturalization of the division of labor, that has motivated Bourdieu’s work.

3. Class bodies and animal bodies

We started with the problem of naturalizing the division of labor, that is, how does it happen that we believe that it is natural for certain persons to do certain tasks and not others? Bourdieu has argued that this happens through the correlative shaping of the body and the eye (*habitus*), so that our bodies fit our jobs and, moreover, *appear* to do so to others, who conclude that our employment is a ‘natural’ result of our physical endowment. We can then unproblematically internalize our interpretive understanding of the objectively structured world from these “embodied, and hence naturalized, social differences” (Bourdieu, 1996 [1989]: 150). The butcher shown as part of the key illustration of this point in *Distinction* (see Fig. 1) is not merely a *representative* of a particular occupation, he is a *representation* of it, a concept intuited via the sensory capacities.⁸ His body and bearing, marked by the traces of his trajectory through social space, do not merely ‘correspond’ to his job, they are an embodied *theory* of the division of labor. How could this man be anything *but* a butcher – he *is* meat. “The body”, writes Bourdieu (1984 [1979]: 192f.), “a social product which is the only tangible manifestation of the ‘person’, is commonly perceived as the most natural expression of innermost nature”. As a social product, it corresponds to its bearer’s location in social space; “Thus one can begin to map out a universe of class bodies, which (biological accidents apart) tends to reproduce in its specific logic the universe of the social structure”.

This appealing approach suffers from two empirical problems: the first is that it is unlikely that the differences between bodies are reliably enough related to ‘the job’ as to allow persons to naturalize the division of labor by simply internalizing objective distinctions. That is, every *thin* butcher should *delegitimize* the existing social order, were it not for an *additional* training of the eye, that is, the instillation of a preconception regarding appropriate bodies that allows for the rejection of the dis-

selves, that it is about a logic of transformations (A:B::C:D). But he went further, and tried to reintegrate the two senses of totemism, ritual identification and social division, which used form as the key to unlock the content of animals chosen. I do not draw upon that second portion of his work here.

⁸ More exactly, Bourdieu’s account corresponds exactly to Kant’s (1950 [1787]) invocation of the presence of apriori structuring to ‘sensibility’ (*Sinnlichkeit*), but with the proviso that these aprioris are objective-but-contingent social constructs, not Kant’s subjective-but-necessary universals.



Fig. 1. The body for the job.

(Butcher picture from Pierre Bourdieu, *Distinction*, used by permission of Les Editions Minuit.)

crepant cases as ‘exceptions’ and a focus on the expected as ‘examples’. This pre-
 vision, which allows one to divide the world into examples and exceptions, leading
 to a circularity in which preconceptions tend to be validated no matter how skewed
 the data might seem towards their rejection, is unlikely to arise simply by internaliz-
 ing objective differences. But if it *is* instilled, it allows for a kind of selective
 abstraction which leads the same bodily features to have different ‘meanings’ in dif-
 ferent contexts.

The second problem is that, as said above, the construction of at least skeletal
 forms of these systems of classification must take place before one really has wide
 social experience, that is, during childhood. How then might we develop a pre-vision
 for class bodies, the ability to selectively abstract certain features from certain bod-
 ies, and thus develop the naturalizing logic of class bodies? Further, how could we
 develop this as children?⁹ This brings us to a key question of the expanded visual
 sociology (Grady, 1996), namely how the culturally specific training of the eye is
 woven into socialization.

It is here that the analogic hyperbole of totemism might come into play. Children
 are fascinated by and sensitive to animals (see Myers, 1998: 3), which are certainly
 a stock part of literature, both oral and written, for children. Further, as Fernandez

⁹ Adults, too, may at times need to reinforce the distinctions located in habitus with arguments regard-
 ing the naturally established distance between types of persons, but they are likely to use scientific dis-
 course (for an example here, see Schiebinger, 1987). Harwood (1979) provides a succinct summary of the
 patterns by which science which intends to legitimize inequality stresses differentiation as opposed
 to integration of human types. The literature on the use of science to naturalize differences is too large
 to refer to here.

(1972: 46) has argued, adults use animal metaphors as terms of endearment for children from very early ages, linking animals and their attributes to the developing sense of self. (Thus animals predominate preschoolers' dreams, and seem to wane in importance only after children are able to develop other forms of symbolically representing themselves to themselves, see Foulkes, 1982: 48, 60, 82, 115)

Finally, there is even a fairly serious degree of evidence that animals are seized upon by children as the first material for categorization. In the words of Paul Shepard (1996: 10), the chief exponent of this view, "Children respond spontaneously to the details of nature and the names and movements of animals because animals were (and are) the path to categorical thought and, eventually, the terms of a philosophy or cosmology".¹⁰ Contrary to the myth, popular among social scientists, that it is impossible to perceive 'likeness' and that all categorical labels come from language,¹¹ children are able to perceive species with a fair degree of regularity before they understand language. "Because such characteristics [that distinguish species] are visible to people, birds and other animals are the perfect embodiments of diversity in unity and unity in diversity. Anciently connected to category making as the archetypes for the cognitive act itself, they constitute the child's practice ground in making categories that balance the poles of likeness and difference" Shepard, (1996: 48). "It is not only that each species occupies a taxonomic space that serves to model categorizing, but each is framed in relationship to others by behavior and personality" (Shepard, (1998 [1978]: 63; cf. 249, 253, 255).

Unlike their latter day admirers, Durkheim and Mauss actually would have conceded that a pre-social (and prelinguistic) perception of likeness between animals was possible; they simply maintained that such perception of likeness was not the same as understanding their position in a *system of classification*, in which objects may be placed in nested sets of greater or lesser inclusiveness. This abstract, hierarchical structure, argued Durkheim and Mauss (1963 [1903]), is not found in the natural world, though mere 'likeness' is. That is, it is certainly true that one can, in unmediated fashion, perceive that one bottle-nosed dolphin is the same type of thing as another bottle-nosed dolphin, and that either of these two individuals is somewhat like (but not entirely like) a porpoise, and that both porpoises and dolphins are fairly like a right whale, and, finally, that the dolphin, porpoise, and whale are a little bit like tuna and swordfish, and a little bit like cows and seals. But this system of pairwise degrees of 'likeness' is nothing at all like our developed classification, in which say, Flipper *is* a dolphin, *and* a toothed whale (along with the porpoise and the narwhal), *and* a whale (along with the right whale), *and* a mammal (along with the

¹⁰ My exposition does not do justice to Shepard's actual claims, for he would distinguish the use of animals in totemic society properly so called, a society appropriate to hunter-gatherers, from what he terms 'domestic' society, the class-mented society that arises with cultivation and herding. Only in the latter are group differences truly naturalized: "Class culture perverts totemic thought by replacing metaphor with homonym" (1998 [1978]: cf. 145, 149, 162–170).

¹¹ This point will be explicated in a forthcoming essay; suffice it to say that ethnobiology does not find the type of cross-cutting division of the natural world into different species associated with the claims of Durkheimians like Barnes (1981) and Douglas (1986). See Berlin (1978).

cow). Degrees of pair-wise likeness become absolute likeness at different levels of analysis.

Durkheim and Mauss (1963 [1903]) argued that in order to internalize such a hierarchical structure, one that does not exist in nature, we must first experience such a scheme in some other realm which, predictably, they identified as society. (More particularly, the nested system which arises from repeated fission of a family tree – one repeatedly experienced by people as they negotiate a divided social world in which the logical hierarchy corresponds to actual social authority – gives a template for the interpretation of natural categories.) But it is not clear why it is easier to perceive classes in human society than among the world of animals. While one may acknowledge that it is unlikely that the identity of whale, platypus, and bat as ‘mammals’ is easily seen, it does not seem beyond reason that the identity of cow, goat, and sheep can be perceived, especially as they are all in a similar *functional* relation to humans (domesticated, milk-and-meat producing, grazing, hoofed quadrupeds). Indeed, it is at least as reasonable that the natural organization of animals would form the template for the organization of society than the reverse¹² – Durkheim, as a sociologist in modern France, had little reason to obsessively study and contemplate animals, and instead obsessively contemplated society. Hunter-gatherers and herders probably did the reverse. And children may – in this respect – satisfy Durkheim’s ontogenesis in being more like hunter-gatherers than twentieth-century sociologists.

To conclude, there is every reason to believe that children can perceive not only the likenesses between members of the same species, but also the differences between species, and that they are extraordinarily attentive to these differences at the time in which they are entering verbal thought. Thus, they may use differences between animals as the template for categorical thinking in general, and to construct categorical differences between types of persons in particular. For example, in his ethnographic study of Asturian children, Fernandez (1974: 124) confirms this: “Children come to quickly perceive a difference between a cow and a cat, chicken, dog, donkey, etc., [...] In their earliest search for identity, these children turn towards the imitation [...] of some animals rather than others, choosing animals that occupy the more desirable portions in the quality space of their culture”.

In other words, children employ the analogic hyperbole of totemism as a way to produce the ‘category’ of classification, which is then applied to the social realm, an exact reversal of Durkheim’s logic (cf. Shepard, 1998 [1978]: 130). But this totemic logic, we recall, is wholly formal – no *particular* content is attached to analogic hyperbole. This content, I hazard, may be supplied by adults, partially answering our question as to the actual processes involved in the training of the Bourdieuvian eye. In supplying this content, through literature and informal interpretations of animal behavior, adults shape the possible applications of the categorical structure of ani-

¹² While it goes beyond the bounds of this paper to fully explore this question, it is worth noting that Shepard (1996: 99) has emphasized that the system of animals is not only used ontogenetically by each child in the production of cognitive categories, but phylogenetically by evolving human intelligence (in stark reversal of the Durkheimian script): “Animals were among the first objects of classificatory thinking. It follows that interspecies concepts became the model for our social definitions”.

mals to the social world. (This has been explicitly noted by children's writers such as C.S. Lewis, 1963: 463.) More particularly, we can derive a hypothesis to test, namely that *the use of totemic logic in children's literature can instruct the socializing eye as to the reality of class bodies*. In a typical circle, animals may be endowed with bodily attributes abstracted from types of persons, and then these animals used as examples to highlight and naturalize differences between persons.

The use of animals in children's literature to accentuate differences between people is well known – in classical fairy tales and fables, animals represent *characteristics* of persons in a stereotyped and allegorical fashion (Shepard, 1996: 76). Thus the modal type of Aesop's fables involves the interaction of representatives of two different species; only around 2% involve conversations between members of the same species.¹³ But what we retrospectively call modernization involved the substitution of a new form of differentiation between persons for the previously dominant differentiation of character, namely occupational role.¹⁴ What children need to learn – and what they are taught in the early years of life through explicit curricular foci and the presentation of materials for both instruction and for play – has to do with the meaning of this form of division. As Shepard (1996: 84) has noted, "It is not the roles in life that are being learned, but the more fundamental lesson that there are roles, and these, because we are a poetic species, are best grasped indirectly".

The conclusion from this perhaps somewhat lengthy chain of reasoning is that we may use totemic logic to train the developing social eye of children so that they will recognize the class bodies discussed by Bourdieu (1984 [1979]). Testing such a claim might seem out of the bounds of plausibility, but I hope to offer at least provisional support, through an analysis of what is now the most popular work for children on the division of labor in the world (and has been since I was a child), Richard Scarry's work on Busytown.¹⁵ Richard Scary has written many books about the same

¹³ This is of course to be taken as a rough finding. It comes from my analysis of a collection of 207 fables (Aesop, 1964), the largest collection I could find. There are no clear boundaries as to what fables are Aesop's (let alone consensus as to whether or not such a person ever existed), and there are some fables which are probably of later origin. Fables may involve any possible permutation of gods, humans, animals, plants, and inanimate objects as actors, leading to a difficulty in coming up with a simple table of fable types, but those with two different animals are clearly most frequent.

¹⁴ More accurately, there was a transitional period in which characteristics and occupations were integrally related in what were to become animal *folktales*. Here the animal represents not the pure character as in Aesop, nor the pure occupation (as we shall see below), but the more ambiguous *Stand* (here see Böröcz, 1997). In Shepard's (1996: 1996: 95) words, "The folktale is an internal dialogue by which a society inculcates its members in a language where animals parody not only classes and values, but personality traits, hierarchical notions, and moral principles". It might also be said that if the categorical system of *habitus* exerts symbolic violence, folktales are often symbolic sabotage. By making, for example, a pig stand for the gluttonous bureaucrat, a regular association pointed to by Shepard, the dominated not only 'inculcate' its members in a language, they *innoculate* themselves against the attempted symbolic violence of the dominating, who would fain naturalize their superiority in their bodies (cf. Shepard, 1998 [1978]: 172f.).

¹⁵ It is perhaps worthy of note that one of Scarry's early works was a collection of Jean de la Fontaine's version of Aesop's fables (Retan and Risom, 1997: 47). It is difficult to get accurate data on sales figures for children's books; see the discussion of Scarry's popularity below.

mythical town, establishing a consistency of geography and lineage despite his high productivity that makes Faulkner look like an amateur. Several of these books deal with the division of labor, but most famous is *What do people do all day* (Scarry, 1968).¹⁶

The odd thing about a book entitled ‘What Do People Do All Day’ is that there are no people, only animals.¹⁷ But that, of course, is the point of totemic logic – people are animals, because they are different. And it is this difference that forms the subject of *What do people do all day* (hence WDPDAD), which is about the variety of jobs in a typical town with an advanced division of labor. In Busytown animals speak the same language, get along fine, and they don’t eat each other, but neither do they interbreed – pigs stay with pigs and have pig children. Most importantly, different species are differentially represented in different occupations, and – here is the important point – these occupations generally have no relation to the physical attributes of the animals. Thus the airplane pilot is not a bird, but a fox. Occasionally exceptions are made for special jobs – the mine is run by gophers, one lumberjack (but only one) is a beaver. But the star characters – those with names or special jobs – do not display such a ‘natural’ relation of species to job. And yet there is a relation, indeed a ‘naturalizing’ relation. To bring out the socio-logic of this relation, I propose to apply a formal analysis to the aggregate information contained in the dispersion of species across occupations.

4. Methods

As stated above, WDPDAD is about a variety of species living in one town holding a variety of jobs. One may therefore code each animal who is performing a job in terms of the job performed, and his or her species. Doing so leads to an N of 272, distributed among 20 species of animal and 132 different occupational categories. To avoid losing information regarding the socio-logic of the relation between species and jobs, I used as fine a coding scheme as possible. Appendix A describes the coding in more detail. Clearly, this is an extremely sparse table; conventional methods of analysis that rely on asymptotic statistics are inapplicable. To test, for example, simply whether or not the distribution of species across occupations is consistent with a null hypothesis of independence, one must perform an extremely computationally-intensive version of an exact test. An application of the algorithm devised by Mehta and Patel (1983, 1986, incorporated into the SAS package) indicated that in fact this null hypothesis must be rejected at a decisive .001 level of significance – in other words, there *is* a significant interaction between species and occupation. But

¹⁶ *Postman pig* would be the most important other one.

¹⁷ This point, however, was not lost on the sales department at Random House – upon receipt of the manuscript, there was pressure to change the title to ‘What do animals do all day?’; responded Walter Retan, Scarry’s connection as editor in chief of children’s books, defending the title: “They’re not animals, they’re people. If you use the word *animals*, readers will expect a book of true facts about animal activities” (Retan and Risom, 1997: 75).

what kind of interaction? What is the socio-logic of the relation between species and occupation?

Given that we are trying to uncover the logic of the dispersion of species across the occupational map, as opposed to knowing in advance what this logic is, we have a better chance of success if we let the data themselves speak than if we try to code them *a priori*.¹⁸ That is, we will attempt to ‘cluster’ or aggregate these jobs not on the basis of what they mean in the *human* world, but what they ‘mean’ in the Busytown world – that is, how they divide and distinguish species. This meaning is formally based on the duality of species and job – a species ‘means’ what jobs it can hold, while a job ‘means’ what species tend to hold it.¹⁹ At the simplest level, we could combine into a single category all those jobs that were held only by member of a single species, e.g. ‘Rabbit jobs’. Greater difficulty, however, enters when we want to combine jobs that have basically the same *distribution* of species: 40% pig, 40% raccoon, 20% mouse. Of course, one could simply test the hypothesis of independence between the rows corresponding to any two jobs in the occupation by species matrix, and progressively agglomerate those pairs which are most likely to be judged independent. This method has been used by Goodman (1981) and Breiger (1994). However, the sparse nature of this table makes such tests inapplicable, as they depend on asymptotic statistics to retrieve p-values.

Other common techniques have similar problems when it comes to the analysis of sparse data. While it is possible to construct an exact test version of the Goodman/Breiger approach, it is extremely computationally intense for a table of this size, and it is not clear how useful the results would be.²⁰ But there is a different, though related, method, which is not based on tests of *significance* but on actual information contained in the table, and thus small Ns, though they increase standard errors, do not invalidate the results. Furthermore, this method is computationally trivial (having closed form solutions) and ties in to a theoretically and methodologically coherent approach to examining cross-classified tables, namely the entropic approach

¹⁸ For example, it is unclear whether we should begin with a conventional coding system, such as dividing jobs by skill requirements, or by industry, or whether we should select a classification scheme more concretely tied to inter-species differences, such as those that require opposable thumbs and those that do not.

¹⁹ This duality was first pointed to by Simmel (1955 [1922]: 141), who argued that we could just as well see an individual as an intersection of the groups to which she belonged, as see a group as the union of individuals who belong to it. Breiger (1974) formalized such an approach, and further extensions have been used (e.g. Mohr and Duquenne, 1997) to explicate the social meaning of a categorical system. Such an approach makes sense when we cannot be sure that we understand the meaning of a categorical system *a priori*, and we do not wish to throw away information which might be contained in a joint distribution of this and another categorical system. (Such a loss of information would occur were we to condense our codings without attention to this joint distribution.) In the case at hand, I am using the distribution of species across jobs to understand what jobs ‘mean’; as will be made clear below, this is to be done in such a way that the information that species gives us about the meaning of jobs is condensed most efficiently.

²⁰ This is because there are somewhat arbitrary decisions that have to be made regarding how to convert the discrete probability distribution retrieved from an exact test to a continuous and comparable number.

based on Shannon's (1963 [1948]) work on the transmission of information. Recent work in this tradition deserves greater attention from and use by sociologists than has yet been the case.

Space forbids a detailed discussion of this approach, but what is most important for our purposes here is that while the first use of Shannon's entropy measure as the basis of a system for statistical analysis (Kullback, 1959; cf. Luce, 1960) was asymptotically equivalent to the Goodman loglinear system, which is more flexible, clear, and well known, and seems to have computational advantages in certain circumstances (Goodman, 1970: 133, 135; 1971: 169), Preuss (1980) has put forward a set of *measures* of the relation between the various dimensions of a polychotomous table which are superior to chi-square based measures, and less sensitive to small *N*s.²¹ In a recent work, Preuss and Vorkauf (1997: especially 157–159) build upon this approach and provide a method for determining the optimal grouping of categories which maximizes the 'terseness' of the table, or the ratio of output of information to input. This terseness is then a measure of, in Preuss and Vorkauf's (1997: 141) words, "the efficiency of the cross-classification of a repository of knowledge".²² Preuss and Vorkauf also have an extremely user-friendly program to analyze data (TAXIS). For the purposes of brevity, I will not give a technical discussion of the measures used, but an impressionistic one (though one which is never technically inaccurate). Interested readers can consult the cited works for more detail.

We can think of the raw data as being contained in a table with *R* rows (in our case, these consist of 132 occupations) and *C* columns (in our case, 20 species). This table contains 'information', and the more dispersed individual animals are in the table, the more information there is. That is, if all individuals were in one cell (one species and one job), why look at a 132 by 20 table? Second, each variable has a degree of information associated with it. Third, *we can measure the association between the two variables as the inverse of the amount of information lost when using one to predict the other*. This is the heart of the informational approach – to replace the all-or-nothing test of independence with an interpretable measure of the degree of association between two nominal variables.

Preuss, however, has gone farther, and used these statistics to do the following: to (1) *order* the rows²³; (2) make a dendrogram-like structure of the aggregation of

²¹ In previous work (Martin, 1999) I have argued that a thermodynamic version of entropy should be preferred to Shannon's entropy for contingency table analysis when the *N* is small relative to the number of cells (also see Yuan and Kesavan, 1997: 140). Preuss (personal communication), however, argues that the Shannon measure is to be preferred, at least when we conceive of the data as being generated as a sample from a generative process with fixed (but unknown) probabilities.

²² In the loglinear approach, the total dependence can be 'measured' by the chi-square, but this is a metric-less quantity that is always largest when no rows are collapsed and hence has to be compared to the degrees of freedom. But the relation between the chi-square and the degrees of freedom always involves the sample size, and hence the same distribution has different 'meanings' depending on the sample size. Thus there is no way to separate measures of strength from measures of significant inference using chi-square type statistics.

²³ All this applies equally to columns; I will refer only to rows for brevity. However, unlike the Goodman/Breiger approach, Preuss's approach does not *simultaneously* order or agglomerate rows and columns. One must do one first, and then the other.

rows; (3) choose an optimal stopping point in the agglomerative process. First, to order the rows, we can take all $R(R-1)/2$ pairs of rows, and examine the degree to which they give us the same column information, and then arrange the rows so that pairs most alike are next to each other. It is important to note that this in no way assures us of a *linear* or monotonic arrangement of rows in terms of some latent variable that might be correlated with the column distribution. This is in contrast to the results of a routine used to ‘diagonalize’ a table (permute the rows and columns so as to maximize the number of observations falling roughly along the line connecting the cell [1,1] and [R,C])²⁴, or a one-dimensional Goodman RC(I) model (Goodman, 1979). For example, if there were *two* latent dimensions that affected the distribution of species into jobs, one ‘income received’ and the other ‘education required’, and the distribution of jobs happened to be C-shaped within the two-dimensional income-by-education space, the occupations might be arranged from [medium-high income, high education] to [high income, medium education] to [medium income, low education] to [low income, medium education] to [medium-low income, high education] (see Fig. 2 for an example). One would see a monotonic increase neither in education nor in income across rows.

Recall that the ordering of rows utilized a statistic for each pair determining how close they were in their column distribution. We can then begin to agglomerate pairs of rows by first combining those closest to one another, then those second-closest. (Of course, rows may be agglomerated into super-rows consisting of previously agglomerated rows.) This can be continued until all rows are merged into one. The question, then, is where to stop. Many clustering techniques are forced to use ad-hoc rules of thumb. Preuss and Vorkauf (1997), however, provide two meaningful criteria. The first is the ‘terseness’ – the tersest table is one in which the fewest rows are needed to successfully identify a column. It is basically a measure of how *exclusively* each column is linked to one row and each row to one column, over all columns and rows. The second stopping criterion leads to what Preuss and Vorkauf call the ‘easiest’ partition, one which maximizes the gamma introduced in Preuss (1980) – the ease with which one can pick out (‘retrieve’) a row given only column information or vice-versa. The retrievability of a column would be how efficiently one could select it given only row information. The retrievability is bounded by the terseness, and the ‘easiest’ partition is hence always as compact or more compact than the ‘tersest’ partition. While the tersest partition is usually to be preferred on theoretical grounds, one might use the ‘easiest’ partition in a case like ours, where we are making the first pass through finely coded data (Preuss and Partners, 1993: 28). In the analyses which follow, both standards are employed to create partitions, as one is nested within the other.

To conclude, I will apply a method of *ordering* and *collapsing* the rows (occupations) which attempts to preserve whatever information exists in the table regarding the socio-logic of the dispersion of species into jobs, while *simplifying* this table so that we may understand this logic.

²⁴ Such a method is apparently used by Bourdieu (1996 [1989]: 32), though it is unsaid precisely how the diagonalization was accomplished.

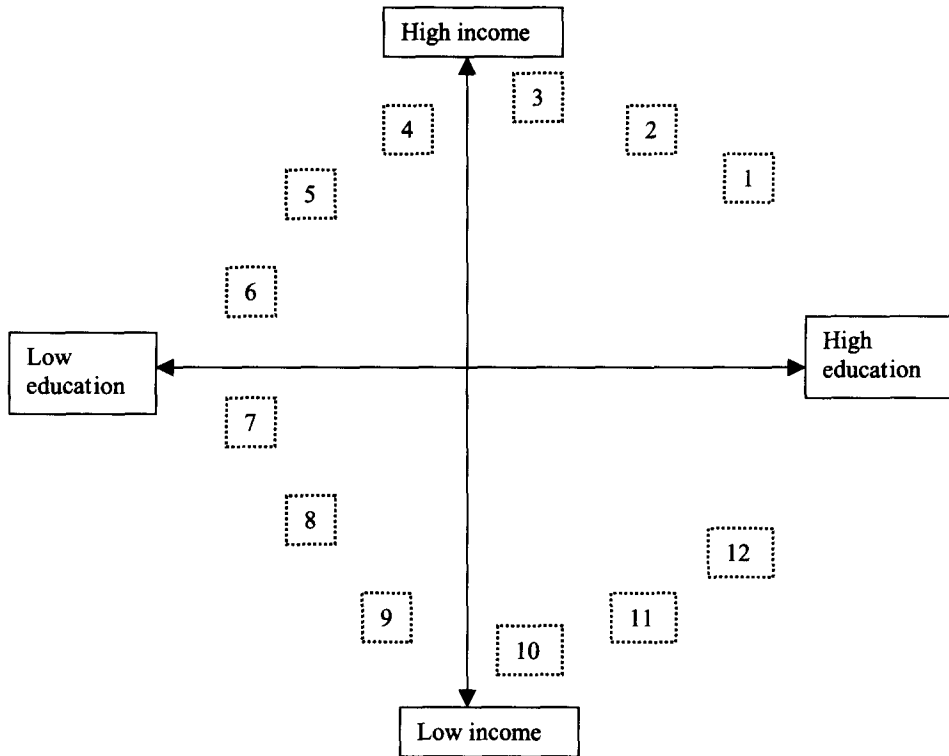


Fig. 2. Hypothetical arrangement of columns that is not ordered along either of two latent dimensions. (The numbers represent rows in a table, each row corresponding to an occupation with a certain average education required and a certain income received. An 'ordering' of the rows according to a nearest-neighbor principle stretches from 1 to 12. This would not correspond to either an increase or a decrease along either of the latent dimensions that structure the order.)

5. Analyses

5.1. *The totemic categories*

I will begin with a data-reductive analysis using the methods just introduced, then supplement this with additional comparisons involving other codings, and then summarize the findings in an interpretable form. Table 1 presents the results of the ordering and both the tersest and easiest partition of the occupations (it was previously determined that with the exception of the single bug and the single skunk, both of which had the same job, there was no purchase to combining species). All 132 occupations are listed in order, as well as the cluster in which they were placed in each of these partitions. After each occupation are two numbers, the first, running from 1 to 33, is the number of the cluster to which it belongs in the 'tersest' partition, and the second (from 1 to 18) is the cluster number to which the occupation belongs in

the 'easiest' partition (I will call these 'minor' and 'major' categories for purposes of exposition). These are the same until the sixth cluster, since the minor categories 6–18 are combined in the sixth major category. Blank lines separate major categories. Further, the species represented in each minor category are listed in descending order of proportionate importance, and all of the major categories that are greater than a single job are given a name summing up the dominant species. Finally, the algorithm turned out to be indifferent to the ordering of the rows within minor categories (that is, any permutation is as good as any other, as long as minor partitions are not crossed).²⁵ I have therefore taken the liberty in some cases of arranging the rows so as to facilitate interpretation.

Table 1
Re-arranged ordering and categorization of occupations

| Occupation | Minor partition | Major partition | Composition (in minor) | Name (in major) |
|----------------------|-----------------|-----------------|------------------------|-----------------|
| Window washer | 1 | 1 | | |
| Plumber | 1 | 1 | | R |
| Boat builders asst | 1 | 1 | | A |
| Manual gate operator | 1 | 1 | | B |
| Police chief | 1 | 1 | RABBIT | B |
| Newspaper reporter | 1 | 1 | ONLY | I |
| Farm hands (child) | 1 | 1 | | T |
| Laundress | 1 | 1 | | |
| Beautician | 1 | 1 | | |
| Frozen dessert sales | 2 | 2 | Pig and Monkey | – |
| Spinner's assistant | 3 | 3 | | |
| Dressmaker | 3 | 3 | | |
| Weaver | 3 | 3 | | |
| Seamstress | 3 | 3 | | |
| Secretary | 3 | 3 | | |
| Flight attendant | 3 | 3 | | |
| Nurse | 3 | 3 | | |
| Poet | 3 | 3 | | |
| Violinist | 3 | 3 | | |
| Dancing teacher | 3 | 3 | | C |
| Bicycle delivery boy | 3 | 3 | CAT ONLY | A |
| Sales | 3 | 3 | | T |
| Grocer | 3 | 3 | | |
| Carpenter | 3 | 3 | | |
| Shoemaker | 3 | 3 | | |
| Watch repair | 3 | 3 | | |
| Helicopter pilot | 3 | 3 | | |
| Ship's captain | 3 | 3 | | |
| Ship's pilot | 3 | 3 | | |

²⁵ This indifference to order within minor categories is not necessarily the case; it comes from the sparseness of these data.

Table 1 (continues)

| Occupation | Minor partition | Major partition | Composition (in minor) | Name (in major) |
|----------------------|-----------------|-----------------|--|-----------------|
| Police officer | 3 | 3 | | |
| Semi-skilled labor | 3 | 3 | | |
| Highway worker | 4 | 4 | Cat and Goat | – |
| | | | | R |
| Chemical delivery | 5 | 5 | | A |
| Fiction author | 5 | 5 | | C |
| Gas station attend | 5 | 5 | RACCOON ONLY | C |
| Miller (skilled) | 5 | 5 | | O |
| Pump operator | 5 | 5 | | O |
| | | | | N |
| Furniture maker | 6 | 6 | Cat, Raccoon, Owl | |
| Train engineer | 7 | 6 | | |
| Chemical worker | 7 | 6 | Cat, Rabbit, Fox | |
| Food service | 7 | 6 | | |
| Sawmill worker | 8 | 6 | Cat, Dog, Rabbit, Bear, Leopard | |
| Fabric cutter | 9 | 6 | Cat, Raccoon, Rabbit | |
| Lumberjack | 10 | 6 | Dog, Cat, Mouse, Rabbit, Fox, Beaver, Bear | |
| Farmer | 11 | 6 | | |
| Air traffic control | 11 | 6 | Pig and Cat dominated; also some | |
| Banker | 11 | 6 | Dog, Raccoon, Mouse, Rabbit, Owl, | |
| Baker | 11 | 6 | Fox, Goat, Bug, and Skunk | |
| Operating engineer | 11 | 6 | | |
| Postal worker | 12 | 6 | Pig, Cat, Dog, Coon, Fox, Beaver, Leopard, Tiger | |
| Weaver's assistant | 13 | 6 | | |
| Airplane mechanic | 13 | 6 | Dog, Raccoon, | G |
| Surveyor's asst | 13 | 6 | and Mouse dominated; | R |
| Porter | 13 | 6 | also Pig, Cat, Bear | E |
| Truck driver | 13 | 6 | | A |
| Miller (semiskilled) | 13 | 6 | | T |
| Materials handler | 13 | 6 | | E |
| Paper co. worker | 14 | 6 | Cat, Dog, Rabbit, Beaver | R |
| Tailor | 15 | 6 | Rabbit and Dog | |
| Airplane janitor | 16 | 6 | | P |
| Ticket vendor | 16 | 6 | Cat and Dog | I |
| Fuel truck driver | 16 | 6 | | G |
| Carpenters assistant | 16 | 6 | | |
| Airplane pilot | 17 | 6 | Fox dominated; also Dog, Raccoon | |
| Mason's assistant | 18 | 6 | | |
| Mason | 18 | 6 | | |
| Stone worker | 18 | 6 | | |
| Unskilled laborer | 18 | 6 | | |
| Janitor | 18 | 6 | | |
| Street cleaner | 18 | 6 | | |
| Switchman | 18 | 6 | | |
| Fire fighter | 18 | 6 | | |

Table 1 (*continues*)

| Occupation | Minor partition | Major partition | Composition (in minor) | Name (in major) | |
|---------------------|-----------------|-----------------|--|-----------------|---|
| House painter | 18 | 6 | | | |
| Weather forecaster | 18 | 6 | | | |
| Surveyor | 18 | 6 | PIG (79.4%); also some Raccoon, Dog, Cat | | |
| Police dispatcher | 18 | 6 | | | |
| Fishermen | 18 | 6 | | | |
| Dye workers | 18 | 6 | | | |
| Chef | 18 | 6 | | | |
| Boat builder | 18 | 6 | | | |
| Barber | 18 | 6 | | | |
| Automobile salesman | 18 | 6 | | | |
| Airport ground crew | 18 | 6 | | | |
| Construction worker | 19 | 7 | | | G |
| Electrician | 19 | 7 | Dog and Mouse; also Fox | R | M |
| Policeman | 19 | 7 | | E | O |
| Supervising tech | 19 | 7 | | A | U |
| Sailor | 20 | 7 | | T | S |
| Lighthouse operator | 20 | 7 | MOUSE ONLY | E | E |
| Airplane navigator | 20 | 7 | | R | |
| Gardener | 20 | 7 | | | |
| Ship's navigator | 21 | 8 | | | |
| Railroad worker | 21 | 8 | | | |
| Conductor | 21 | 8 | | | |
| Sales, clothing | 21 | 8 | | | |
| Cashier | 21 | 8 | | | |
| Waiter | 21 | 8 | | | |
| Chimney sweep | 21 | 8 | | | |
| Taxi driver | 21 | 8 | | | |
| Mover | 21 | 8 | | D | |
| Baggage handler | 21 | 8 | DOG ONLY | O | |
| Truck sales | 21 | 8 | | G | |
| Tailor's helper | 21 | 8 | | | |
| Photographer | 21 | 8 | | | |
| Portrait artist | 21 | 8 | | | |
| Newsstand operator | 21 | 8 | | | |
| Newspaper editor | 21 | 8 | | | |
| Police sergeant | 21 | 8 | | | |
| Detective | 21 | 8 | | | |
| Druggist | 21 | 8 | | | |
| Anesthesiologist | 21 | 8 | | | |
| Ambulance driver | 21 | 8 | | | |
| Blacksmith | 22 | 9 | | F | |
| Electrical worker | 22 | 9 | FOX ONLY | O | |
| Realtor | 22 | 9 | | X | |
| Telephone operator | 22 | 9 | | | |

Table 1 (continues)

| Occupation | Minor partition | Major partition | Composition (in minor) | Name (in major) | |
|------------------------------|-----------------|-----------------|------------------------|-----------------|---------|
| Probable thief | 23 | 10 | Fox and Bear | G | B |
| Postmaster | 24 | 10 | | R | E |
| Contractor/engineer | 24 | 10 | BEAR ONLY | T | A |
| | | | | R | R |
| Mayor | 25 | 11 | Fox and Leopard | L | P |
| Fire chief | 26 | 11 | | E | A |
| Dentist | 26 | 11 | LEOPARD ONLY | O | R |
| | | | | – | D |
| <i>Detached but related:</i> | | | | | |
| Air dispatcher | 27 | 12 | | | O |
| Eye doctor | 27 | 12 | OWL ONLY | | W |
| Music teacher | 27 | 12 | | | L |
| Miner | 28 | 13 | BEAVER ONLY | | BEAVER |
| Printer | 28 | 13 | | | |
| <i>Totally detached:</i> | | | | | |
| Spinner | 29 | 14 | TIGER | | Omitted |
| Door to door sales | 30 | 15 | OCTOPUS | | Omitted |
| Physician | 31 | 16 | LION | | Omitted |
| Thief | 32 | 17 | GORILLA | | Omitted |
| Wildlife photographer | 33 | 18 | HYENA | | Omitted |

It turns out that not all the rows are actually well-ordered; some rows are completely separable from the main table.²⁶ That is, if there is an occupation O held by an animal of species S, and no other S holds a job held by any other species, and no other species holds job O, there is no way to put O in relation to other jobs. At the end of Table 1, we see five detached jobs held by five detached species. These will be omitted from further consideration. There were also two clusters that were ‘semi-detached’ from the rest of the table. That is to say, they were placed next to each other as closely related, but their relation to the large ordering comprising the body of Table 1 was uncertain. I shall discuss the reasons for this ambiguous position below.

We can interpret the ordering of these rows in terms of the animals which hold them. Note that this is in principle different from the possible tactic of using the rows to order the animals. Here we are interested not so much in what animals are ‘closest’ to one another in terms of being candidates for aggregation (since no such aggregations were useful), but rather in understanding the *totemic nature of occupational stratification* in this table. To begin our interpretation of this totemic ordering, we may begin by simply eyeballing the table, and looking for meaningful tendencies –

²⁶ Such separability can be detected by permuting the order of the table before the algorithm is applied, and examining whether this leads to a difference in the final order.

a disproportionate representation of one type of job for one animal class. Starting with the top of Table 1, we see a cluster of rabbit jobs, contiguous to (ignoring the slightly anomalous position of the single occupation of frozen dessert sales) cat jobs. Why are rabbit jobs considered similar to cat jobs? Well, we see at the end of the rabbit jobs a few female jobs (as well as child labor and the ‘tame’ job of newspaper reporting). The cat jobs pick up from here, with a cluster of fabric-related female jobs, and then a cluster of personal-service female jobs, leading to artistic jobs, and then, via the ‘tame’ jobs of delivery boy and grocer, to some petit bourgeois occupations. But cats also may hold semi-skilled laborer jobs, which bring them near to raccoons.

From the raccoon jobs we come to the major category of GREATER PIG, which could be called without too much error ‘America’s Working Man’ (with all the connotations of the particular consciousness uncovered by Halle, 1984). The minor categories here go from Raccoon- and Cat-related jobs of industrial work to the more ‘doggy’ jobs of lifting and transporting things (minor category 13) to the minor category of pig jobs proper: the dominated fraction of the dominated category, to use Bourdieu’s language. Here we see a number of sub-categories that disproportionately employ pigs: jobs involving stone, sanitation, and then the somewhat irresponsible (as it turns out from the text) fire-fighters and house-painters.

Next to the GREATER PIG major category is the GREATER MOUSE, involving some jobs shared by mice and dogs. From here we move on to DOG proper: note that dog jobs involve transportation, personal service (especially picking up and moving things: baggage handling is the occupational equivalent of ‘fetch!’) to some jobs requiring the kind of trust only a good dog is worthy of: police work, dispensing drugs (both as an anesthesiologist and pharmacist, the latter being the most trusted occupation in America, according to Gallup), and driving ambulances. Finally, in quick succession, we see FOX, BEAR, and LEOPARD. Now we may not be as able to see the reasons for the contiguous placement of these categories next to each other as we could when we noted the shared feminization of rabbit and cat jobs. But we must recall that the likeness of fox, bear, and leopard is in part due to their common *differences* from other jobs, which may come up in later analysis.

Finally, we come to the semi-detached owl and beaver jobs. Two of the owl jobs seem to have to do with eyes: this makes them hard to integrate with the other owl workers who are found in the petit-bourgeois end of GREATER PIG. The beaver jobs are similar in that they do not fit in to the area of GREATER PIG where other beavers are found. Thus both owls and beavers are related to the dominant classificatory scheme, but they cannot be arranged in that scheme’s *order* – they float above, not unlike the self-employed who float above current occupational classification schemes.

5.2. Authority, skill, sector, and species

This analysis seems to offer us a limited sense of the totemic logic underlying *What do people do all day*. It suggests that the ‘working man’ jobs of GREATER PIG are contrasted both to the feminized jobs of cats and rabbits, and also to the jobs

of predators (i.e. the fox, bear, and leopard, whom we find at the opposite end of the order from the rabbit jobs), and finally to owls, whom I have compared to the self employed. Is this indeed the case? To test this logic, I coded each occupation on four variables.²⁷ The first is whether it involves authority over another, accepting the authority of another, or no authority relation. The second is the sector of the economy: primary or extractive (e.g. mining, agriculture, lumber); secondary or industrial; tertiary or service; sales; transportation; government; or 'underground' (i.e. criminal). Every effort was made to avoid confusing the job with the sector (thus one who drives a frozen dessert truck is in service, not transportation). The third variable is the degree of skill required by the job: no skill (for example, ditch digging), semi-skilled (for example, asphalt paving), skilled (operating engineer, chemical worker), professional (doctor, lawyer), or sales/service/other. The last variable is sex. With these codings, and some illustrative examples, we can explicate the logic retrieved by the ordering. Here we look at all characters in the sample (as opposed to the reduced table which was presented in Table 1), though in the interests of space I eliminate from presentation the separable species (with the exception of the symbolically interesting lion). The totals at the bottom, however, give the distribution across all 272 characters, to facilitate comparison to the sample as a whole.

First of all, regarding the distribution of authority, it is clear that foxes in particular, and predators in general, are most likely to be in positions of command (see Table 2). The mayor is a fox, the airplane pilot is a fox, etc. Indeed, when the mayor of the neighboring town ('Workville') appears, he turns out to be a leopard. It is almost chilling to see the two mayors, side-by-side, clutching bags of money they have collected as tax revenue to spend on public works. On the opposite side are mice, who cannot occupy any position of authority, despite their diversity of occupation.²⁸ Pigs and raccoons tend to be at the bottom of any authority relation. Owls are unusual in that they are totally disconnected from authority relations – evidently, they are residual craftsmen not yet proletarianized by industrialization.²⁹

Second, women are resoundingly likely to be cats,³⁰ and cats – both male and female – are most likely to have clerical or service jobs in the service sector (see Tables 3 and 4). In other words, women have certain jobs not because they are barred from men's occupations, but because they are a certain type of being – in this case cat – which naturally tends to occupy dead end white collar positions. Dogs are also disproportionately in service sector jobs, though, as we have seen, this comes not from their being found in feminized occupations, but because of their quality of *personal* service. Trustworthy creatures, they make excellent public servants (espe-

²⁷ The coding of occupations, however, was done *before* the results of the partition, as a minimal check against contagion, given that it was impossible to employ independent coders.

²⁸ The problem with using mice is that, as Blount (1975: 152) points out, "perhaps it is easier to imagine [mice as] members of their own hidden social systems and to think that when out of sight they might be a part of a miniature mirror world". This seems to be the case here – Scarry lets mice run whole minor worlds (e.g. a ship at sea), thereby obscuring their relation to other animals as they drop out from the larger society to fill their microcosms.

²⁹ I suspect that the owl body type and face reminded Scarry of a lovable old German woodworker.

³⁰ While cats make up around a fifth of the coded characters, they comprise over half of the females.

Table 2
Crosstabulation of species by authority

| Species | | Have authority or under authority? | | | Total |
|-----------------|---------|------------------------------------|--------------|---------------|-------|
| | | Under authority | No authority | Has authority | |
| Rabbit | Count | 7 | 11 | 2 | 20 |
| | Percent | 35.0% | 55.0% | 10.0% | 100% |
| Cat | Count | 23 | 30 | 3 | 56 |
| | Percent | 41.1% | 53.6% | 5.4% | 100% |
| Raccoon | Count | 12 | 12 | 1 | 25 |
| | Percent | 48.0% | 48.0% | 4.0% | 100% |
| Bug/Skunk | Count | 2 | | | 2 |
| | Percent | 100% | | | 100% |
| Pig | Count | 25 | 21 | 3 | 49 |
| | Percent | 51.0% | 42.9% | 6.1% | 100% |
| Mouse | Count | 9 | 9 | | 18 |
| | Percent | 50.0% | 50.0% | | 100% |
| Dog | Count | 18 | 34 | 2 | 54 |
| | Percent | 33.3% | 63.0% | 3.7% | 100% |
| Fox | Count | 7 | 6 | 3 | 16 |
| | Percent | 43.8% | 37.5% | 18.8% | 100% |
| Bear Count | 1 | 4 | 1 | 6 | |
| | Percent | 16.7% | 66.7% | 16.7% | 100% |
| Leopard | Count | 2 | 1 | 2 | 5 |
| | Percent | 40.0% | 20.0% | 40.0% | 100% |
| Lion | Count | | 1 | | 1 |
| | Percent | | 100% | | 100% |
| Owl | Count | | 5 | | 5 |
| | Percent | | 100% | | 100% |
| Beaver | Count | 4 | 3 | | 7 |
| | Percent | 57.1% | 42.9% | | 100% |
| Total (all 272) | Count | 112 | 142 | 18 | 272 |
| | Percent | 41.2% | 52.2% | 6.6% | 100% |

cially policemen), and as we have seen they are disproportionately likely to have jobs that involve porting things from one place to another.

These results dovetail with the ordering of jobs in Table 1, and they also make reference to some interpretable characteristics of the different species. But how come the working mass was identified with the pig? Recall that we found the minor category of pig jobs to be disproportionately unskilled and demeaning, such as ditch digging or sanitation (though Table 4 demonstrates that pigs are by no means restricted to such jobs³¹). Now in some cases, we can understand the socio-logic behind the

³¹ One will notice that the distribution of raccoons in Table 4 (and Table 2 for that matter) is almost identical to that of pigs; but the two animals are actually *not* quite interchangeable, as Table 3 makes

Table 3
Crosstabulation of species by sector

| Species | | Sector | | | | | | Total |
|--------------------|---------|---------|------------------|---------|-------|---------------------|-----------------|-------|
| | | Primary | Manu- facture | Service | Sales | Trans- portation | Govern- ment | |
| Rabbit | Count | 4 | 9 | 5 | | 1 | 1 | 20 |
| | Percent | 20.0% | 45.0% | 25.0% | | 5.0% | 5.0% | 100% |
| Cat | Count | 3 | 23 | 15 | 1 | 12 | 2 | 56 |
| | Percent | 5.4% | 41.1% | 26.8% | 1.8% | 21.4% | 3.6% | 100% |
| Raccoon | Count | 1 | 13 | 3 | | 6 | 2 | 25 |
| | Percent | 4.0% | 52.0% | 12.0% | | 24.0% | 8.0% | 100% |
| Bug/ Skunk | Count | | 2 | | | | | 2 |
| | Percent | | 100% | | | | | 100% |
| Pig | Count | 5 | 18 | 9 | 2 | 6 | 9 | 49 |
| | Percent | 10.2% | 36.7% | 18.4% | 4.1% | 12.2% | 18.4% | 100% |
| Mouse | Count | 1 | 7 | 2 | | 6 | 2 | 18 |
| | Percent | 5.6% | 38.9% | 11.1% | | 33.3% | 11.1% | 100% |
| Dog | Count | 1 | 15 | 17 | 2 | 15 | 4 | 54 |
| | Percent | 1.9% | 27.8% | 31.5% | 3.7% | 27.8% | 7.4% | 100% |
| Fox | Count | 1 | 6 | 3 | | 3 | 2 | 16 |
| | Percent | 6.3% | 37.5% | 18.8% | | 18.8% | 12.5% | 100% |
| Bear | Count | 1 | 2 | | | 1 | 1 | 6 |
| | Percent | 16.7% | 33.3% | | | 16.7% | 16.7% | 100% |
| Leopard | Count | | 1 | 1 | | | 3 | 5 |
| | Percent | | 20.0% | 20.0% | | | 60.0% | 100% |
| Lion | Count | | | 1 | | | | 1 |
| | Percent | | | 100% | | | | 100% |
| Owl | Count | 1 | 1 | 2 | | 1 | | 5 |
| | Percent | 20.0% | 20.0% | 40.0% | | 20.0% | | 100% |
| Beaver | Count | 4 | 2 | | | | 1 | 7 |
| | Percent | 57.1% | 28.6% | | | | 14.3% | 100% |
| Total (All 272) | Count | 23 | 101 | 59 | 7 | 51 | 28 | 272 |
| | Percent | 8.5% | 37.1% | 21.7% | 2.6% | 18.8% | 10.3% | 100% |

choice of species for the job. Thus the fidelity of dogs – an actual trait based on wolf sociality and further bred into the species – makes them ideal for law-enforcement. The proverbial cunning of foxes also suits them for politics. Even the connection between the feline and the female is readily interpretable; in our culture cats are closely linked with the declawed female – they are seen as soft, indoor, useless ani-

clear. Raccoons tend to have jobs with little in the way of skilled requirements, but they are highly clustered in the industrial sector, while pigs are found in the extractive industries and government (e.g. sanitation engineer) – this probably stems from the fact that raccoons are well known to have high motor control with their paws, which well suits them for putting things together, but it also seems to indicate a bit more self-reliance than that possessed by the pig.

Table 4
Crosstabulation of species by skill of labor

| Species | | Skilled labor? | | | | | Total |
|--------------------|---------|----------------|--------------|---------|--------------|-----------------------|-------|
| | | Unskilled | Semi-skilled | Skilled | Professional | Sales, service, other | |
| Rabbit | Count | 1 | 5 | 6 | 2 | 6 | 20 |
| | Percent | 5.0% | 25.0% | 30.0% | 10.0% | 30.0% | 100% |
| Cat | Count | 2 | 18 | 18 | 5 | 13 | 56 |
| | Percent | 3.6% | 32.1% | 32.1% | 8.9% | 23.2% | 100% |
| Raccoon | Count | 5 | 10 | 5 | 1 | 4 | 25 |
| | Percent | 20.0% | 40.0% | 20.0% | 4.0% | 16.0% | 100% |
| Bug/ Skunk | Count | | | 2 | | | 2 |
| | Percent | | | 100% | | | 100% |
| Pig | Count | 5 | 16 | 11 | 2 | 15 | 49 |
| | Percent | 10.2% | 32.7% | 22.4% | 4.1% | 30.6% | 100% |
| Mouse | Count | 1 | 7 | 5 | 1 | 4 | 18 |
| | Percent | 5.6% | 38.9% | 27.8% | 5.6% | 22.2% | 100% |
| Dog | Count | 6 | 17 | 11 | 4 | 16 | 54 |
| | Percent | 11.1% | 31.5% | 20.4% | 7.4% | 29.6% | 100% |
| Fox | Count | | 2 | 8 | 2 | 4 | 16 |
| | Percent | | 12.5% | 50.0% | 12.5% | 25.0% | 100% |
| Bear | Count | | 3 | 1 | | 2 | 6 |
| | Percent | | 50.0% | 16.7% | | 33.3% | 100% |
| Leopard | Count | | 1 | | 1 | 3 | 5 |
| | Percent | | 20.0% | | 20.0% | 60.0% | 100% |
| Lion | Count | | | | 1 | | 1 |
| | Percent | | | | 100% | | 100% |
| Owl | Count | | | 2 | 1 | 2 | 5 |
| | Percent | | | 40.0% | 20.0% | 40.0% | 100% |
| Beaver | Count | | 5 | 2 | | | 7 |
| | Percent | | 71.4% | 28.6% | | | 100% |
| Total (All 272) | Count | 20 | 86 | 72 | 20 | 74 | 272 |
| | Percent | 7.4% | 31.6% | 26.5% | 7.4% | 27.2% | 100% |

mals ... though of course cats did not appear in this guise in earlier times, when they were nasty, outdoor, rat-trappers, and gendered male.

The pig, however, presents a bit of a conundrum ... unless one sees the pig as an unconscious parody of the working class body type – the body without breeding, tending to overflow polite boundaries and destine its bearer for simple tasks.³² As Bourdieu (1984 [1979]) has argued, the opposition thick/thin is reliably connected to the dichotomy between mental and manual laborers: it cannot be accidental that jobs involving the manipulation of stone are PIG jobs, for the thickness and heaviness of

³² As Shepard (1996: 298f.) says, “pigs have come to represent the degraded status connoting ‘animal’ or ‘flesh’ or ‘body’”.

the stone has a naturalizing affinity for the thickness and heaviness of the pig's body. Thus the pigs' position in the occupational hierarchy comes from their ability to represent a polar body type.

That the use of the pig legitimizes class stigmatization is seen in the disproportionate number of foolish mishaps that pigs cause in this work. (Indeed, when Scarry later introduced a character who would specialize in foolish accidents, Mr. Frumble – i.e. fumble –, he made him a pig.) Scarry is well known for his filling almost every page with some outrageous accident or another, and he has claimed that he used animals as characters as opposed to people so that he could portray such accidents without being seen as sadistic. But it is not just any animal that finds itself in these humiliating accidents. Fully 16% of the pigs are involved in a mishap of some other, far more than any other species, and unlike the other species, they are the *cause* of the mishap 75% of the time, as opposed to the innocent victim. Less than 2% of the other animals, in contrast, are the cause of a mishap. But pigs fall into bread dough, they fall into rivers, toss pancakes out of windows. The main pig character ('Daddy Pig') stuffs himself with food, getting so heavy he breaks his children's beds – they move into Mommy Pig's bed, while he lies snoring obliviously.

To fully appreciate this depiction, compare the serious professionalism of the other firefighter in this scene to the absurd antics of the three pigs (one of whom later smashes down a door with his axe without seeing if it is even locked) (see Fig. 3). By itself, this would mean nothing. But when one surveys Busytown, as in the overview given on pages 4–5, one begins to have an explanation of why the street cleaner and the ditch digger are pigs. It is an answer to the question posed by the inequity of the division of labor that is simpler – only slightly – than that of Davis and Moore (1945), but then again, this *is* a book for children.

These interpretive glosses are supported by our findings, but can we make sense of the scheme as a whole? Let us arrange the major classifications in a Durkheimian schema, attentive to the fact (discussed above) that the ordering algorithm used does not necessarily correlate with a single dimension. We can summarize the important findings of Tables 2–4 in Table 5, which will allow us to understand the order of species retrieved from Table 1. Fig. 4 plots this order in a three-dimensional totemic space, in which the relative positions of the species provide a key both to their hierarchical relations and what Evans-Pritchard (1950 [1940]: 109f) called 'social distance': "the distance between groups of persons in a social system, expressed in terms of values". The order of animals is stretched into a U-shape. Animals at the bottom of the U may be considered to be dominated, animals on top dominating. As we shall see, while there is a logic to the horizontal placement of species, it is *not* to be interpreted as a single latent dimension. The dominated animals are raccoon, bug/skunk, pig, and mouse. Note that Table 5 demonstrates that the vertical dimension here correlates quite well with the percent of the species that are professionals, who have authority, and who have skilled jobs. There are two exceptions which help us understand the multidimensionality of the schema. The first is the position of mice – they have less authority than would be expected. As we have seen, this is characteristic of mice: they are small things, fearful, and not able to command like the predators. The second exception is the dog, whose lack of skill seems out of



Fig. 3. Pig firemen.

(From *What do people do all day?* by Richard Scarry, copyright 1968, 1979. Used by the kind permission of Random House.)

place with his relatively non-dominated position. It seems that his faithfulness has been rewarded!

Table 5
Data to be used to Interpret Fig. 1

| Species | Ratio of percent having authority over others to percent under authority of others | Ratio of percent skilled to percent unskilled | Percent female | Percent Professional |
|---------------|--|---|----------------|----------------------|
| RABBIT | .29 | 6 | 15 | 10.0 |
| CAT | .12 | 8 | 21 | 8.9 |
| RACCOON | .08 | 1 | 8 | 4.0 |
| BUG/ SKUNK | .00 | (semiskilled only) | 0 | 0.0 |
| PIG | .12 | 2.2 | 0 | 4.1 |
| MOUSE | .00 (0/50) | 4.6 | 0 | 5.6 |
| DOG | .12 | 1.8 | 6 | 7.4 |
| FOX* | .43 | infinite (50/0) | 6 | 12.5 |
| BEAR* | 1.00 | infinite (17/0) | 0 | 0.0 |
| LEOPARD* | 1.00 | undefined (0/0) | 0 | 20.0 |
| OWL | undefined (0/0) | infinite (40/0) | 20 | 20.0 |
| BEAVER* | 0 (0/57) | infinite (29/0) | 0 | 0.0 |

* This species is disproportionately concentrated in government.

Owls and beavers, as we have seen, hold jobs that are classified as GREATER PIG jobs, yet OWL ONLY jobs and BEAVER ONLY jobs do not fit in the order of animals. They float somewhat above it, as they do not quite find their place in the modern occupational structure. Owls, I contended, were pre-industrial craftsmen who were not yet wholly proletarianized: so too beavers seem uniquely wedded to the extractive industries of early industrial capitalism, and unlike the other workers, have not branched out into other sectors such as sales and service which would make them comparable in their occupational distribution to the other dominated animals. Their presence therefore induces a partial third-dimension, one having to do with *time*, in the space corresponding to industrial evolution. Hence the dashed line is to be read as coming out of the page; the further out, the further back in economic development is the species.

The U-shape of the main distribution indicates two paths of upward mobility (and it is the separation of these two paths that induces the horizontal differentiation), though it is not without significance that the one pictorially higher in fact leads to

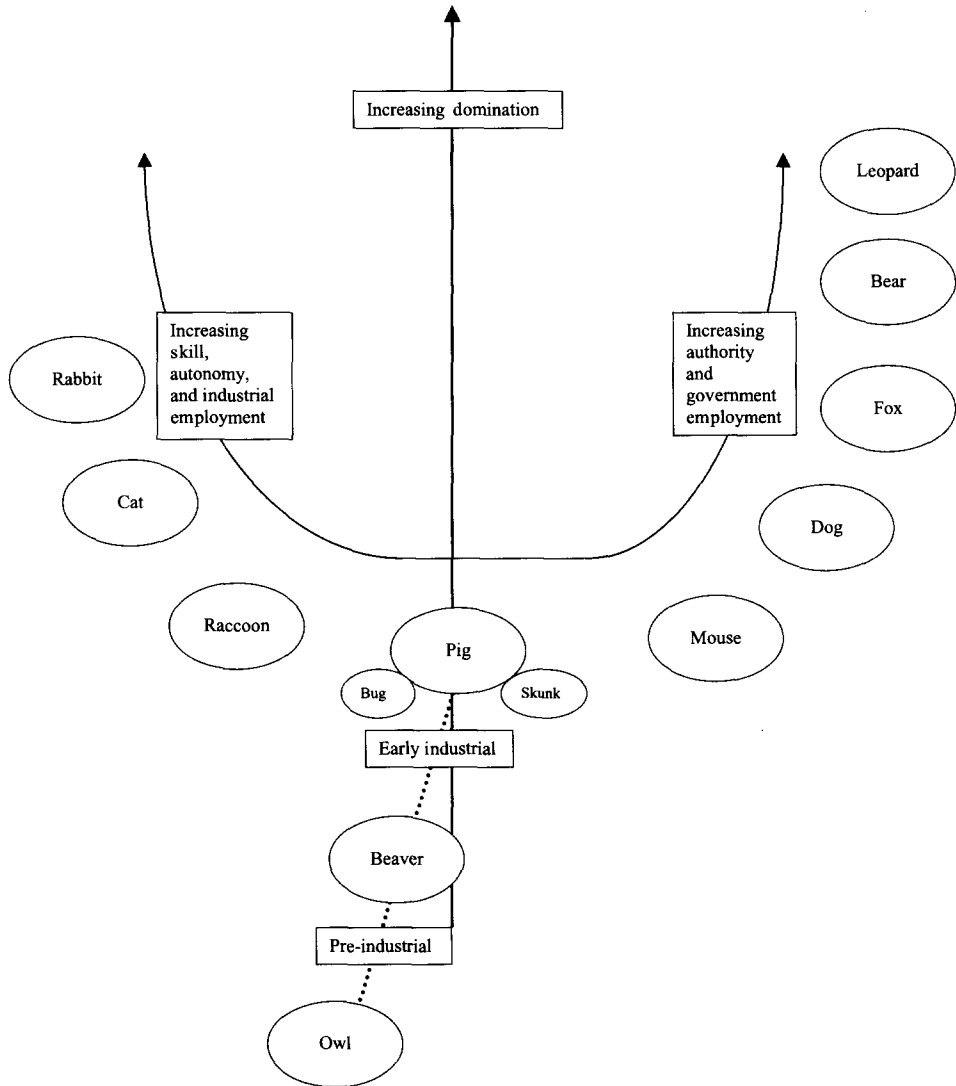


Fig. 4. Totemic arrangement recreated from master table.

higher positions of absolute status. The stark opposition of these two wings is just as full of import as is the domination of pigs and raccoons itself. The rightward wing involves not only increasing skill and professionalism, but rapidly increasing authority and government involvement. From dog to fox to leopard, we go from the humble state servant to the power elite. (It is also not insignificant that the major dog character in Scarry's world is a policeman, 'Sergeant Murphy': thus dogs do actually represent the Irish path of upward mobility via Tammany Hall.)

The leftward route is quite different – it also involves increasing authority (moderately), but what is most notable is that it is the route of the 'tame', culminating in the rabbit. The most central rabbit is Stiches the tailor, with his innumerable children: Scarry unconsciously draws upon stereotypes of the timid European immigrant, probably a Jew, for this character, and more generally, this leftward route of mobility seems appropriate to such types normally considered tame, paradigmatically women. This *is* a route of mobility, but it is obviously limited – there is no path to the dominating fraction of the dominant class, the large cats, despite the evolutionary closeness between domestic cats and leopards.

In sum, the totemic organization retrieved by the entropic analysis adds a richness to our understanding of how Scarry's analogic hyperbole operates, for it allows us not only to see how individual species exaggerate characteristics associated with jobs, but how (in strict accordance with the explication of totemic logic given by Lévi-Strauss, 1963 [1962]), the *relations* between species map onto the relation between persons of different sorts. The dominated position of the pig, while 'naturalized' to appear as a result of the internal porcine nature of his hammy body, is at the same time an indexical relation of *difference*, what Bourdieu (1996 [1989]: 2) referred to as "the reciprocal externality of positions".

Hence the child learns not just what people do all day, but what *kinds* of people do what *kinds* of things. Precisely by refusing to portray humans *as* humans, which would require explicit decisions as to the particular person for the particular job, and a difficult choice of race, ethnicity, and other visible signs, Scarry is able to provide children the key to unlock the objectively coded world of occupational stratification. Of course this is often (though not always) unintended by the author, but this is all the more reason to take the results of this exercise in irresistible analogic hyperbole seriously.³³ The unconscious nature of the production does not decrease its effectiveness in setting up a provisional habitus, a matrix of dispositions tied to categories, that allows the child who has no knowledge of real people to see that sanitation and unskilled labor are connected – connected by virtue of being performed by the same *type* of person, the goofy, thick, clown.

³³ At other times, the choice of species is quite deliberate – thus Scarry clearly understands that the goat who farms references the Scandinavian visage of American Gothic.

6. Conclusions

“Does not society turn man according to the settings in which he deploys his activity into as many different men as there are varieties in zoology? The differences between a soldier, a workman, an administrator, a lawyer, an idler, a scholar, a statesman, a merchant, a sailor, a pauper and a priest are just as great – although more difficult to grasp – as those between a wolf, a lion, a donkey, a raven, a shark, a sea-cow, a sheep, etc. There always have been and there always will be social species as there are zoological species.” (Balzac, *La comédie humaine*³⁴)

The patterns retrieved by formal analysis are not only consonant with the theoretical discussion of the means by which a kind of totemic logic can naturalize the division of labor, they are also consistent with an informal analysis of the illustrations we have seen. Despite this impressive internal consistency, however, there are two obvious objections to my thesis: the first is that it simply reads too much into this light-hearted work (WDPDAD); the second is that I have picked one unrepresentative work out of many. Regarding the former, I am far from the first to engage Scarry on the terrain of his portrayal of the division of labor, and the internalization of character types flowing from the use of animals. First of all, Scarry’s very use of animals is explained in terms of the division of *people* into categories. Scarry’s hagiographer remarks that “[At the time of Scarry’s first book, in 1963], many children’s books had illustrations of white children and adults. But Scarry used humorous animals in his illustrations. He avoided representing only one group of people” (Berg, 1994: 11). Scarry himself seconded this: “I like to draw animals.³⁵ And I think that children can identify more closely with pictures of animals than they can with pictures of another child. They see an illustration of a blond girl or a dark-haired boy who they know is someone other than themselves, and competition creeps in” (Berg, 1994: 21). The challenges of a diverse society prompted Scarry to use animals to avoid offense, yet describe the range of human types.

Nor am I the first to see Scarry’s figures as legitimizing a form of social stratification. Scarry received much criticism from women’s groups for portraying women in traditional roles like that of the housewife. More importantly, Scarry himself saw such a reading as relevant. “Their criticism has been valid in some instances”, Scarry is quoted as saying. “And I’m trying to improve my [N.B.] image” (Berg, 1994: 27). Scarry ‘improved his image’ by improving that of women – he not only portrayed women in more ‘modern’ roles in his later works, he even revised his first major success, *Richard Scarry’s best word book ever* to portray female animals in a wider variety of roles (Retan and Risom, 1997: 50f.) – for example, on the second

³⁴ Cited in Shepard (1996: 113).

³⁵ Indeed, Scarry also *liked* animals – when he had achieved success, he made yearly safaris in Kenya, to see elephants, lions, giraffes, zebras, and hippopotamuses (Retan and Risom, 1997: 113). But note none of these dominate his works, and indeed only lions and hippos are regularly seen. Why? Presumably because only these successfully reference types of people (lions are trustworthy dominant males, hippos are somewhat ridiculous middle-age women).

edition's cover the female pushing the baby carriage has become a male, the male traffic cop a female, etc.

The other question is whether, division of labor or no, Scarry's work – and therefore these results – is representative. Now of course, this is only one book from one author. However, Richard Scarry is the world's best selling children's picture book author, with over 300 books selling more than 100 million copies world wide.³⁶ If one was to pick any single author for detailed analysis, to test my claim regarding the naturalization of the division of labor via a totemic logic which makes use of analogic hyperbole, it would certainly be Scarry. Indeed, after beginning this research I found one article on class and animal symbolism, by the Swedish anthropologist Orvar Löfgren. While the work is a social history of the place of pets in the context of Swedish class formation,³⁷ it begins with an anecdote from the author's life: at a parade, his three year old son is disappointed to find that the firemen are not pigs. "It took me some time", recalls Löfgren (1985: 184), "before I realized that he had been over-exposed to the bizarre picture-book world of Richard Scarry, where pigs do not man the police station but the fire department". (We have of course uncovered the reason for this.)

Though he is only one author, then, Scarry's sampling weight is prodigious. Of course, Scarry is unique, as are we all (if not 'bizarre' as Löfgren unkindly calls him), but what sets him apart is the way he handles this point, not his interest in it. A very different treatment, worthy of more attention than I can give it here, would be DeBrunhoff's (1963 [1935]) *Babar the king*. Briefly, in this book about the ever-popular elephant, we follow Babar instructing his subjects in the building of a city, to be named after Babar's wife. He has returned from a sojourn among humans, and has gifts which he will distribute after the construction of the overplanned modernist city, Celestville. After the construction of this Pachydermal Brazilia, Babar distributes the presents, in a special building apparently constructed solely for this purpose (see Fig. 5). "He gives a gift to each elephant and also serviceable clothes suitable for work-days and beautiful rich clothes for holidays. After thanking their King most heartily, the elephants all go home dancing with glee" (DeBrunhoff, 1963 [1935]: 14). But this is a bit misleading. The elephants, who until this time have been naked quadrupeds, emerge from this room as clothed bipeds – each with a job and a new identity. They do not return to four legs once they stop their obsequious dance; they remain now protohumans. It is an inversion of Scarry's logic – animals of the same species must become like humans to be differentiated; humans are different from other animals because their interspecies variation is greater due to the division of labor.³⁸

³⁶ In 1980 alone, Scarry sold over 4 million books world-wide, over 60 million sold entire.

³⁷ Löfgren (1985: 201f.) demonstrates that the British middle classes seized upon birds as 'paragons of bourgeois virtues' – unlike other animals they were clean, focused on their nuclear families, and relatively discrete in sexual matters. Those that were not were castigated as bad birds (more particularly, the 'Irishmen' or 'Cockneys' of birds) in remarkably blatant evaluative discussions in supposedly educational works.

³⁸ The point that *Babar* presents animals as differentiated only when they become civilized (humanized) has recently been noted in a somewhat strained essay by Kohl (1995: 7, 10, 17). Interestingly, Kohl



Fig. 5. From state of nature to civil society in Celesteville.
 (From *Babar the king*, by Jean DeBrunhoff, copyright 1935, 1963.) Used by the kind permission of Random House.)

And make no mistake, this differentiation is of paramount interest to DeBrunhoff. He has a long (and rather dull) description of how the division of labor works (“If Barbacol [the tailor] wants a statue for his mantelpiece, he asks Podular [the sculptor] to carve one for him, and when Podular’s coat is worn out Barbacol makes a new one”, DeBrunhoff, 1963 [1935]: 24), even down to reciprocity between the army officer who guards them from enemies, and the street cleaner who sweeps up

also notes that DeBrunhoff’s son Laurent, who has carried on the Babar books, has made quite clear that he understands the seriousness of the implications of the Babar series regarding the relations between races and sexes, and that, like Scarry, he is trying to ‘update Babar’s image’.

their streets. These occupational identities become all encompassing for the de-animalized elephants – at the enforced parade to honor their dictator, Babar has all the elephants organized in true corporatist fashion by their trade, so that he can survey the social organs as they pass before him.

One swallow does not a summer make, as Aesop says; perhaps not even two. But however one evaluates my particular claims here, the development of the cognitive schema that naturalize the division of labor cannot be forever shrugged off with a general ontological image, but must be studied as part of primary socialization.³⁹ We probably cannot fully understand the importance of the class physique of the butcher in Bourdieu's (1984 [1979]) example 'The body fits the job' (Fig. 1) – nor why Bourdieu picked that particular example – without comparing it to the butcher in *Busytown* (see Fig. 6). No person could simply internalize the subjective correlative to the objective position of butcher, a position and trajectory that leave readable traces in the butcher's body. There assuredly are, even in France, endomorphic, mesomorphic, and ectomorphic butchers, though this distribution may be uneven. Furthermore, as Durkheim and Mauss (1963 [1903]) argued, something 'more' is needed to transform mere likeness into categorical identity, and it is such categorical identity that is required to truly naturalize the division of labor. We have seen evidence that this can occur through the totemism of analogic hyperbole, by mapping differences between people onto differences between animals. Children may be predisposed to *use* the formal characteristics of the animal kingdom to develop the empirically valid sense of classification which can then be used to order the social world. But the content of that mapping is to some degree determined by the socialized form in which structured oppositions between animals are presented in literature, a form which bears the imprint not of the natural divisions between animals, but of the naturalizing of the division of labor.

Appendix A: A note on coding

All characters were coded if the species and occupation could be determined. In some cases, characters had no clear occupation (e.g. Wild Bill Hiccup); in others, characters were shielded behind others so as to make it unclear what species they were. In at least one case (e.g. newstand vendor on p. 47), the animal could have been a young wolf, a fat mole, or a husky dog. There were very few such cases. Some care was taken to make sure that the same character was not coded twice; unnamed characters were assumed to be the same within a story (the dog fireman getting off the truck is, unless otherwise indicated by varietal differences, the same as the dog fireman in the firehouse), but to be different *across* stories. (A cat ditchdigger in one story is not, unless otherwise indicated, the same as the cat ditchdigger in a different story.) As one can see by examining the raw data (available upon request), there were very few (or no) examples of the latter duplication.

³⁹ One of the most important ways in which this socialization takes place, in which one generation can rapidly condense and introject into the next generation whatever crucial information it has distilled from time immemorial, is to make it see-able (see the lovely discussion at the end of Crosby, 1997). We should therefore expect any naturalization of the division of labor to appear most infallibly in printed materials.



Fig. 6. The body fits the job II: A Busytown butcher.

(From *What do people do all day?* by Richard Scarry, copyright 1968, 1979. Used by the kind permission of Random House.)

Often animals were observed doing one task that might be only one portion of a self-employed businessman's job. In that case, it was assumed that the animal was the businessman, and hence the driver of the boat builder truck was classified as a boat builder. But when the truck driver was working for a larger company, he was classified as a truck driver. Also, in some cases a collection of different animals perform different tasks that might best be thought of as part of one occupation (e.g. farming includes tasks that might be assigned to a truck driver, an operating engineer, an unskilled laborer). If the context seemed to suggest that the workers were interchangeable, they were just coded as belonging to that more general occupation (e.g. farmer). When one species had a monopoly on a certain activity or company (the mice as ship's staff, the beavers in the mine), all were classified as 'sailors' or 'miners', irrespective of their particular activity (explosives, drill, pump), as is was believed that little light would be shed on the division of labor when it was due to ethnic takeover.

Only workers were coded – excluded were of course tramps and hobos, but also wives not in the paid labor force. A brief note about them is in order. Wives were found for the following species: pig (Mommypig), cat (Huckle's mom), fox (Blacksmith Fox's wife), bear (Chief Road Engineer's wife and Besty's mom), and rabbit (Stiches' wife). Other women identified were cat, pig, mouse, dog (the tiny wife of a plane passenger), rabbit, and one fox and the rac-

coon on the first page.⁴⁰ In other words, the distribution of non-working women does not challenge the association of women with cats, but is not restricted to that association.

References

- Aesop, 1964. *Fables of Aesop*, translated by S.A. Handford. New York: Penguin.
- Barnes, Barry, 1981. On the conventional component in knowledge and cognition. *Philosophy of the Social Sciences* 11, 303–333.
- Berg, Julie, 1994. *Richard Scarry: A tribute to the young at heart*. Minneapolis, MN: Abdo.
- Berlin, Brent, 1978. Ethnobiological classification. In: E. Rosch and B. Lloyd (eds.), *Cognition and categorization*, 9–26. Hillsdale, NJ: Earlbaum.
- Blount, Margaret, 1975. *Animal land*. New York: Morrow.
- Boas, Franz, 1916. The origin of totemism. *American Anthropologist* 18, 319–326.
- Böröcz, József, 1997. Stand reconstructed: Contingent closure and institutional change. *Sociological Theory* 15, 215–248.
- Bourdieu, Pierre, 1977 [1972]. *Outline of a theory of practice*, translated by Richard Nice. Cambridge: Cambridge University Press.
- Bourdieu, Pierre, 1984 [1979]. *Distinction: A social critique of the judgement of taste*, translated by Richard Nice. Cambridge, MA: Harvard University Press.
- Bourdieu, Pierre, 1996 [1989]. *The state nobility*, translated by Lauretta C. Clough. Stanford, KY: Stanford University Press.
- Bourdieu, Pierre, and Jean-Claude Passeron, 1990 [1970]. *Reproduction in education, society, and culture*, second edition, translated by Richard Nice. London: Sage.
- Breiger, Ronald L., 1974. The duality of persons and groups. *Social Forces* 53, 181–190.
- Breiger, Ronald L., 1994. Dual aggregation on the basis of relational homogeneity. Paper presented at the International Social Networks Conference, New Orleans.
- Crosby, Alfred W., 1997. *The measure of reality*. Cambridge: Cambridge University Press.
- Davis, Kingsley and Wilbert E. Moore, 1945. Some Principles of Stratification. *American Sociological Review* 7, 309–321.
- DeBrunhoff, Jean, 1963 [1935]. *Babar the king*, translated by Merle S. Haas. New York: Random.
- Douglas, Mary, 1986. *How institutions think*. Syracuse: Syracuse University Press.
- Durkheim, Emile, 1933 [1893]. *The division of labor in society*, translated by George Simpson. Glencoe, IL: Free Press.
- Durkheim, Emile, 1954 [1912]. *The elementary forms of religious life*, translated by Joseph Ward Swain. Glencoe, IL: The Free Press.
- Durkheim, Emile and Marcel Mauss, 1963 [1903]. *Primitive classification*, translated by Rodney Needham. Chicago, IL: University of Chicago Press.
- Evans-Pritchard, E.E., 1950 [1940]. *The Nuer*. Oxford: Oxford University Press.
- Evans-Pritchard, E.E., 1974 [1956]. *Nuer religion*. New York: Oxford University Press.
- Fernandez, James W., 1972. Persuasions and performances: Of the beast in every body ... and the metaphors of everyman. *Deadalus* 101, 39–60.
- Fernandez, James W., 1974. The mission of metaphor in expressive culture. *Current Anthropology* 15, 119–145.
- Foulkes, David, 1982. *Children's dreams: Longitudinal studies*. New York: Wiley.
- Goodman, Leo, 1970. The multivariate analysis of qualitative data: Interactions among multiple classifications. *Journal of the American Statistical Association* 65, 226–256.
- Goodman, Leo, 1971. The analysis of multidimensional contingency tables: Stepwise procedures and direct estimation methods for building models for multiple classifications. *Technometrics* 13, 33–61.

⁴⁰ In this book there is no wife of Alfalfa the farmer (goat); she does appear in other works.

- Goodman, Leo, 1979. Simple models for the analysis of association in cross-classifications having ordered categories. *Journal of the American Statistical Association* 74, 537–552.
- Goodman, Leo, 1981. Criteria for determining whether certain categories in a cross-classification table should be combined, with special reference to occupational categories in an occupational mobility table. *American Journal of Sociology* 87, 612–650.
- Grady, John, 1996. The scope of visual sociology. *Visual Sociology* 11, 10–24.
- Halle, David, 1984. *America's working man*. Chicago, IL: University of Chicago Press.
- Harwood, Jonathan, 1979. Heredity, environment, and the legitimation of social policy. In: B. Barnes and S. Shapin (eds.), *Natural order*, 231–248. Beverly Hills, CA: Sage.
- Kant, Immanuel, 1950 [1787]. *Critique of pure reason*, translated by Norman Kemp Smith. London: Macmillan and Company.
- Kohl, Herbert, 1995. *Should we burn Babar?* New York: The New Press.
- Kullback, Solomon, 1959. *Information theory and statistics*. New York: Wiley.
- Lévi-Strauss, Claude, 1963 [1962]. *Totemism*, translated by Rodney Needham. Boston: Beacon.
- Lévi-Strauss, Claude, 1966 [1962]. *The savage mind*. London: Weidenfeld.
- Levy-Bruhl, Lucien, 1985 [1910]. *How natives think*, translated by Lilian A. Clarke. Princeton, NJ: Princeton University Press.
- Lewis, C.S., 1963. On three ways of writing for children. *The Horn Book Magazine*, October, 459–469.
- Löfgren, Orvar, 1985. Our friends in nature: Class and animal symbolism. *Ethnos* 50, 184–213.
- Luce, R. Duncan, 1960. *The theory of selective information and some of its behavioral applications: Part I of developments in mathematical psychology*. Glencoe, IL: Free Press.
- Martin, John Levi, 1999. Entropic measures of belief system constraint. *Social Science Research* 28, 111–134.
- Mead, George Herbert, 1962 [1934]. *Mind, self, and society from the standpoint of a social behaviorist*. Chicago, IL: University of Chicago Press.
- Mehta, Cyrus R. and Nitin R. Patel, 1983. A network algorithm for performing Fisher's exact test in $r \times c$ contingency tables. *Journal of the American Statistical Association* 78, 427–434.
- Mehta, Cyrus R. and Nitin R. Patel, 1986. FEXACT: A FORTRAN subroutine for Fisher's exact test on unordered $r \times c$ contingency tables. *ACM Transactions on Mathematical Software* 12, 154–161.
- Mohr, John W. and Vincent Duquenne, 1997. The duality of culture and practice: Poverty relief in New York City 1888–1917. *Theory and Society* 26, 305–356.
- Myers, Gene, 1998. *Children and animals*. Boulder, CO: Westview.
- Parsons, Talcott, 1968. *The structure of social action*, vol. I. New York: The Free Press.
- Preuss, Lucien G., 1980. A class of statistics based on the information concept. *Communications in Statistics – Theoretical and Methodological* A9(15), 1563–1585.
- Preuss and Partners, 1993. *TAXIS: A knowledge base*. Zurich.
- Preuss, Lucien and Helmut Vorkauf, 1997. The Knowledge Content of Statistical Data. *Psychometrika* 62: 133–161.
- Radcliffe-Brown, A.R., 1952. *Structure and function in primitive society*. London: Cohen.
- Retan, Walter and Ole Risom, 1997. *The busy, busy world of Richard Scarry*. New York: Abrams.
- Rousseau, Jean-Jacques, 1967 [1755]. *Discourse on the origin of inequality*, edited by Lester G. Crocker. New York: Washington Square.
- Scarry, Richard, 1968. *What do people do all day?* New York: Random House.
- Schiebinger, Lorna, 1987. Skeletons in the Closet: The first illustrations of the female skeleton in eighteenth-century anatomy. In: C. Gallagher and T. Laqueur (eds.), *The making of the modern body*, 42–82. Berkeley, CA: University of California.
- Shannon, Claude E., 1963 [1948]. *The mathematical theory of communication*, reprinted by Claude E. Shannon and Warren Weaver. Urbana, IL: The University of Illinois Press.
- Sheldon, William H., 1954. *Atlas of men: A Guide for the somatotyping the adult male at all ages*, with the collaboration of C. Wesley Dupertuis and Eugene McDermott. New York: Harper.
- Shepard, Paul, 1996. *The others: How animals made us human*. Washington DC: Island.
- Shepard, Paul, 1998 [1978]. *Thinking animals: Animals and the development of human intelligence*. Athens, GA: University of Georgia Press.
- Simmel, Georg, 1955 [1922]. *Conflict and the web of group affiliations*, translated by Reinhard Bendix and Kurt H. Wolff. Glencoe, IL: Free Press.

- Smith, Adam, 1937 [1776]. *An inquiry into the nature and causes of the wealth of nations*. New York: The Modern Library.
- Tönnies, Ferdinand, 1975 [1887]. *Community and society (Gemeinschaft und Gesellschaft)*, translated by Charles P. Loomis. East Lansing, MI: Michigan State University Press.
- Yuan, Lin and Kesavan, H.K., 1997. Bayesian estimation of Shannon entropy. *Communications in Statistics, Theory and Methods* 26, 139–148.

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