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Human Universals and Human Culture

In spite of the two-part title, this talk is roughly divided into three parts: One on the kinds of universals, one on the causes of universals, and then one on universals in relation to the development of culture.

In the basic conception of human universals (I will turn to some alternative conceptions later) they consist of those features of culture, society, language, behavior, and mind that, so far as the record has been examined, are or were found in all societies known to ethnography and history. To give a few examples, those in the cultural realm include myths, legends, body adornment, daily routines, rules, concepts of luck and precedent, and the use and production of tools; in language there are grammar, phonemes, polysemy, metonymy, antonyms, and an inverse ratio between the frequency of use and the length of words; in the social realm there are a division of labor, social groups (including thinking of them as entities or agents), age grading, the family, kinship systems, ethnocentrism, play, exchange, cooperation, and reciprocity; in the behavioral realm, there are aggression, gestures, gossip, and facial expressions; mentally there are emotions, dichotomous thinking, wariness around or fear of snakes, empathy, and psychological defense mechanisms.

Many universals do not fall neatly into one or another of these conventional realms, but cut across them. Kinship terminologies (in English: father, mother, brother, sister, cousin, etc.) are simultaneously social, cultural, and linguistic. The concept of property is social and cultural. Revenge is both behavioral and social. Lying is behavioral, social, and linguistic. Conversational turn-taking is both social and linguistic.

Let me digress for a moment to discuss a distinction among universals that looms large among anthropologists: the distinction between "emic" and "etic." These terms--taken from the linguistic terms "phonemic" and "phonetic"--distinguish features that are overtly or consciously represented in a people's own cultural conceptions from features that are present but not a part of the overt or conscious local cultural conceptions. Thus every people has a language with grammar, but not all peoples have an overt cultural representation

of the idea of grammar. Having grammar is an "etic" fact. If it is culturally represented, then it is an "emic" fact too. Etically, everyone has a blood type, but having blood types as a part of culture--as in the case of those Japanese beliefs that link blood types with marital compatibility--is far from universal. The general point is that emic universals are probably much rarer than etic universals. Etically, everyone has a father; but a single kin term designating just this kinsman--as the English term "father" does--is not an emic universal.

Many universals subdivide into yet others. Thus tools are a universal but so too are some general kinds of tools (pounders, cutters, containers, etc.). The facial expression of emotion is a universal, but so too are smiles, frowns, and other particular expressions.

While some universals are or seem to be relatively simple, others are complexes or syndromes (no implication of illness intended). Ethnocentrism and romantic love are examples: both are best understood as complexes or syndromes rather than simple traits or behaviors.

Many universals have a collective rather than individual referent. Thus music and dance are found in all societies, but not all individuals make music, not all individuals dance. Child-rearing occurs in all societies, but not all persons rear children.

Yet other universals are found in all (normal) individuals, although sometimes only in one sex or the other or in particular age ranges. Thus children everywhere acquire language with prodigious skill, but not adults. On the other hand, above the age of infancy everyone employs gestures and such elementary logical concepts as not, and, or, kind of, greater/lesser, part/whole, etc.; everyone classifies; everyone shows likes and dislikes.

Universals at the level of the individual seem particularly likely to be close to human nature or to be actual elements of human nature--by which I mean the evolved mechanisms of the human mind. But universals of this kind--innate universals--raise some important methodological and disciplinary issues.

To begin, there are severe methodological limitations on what can be known about universals in general. No one can really know the conditions in all societies, so that any statement about universality is based on some sort of sampling. In most cases this sampling has not been rigorous. Furthermore, the precision with

which the real or alleged universal has been described often leaves much to be desired, in part because the original "field" reports or descriptions were provided by different observers and sometimes at widely spaced intervals in time. Thus the confidence one can have in particular claims of universality is quite variable. Given the costs involved in studying even a single society, this range of problems will persist.

Let me note in passing, however, that a sample as small as two societies--so long as they are very different--can be highly suggestive. Thus one can view the documentary film entitled "First Contact" [ref?] and make one's own observations about what is common to two highly diverse societies: one's own modern society and a previously uncontacted highland New Guinean society. The film footage that this documentary is based on was taken by Australian prospectors in the 1930s, when they were the first outsiders to enter a high and isolated valley. The differences between the Australians and the New Guineans are striking, and yet they also showed much in common, much of which would be difficult to trace to borrowing from each other.ⁱ

As a related methodological complication, anthropologists, while emphasizing cross-cultural verification, have tended to focus on surface or manifest universals, those readily available to observation or readily expressed by their informants. Innate universals--the evolved features of the human mind--have tended to be neglected by anthropologists, in part because they often are not on the surface but in part because many anthropologists have thought, throughout much of the twentieth century, that there were few if any universal features of the human mind.

Psychologists, by contrast, have been much more open to the discovery of features of the human mind, but have only rarely conducted their research outside the modernized and mostly western world, so that the cross-cultural validity of their research results is often in doubt. And some cross-cultural research has indeed shown that psychological phenomena that one might think are unaffected by cultural differences--the perception of certain optical illusions, for example--are in fact not universal.

Consideration of innate versus manifest universals shades into the matter

ⁱ The making of this documentary is described in Connolly and Anderson 1987.

of what I will call the different formal distinctions among universals. These formally distinct kinds include absolute universals, near universals, conditional universals, statistical universals, and universal pools.

The definition I gave at the outset refers to absolute universals. A near universal is one for which there are some few known exceptions or for which there is reason to think that there might be some exceptions. Fire making and keeping domestic dogs are two near universals, as there were good reports of a very few peoples who used fire but did not know how to make it, or who did not possess the dog. Many traits are described as "universal or nearly universal" to express a note of caution (given the sampling problems mentioned earlier). Thus the emphasis in ritual around the world of the colors red, white, and black and of percussion or deep-noted instruments should probably be described as universal or nearly universal.

A conditional universal (also called an implicational universal) is an "if-then" universal: if a particular condition is met, then the trait in question always accompanies it. Such universals are analogous to the facultative adaptations of evolutionary biology, of which callusing is an example. Not all individuals have calluses, but if there is sustained friction on particular locations of the hand, say, then calluses develop. Implicational universals are particularly well documented in linguistics. An example from culture is that if there is a cultural preference for one hand over the other then it will be the right hand that is preferred (as is the case in western culture, where the right hand is used in greetings and taking oaths). It is the rule or underlying causal mechanism that is the real universal in such cases.

A statistical universal is one that may be far from absolutely universal but that occurs in unrelated societies at a rate that seems well above chance. An example is the words used for the pupil of the eye. In a surprisingly large number of unrelated languages it is a term that refers to a little person. The apparent explanation for this is that everywhere people looking closely at other peoples' eyes see a small reflection of themselves, so that over and over again in one society after another this experience has somehow influenced the naming of the pupil. Although it is something of a stretch to think of these kinds of phenomena as universals, the explanation for them is not culturally particular but, rather, is

in terms of a universal experience. Of course statistical- and conditional universals may combine (a great many anthropological generalizations are of this form).

A universal pool refers to those situations in which a limited set of options exhaust the possible variations from one society to another. The international phonetic alphabet, which does not really cover all the possibilities, nonetheless serves to express the idea: it consists of a finite possible set of speech sounds or sound contrasts, from which each actual language draws a particular set. Early in this century an analysis of kinship terminologies showed that a quite small set of semantic contrasts accounted for the differences in kin terms in all or nearly all societies (a few further contrasts have been added since). (Examples of the semantic contrasts are sex, generation, relative age, lineality/collaterality, etc.) The classification of the sexes appears to be severely constricted, though more optative than many might realize. In most societies, as expected, there are two sexes. But in India and Southeast Asia there are societies in which the sexes are emically divided into three, with one sex being intermediate between male and female or in some sense neither male nor female. Among native Americans a number of societies had crossover sexes, either males who opted to live as females or females who opted to live as males, or both. But those alternatives exhausted the possibilities.

Let me turn now to the causes of universals, noting at the outset that a relatively small number of processes or conditions appear to account for most of them. These processes or conditions are 1) the diffusion of ancient (and generally very useful) cultural traits, 2) cultural reflection of physical fact, 3) the operation and structure of the human mind, and (behind the latter) 4) the evolution of the human mind.

Some universals-- the well-authenticated examples are tool making, the use of fire, and cooking food--can be traced to such a great antiquity that it is sometimes proposed that they existed in the very earliest human populations and spread with humans to all their subsequent habitats. At any rate, some universals are very ancient and they are very useful, leaving it fully understandable that they might readily have spread to all human societies. On the other hand, there is nothing about them to suggest that they are anything but cultural; that is, they

do not appear to be innate.ⁱⁱ

As for cultural reflection, I have already mentioned the case of terms for the pupil of the eye, which is based on a literal reflection. I have also mentioned kin terms, which everywhere reflect the relationships entailed by the facts of sexual reproduction (for example, parent-child relationships, sibling relationships, marital/mate relationships, and the various compounds of these relationships). Kin terms often include more than what is entailed by reproduction and sometimes omit some of the entailments, but in every language there is a substantial mapping of actual (etic) kin relationships onto the locally named (emic) relationships. Similarly the naming or classification of plants and animals shows substantial mapping onto (scientific) zoological and botanical classification. The near universal preference for the right hand (that was mentioned earlier) is probably a cultural reflection of the fact that in all societies most people by far are right handed and the right hand seems so much "better." In all these cases the "world out there," so to say, is reflected in the cultural conceptions of each people--even though the reflections are not one-to-one and most certainly do vary in many ways from one society to another.

Finally, there are those universals that stem more or less directly from the nature of the human mind, or that are features of the human mind. These in turn are the products of the evolutionary past of humanity as a species. Here I should note that I stand on somewhat uncertain ground. I am by training a more or less standard socio-cultural anthropologist, but one who took anthropology's views on cultural indeterminacy sufficiently seriously to be really puzzled by the fact of so many parallel developments in cultures scattered through time and space, and

ⁱⁱIt is sometimes suggested that there are also traits that have been with humans from the earliest times, and transmitted to all subsequent human societies, not because they were obviously useful but because there was little or nothing to hinder their spread. The anthropologist Weston LaBarre coined the term "archoses" to refer to ancient and pernicious beliefs of this sort, as part of his analysis of the widespread belief system that underlies headhunting and scalping (that is, the belief that brain, bone marrow, and semen are all a common substance, with the brain as the finite reservoir of this life essence). However, this belief system seems equally likely to be a statistical universal resulting from numerous independent but similar developments. Thus, neither LaBarre nor anyone else that I am of aware of has provided convincing evidence for a universal being transmitted culturally from very ancient times and having no utility.

then even more puzzled or concerned when in the 1980s the evidence for universals seemed to be accumulating rapidly. I am not by training a psychologist or biologist. But psychobiology and evolutionary psychology now seem to me to be crucial in explaining many universals and in providing evidence of yet further universals. The reasoning is simple: whatever is constant through the many environments humans live in must be due to something that goes with them wherever they go; that is, human nature. Psychobiology and Evolutionary psychology are the tools for understanding human nature. Furthermore, I think psychobiology and evolutionary psychology will have much to say about socio-cultural particulars too. I agree with those who see the features of human nature as providing a sort of "deep structure" of society, culture, and history--however much variation they exhibit.ⁱⁱⁱ

Let me also briefly note that much of the entire body of findings on the mind, as determined by psychology, is potentially universal. The vast majority of those findings, however, have not been tested cross-culturally. It would be a massive undertaking to so test them. This task can be meaningfully reduced, though, by limiting it not to all that the mind can and does do, but to determining those features of mind placed there by natural selection; that is, by focusing on the natural units of mind, the adaptations that make it up, rather than pursuing an indiscriminate study of any or all the effects that the mind can produce. This is the task of evolutionary psychology as opposed to psychology in general. (I will say more about effects later.)

Now, let me give a few examples of universals of psyche or mind that were determined by cross-cultural study but without evolutionary theorizing and a few that are the more recent product of evolutionary theorizing. Examples of the former include dichotomization or binary discriminations, the language acquisition device (as described by the linguist Noam Chomsky), emotions, classification, elementary logical concepts, psychological defense mechanisms, ethnocentrism or in-group bias, and reciprocity as a social bonding mechanism. Examples of those derived through testing evolutionary propositions include the previously mentioned facial template-constructing mechanism that generates a preference for faces that are near the population mean, a social-cheater detecting mechanism, a module for thinking

ⁱⁱⁱ By "deep structure" I only mean that the influence of human nature is continuous and pervasive.

about "human kinds," and a preference in males for skin colors in females that are lighter than the mean (because in the past it correlated with fecundity). Incest avoidance straddles the boundary, as it is an evolution-inspired re-thinking of one of the most frequently discussed universals, the incest taboo.

The determination of innate universals, predicted or illuminated by evolutionary theory, is probably the most active area in the study of universals at present (outside of linguistics). But in the near future I think we will also see a fair amount of research or analysis that involves partitioning or breaking down socio-cultural particulars into the universal elements of which they are compounds. (More about this partitioning later.) There should also be a fair amount of attention to how to determine just which causal processes account for which universals.

Human Culture

In turning now to culture in relation to universals, I will ignore those universals that presumably are cultural--the ancient and useful inventions and the cultural reflections--but will focus instead on those that are or may be universals of mind, innate universals. Hereafter, "universals" refers to those only.

Culture is usually defined in terms that distinguish it from nature, often as a radical contrast: culture versus nature. The definitions of culture often stress patterns of behavior, thought, feelings, and artifact that are passed on from individual to individual, group to group, generation to generation extrasomatically, meaning patterns that are not in our genes, patterns that must be learned.

Although not a part of the definition, an important association with culture is variability, indeterminacy, arbitrariness. The various peoples of the world do have substantial cultural differences, and some differences seem to have no rhyme or reason. This tendency to variability is often contrasted with the fixity of nature, as in the fixity of animal instincts.

Thus I see two sets of problems that universals pose (especially for cultural anthropology). One concerns the boundary between nature and nurture while the other is the matter of how constants produce or participate in variations. Let me treat the former first.

Whatever contrast there may be between culture and nature, cultural patterns must initially be created by humans; that is, they must be created, conveyed, received, and given expression with the mental and physical traits that make up the human organism. In other words, human nature is essential to human culture--in origin and as an ongoing process. I don't think anyone denies this, though they disagree greatly about how, when, to what extent, and in what ways human nature manifests itself in cultural matters.

Let me use an analogy to indicate how I think culture and nature run together. As I sat in my office composing these sentences, employing and surrounded by artifacts that did not exist during the period in which humans evolved, much of what was around me and much of what I was doing would well fit the description of culture. The very desk in front of me was built by humans according to a pattern devised by humans. But the grain in the desk's wood always runs in whichever is the long direction of each piece. The wood itself was once a natural object, and still retains some of its natural features. So the principal ingredients of the desk are natural and the nature of those ingredients figures into how the pieces are employed. Thus nature and culture combine in the desk. Similarly, as I put together my thoughts in language, planning to communicate with other humans, trying to make myself comfortable at the same time, I was doing many natural things. As I articulated my thoughts and words, an enormous amount of mental and physical activity went on silently inside me--as they do right now--almost entirely beyond the range of consciousness. That is nature, human nature.

Some definitions of culture acknowledge this continuous intermixing with nature. The philosopher-anthropologist David Bidney, for example, argued that culture should, at least in part, be understood "as the dynamic process and product of the self-cultivation of human nature" (1947:387). Others speak of culture within nature instead of culture vs nature--that is, culture is a product of human nature. Some have equated culture with "life way," making no reference to it being extrasomatic; that term, "life way," seems to me apt for combining nature and culture. Others have seen culture as a control or correction of certain features of human nature. Yet others see it as an extension of the human mind and body. I like to think of culture as a kind of judo, in which the features of the mind and body are channeled and amplified into particularly efficient uses.

As a result of this intermingling of nature and culture, anthropologists (and others) are led to continuous uncertainty or disputation about which is which. These disputes can be beneficial, so long as there is no insistence on behaviors being radically separated, either-or culture or nature.

In sum, there may be good reason to distinguish cultural elements, but in almost everything that humans do and make it is as useful to insist on it being either culture or nature as it would be to insist that water is either hydrogen or oxygen.

Now, how do we reconcile a fixed human nature with the variability of cultures or, for that matter, with the manifest variability of human behavior? Let me give five answers.

1) in any discussion of human nature a particularly crucial distinction must be made between "functions" and "effects." The set of mental mechanisms that comprise human nature were designed by natural selection to solve particular problems and are presumably finite in number. Solving these problems are (or were) the respective functions of those mechanisms. However, a mechanism designed to discharge a particular function may have other effects, that is, side effects or byproducts. Thus, the shape of the outer ear was designed to gather sound waves but may also be used to support glasses or pencils. Similarly, our fingers were not designed to type, but can do it. In his book RACE IN THE MAKING (1996), Lawrence Hirschfeld has proposed, on the basis of experimental evidence, that there is a mechanism or module in the human mind dedicated to processing information on human types, such as kin types, the sexes, occupational types, etc. While this mechanism must have evolved in conditions in which racial differentiation was rarely if ever perceived, it has left the human mind effectively "prepared" to think about races in particular ways. Thus, racial thinking "parasitizes" a mechanism that was designed for other purposes.

In the case of humans the mental mechanisms are numerous and their effects--which presumably include a great many emergent properties stemming from the interaction of the various individual mechanisms--are either potentially infinite or at any rate infinitely divisible. In spite of the infinity of possible behavioral effects, the mechanisms do leave traces of their existence: some are relatively obvious (as in the uniformity of smiles and frowns), some with enough observable irregularity to fuel the well-known nature/nurture debates (as with many sex differences), and some that reveal themselves only through unusual observational situations, as in extensive cross-cultural observation or psychological experimentation. At any rate, the range of effects that may become culturally patterned is thus large.

2) Many mental mechanisms motivate us toward goals (mating, ingesting food, etc.) without

specifying the means. We may meet these goals through a potentially infinite variety of means. While the many means are observable, the few goals must be inferred. The range of means that may become culturally patterned again is large.

3) Some mental mechanisms are facultative adaptations (that result in conditional universals). They are invoked under certain conditions but not others or invoked in varying degrees so that they are calibrated to environing conditions. The resulting behaviors are variable by design, though the underlying mechanism is unitary. In some cases, whole societies may or may not invoke one or another particular conditional response. In such cases, the variable responses may thus appear to be cultural. For example, there is evidence to suggest that humans have an evolved mechanism for detecting and preferring faces that, for many of their features, are near the mean (or average) of what one sees. Since the mean would vary from one population to another, the resulting standards of beauty would vary too, and this could easily be interpreted as a cultural difference.

4) Many adaptations may in some circumstances conflict with each other, so that the resulting behaviors are compromises. Purely local conditions may favor compromises in one direction rather than another.

5) As wondrously precise as genetic replication is, the genes that program the structure and operation of our minds (and bodies) do so in interaction with the genes' environments, which can and do vary. This in turn results in structures and operations that differ in varying degrees from one individual to another and from one population to another. In this context it is important to note that recent human environments, in almost all parts of the world, present many conditions quite unlike those that prevailed over the long period in which human nature evolved. Many modern behaviors may have their analogues more in the bizarre behaviors of animals in zoos than in what the same kinds of animals do in their natural habitats. Clearly, local environments account for many of what are seen as cultural distinctions between one society and another.

In sum, observable variation in behavior or culture is entirely compatible with a panhuman design of the mind (barring sex and age differences that are equally likely to reflect design).

Finally, I want to return to the notion that human universals, mostly or entirely those of mind, form a deep structure of culture (and society and history). To the extent that this is so, we should be able to do a sort of back engineering on features of society or culture that allows us to break them down into their component elements or trace their roots back to the features of human nature that gave rise to them. This is not a new idea, in part because in some cases the task seems easy. What is the alternative, for example, to concluding that writing, the printing

press, the telegraph, the telephone, the word processor, and more are extensions or augmentations of speech?

Around the beginning of the 20th century, similar thinking--about what were then called "elementary ideas"--led to the conclusion that the spear is an augmentation of the arm. What would be the alternative explanation for literally millions of songs, poems, stories, and works of art, from many parts of the earth and over long periods of time, that celebrate the attractions between men and women--except the mind's preoccupation with the topic? Perhaps the entire cosmetics industry can be included. A prominent historian of colonialism has argued that the sexual drive was as potent a motivator of colonialism as was economics (Hyam 1976).

At the opposite extreme, the virulent nationalisms and racisms of modern times may well be "hypertrophies" of an ethnocentrism that for many millenia played itself out on a much smaller scale.

Near the middle of the past century what I believe was one of anthropology's great achievements appeared in a book on culture history entitled The Tree of Culture (Linton 1955). It assembled information about where and when cultural inventions arose around the world. But what was omitted were the roots of that tree in human nature. I think we can look forward to the time when those roots will be traced; that is, when a great many cultural features are traced beyond the time and place of their invention to the specific features of human nature that gave rise to them, or for which they are augmentations. In order to do this we need not only a close examination of culture but an expanding knowledge of what the full complement of features of human nature might be. The study of human universals offers some guidance in this task.

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Footnote