On (e)-tic and -emic

By Giorgio Buccellati

Following Kenneth Pike and Marvin Harris, the terms -etic and -emic have come to be in common use, particularly in American anthropology. They are the abbreviations of terms first used in linguistics, as in "phonetics" and "phonemics." The abbreviated form of the first term, -etic, is however, etymologically improper, for the correct Greek suffix is -tik- (os) – as seen, for instance, in such words (derived in English from Greek) as pneuma-tic, poli-tic, hermeneu-tic (with vowels other than the e of phone-tic), or galac-tic, phantas-tic (with consonants). In other words, the "e" of -etic does not belong to the suffix but is rather an intrinsic component of the nominal base to which -tic is appended. To illustrate the point from the perspective of an ear attuned to English, -etic stands to "phonetic" the way -tiful stands to "beautiful"–hence my seemingly odd writing (e)-tic in the title. The term -em-ic, on the other hand, is a proper (double) suffix, with the element -em(a) constituting words in their own right, such as probl-em, from which adjectives with the suffix -tik- may in turn be derived, as in probl-ema-tic.

And yet, however etymologically inappropriate these terms may be, they serve a useful purpose in providing a shorthand reference to a very specific and important theoretical construct–one which, however, is not generally understood with sufficient precision. It is this construct that I would like to elucidate here, bringing out its importance for archaeological reasoning.

In my view, the basic underlying concept is *the distinction between an open and a closed system*, where -etic refers to the first, and -emic to the second. For the sake of simplicity, let us take a set of three colors, red, yellow and green, to serve as a simple database for my analysis. In and of themselves, we may categorize them chromatically according to their physical properties. This system is *open* because any number of gradations may be introduced at any time, depending on the standards we use, from a common sense list to a Munsell chart to the millions of combinations allowed on a computer. These properties are extracultural or -etic, and may be considered "real" in the sense that a given definition of "green" will always correspond univocally to the same physical entity. Distributional clustering is also possible. Thus yellow and green form a cluster because of their spectral qualities, in opposition to red, thus yielding two distinct nodes, yellow-green and red.

Such an open system is extracultural, hence it does not, as a matter of principle, tell us anything about any given culture in which these colors may have acquired a special meaning – though obviously it might help us classify extant documents that happen to be colored yellow, green or red. We will then have a precise set of colors, which we know we can reproduce even without having the documents in front of us – but we will have gained no insight into the culture from which the documents stem, i. e., no insight into the meaning of the documents. Our documentation will be objective, but our understanding close to nil.

Let us now look at these documents intraculturally, or -emically. In the specific case in point, the documents are stoplights found at street intersections, and for the purposes of our example we will claim ignorance as to their use. We will notice a preponderant correlation between the appearance of, respectively, the color red and the number of cars that are stopped, the color yellow and the number of cars that come to a halt, the color green and the number of cars that go through. If our evidence were so limited that we had only one attestation for each distributional class, we could not draw any conclusion; but assuming a larger corpus, we could safely attribute meaning to the correlation–though the nature of this meaning would remain unclear if based only on the observations mentioned so far. But what is clear is that the system is *closed* in the specific sense that the addition of any other color would alter the very nature of the system. The importance for an archaeological context is that we can indeed establish the existence of such closed systems, and that once this is established, we may safely assume meaning even if its full import escapes us.

To proceed further with the question of meaning, we must seek for binary oppositions. Chromatically (-etically), all colors are irreducible: the digital signature of a given color is absolutely different from that of another. In a closed system, on the other hand, the exact "-etic" quality of the colors is not of great consequence. As long as they are within a given range (say, yellow may "-etically" be orange), their contrast is more important than the exact hue of any one color (-emically, yellow is the same as orange). In linguistics, one would say that yellow and orange are allophones (allochromes?) of the same phoneme (chromeme?).

There is a profound correlation between the -emic and (-etic) dimensions of a set of data, for the components of the former are univocally bracketed to those of the latter. Thus, the phonemic inventory of a language accounts for each and every one of the phonetic realizations of the same language (clustered as allophones within a single phoneme), and conversely, every phonetic realization has one, and only one, correspondence with the phonemic inventory. Such tight bracketing of the two systems, closed and open, makes the "closeness" of the former all the more complex, since it is not only closed in itself, but doubly closed by reference to the open system to which it is bracketed.

As more binary oppositions are noticed, the attribution of meaning can become more specific. For instance, the correlation between the flashing of colors and their impact on the traffic suggests that we may combine green and red as representing a fixed state, and yellow as representing a transitional state. Or again, since we can verify that the appearance of the color is

irreversible with the status of the traffic (the colors change in a sequence that is independent of any change in traffic flow, i.e., they change regardless of how many cars there are), we may attribute not only generic meaning, but causality. The red causes the cars to stop.

Even greater specificity in the attribution of meaning can come from a widening circle of distributional classes applied to the same data. Given such additional information, we may be able to determine whether red causes cars to come to a halt because it holds a special religious, or aesthetic, or legal status for the car drivers, or because it triggers automatically a response in the engines that approach.

To this extent, the intracultural or -emic analysis of the data *is* within the data, not in any ontological way, but only in terms of conditioned distributional patterns. To make cars stop, the red must be within a range of red (blue would definitely not work), and it must be associated with the specific set of two additional colors. Clearly, it is not as though red by its nature causes things to stop. If in doubt, ask a bull!

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Numerical patterns in Moche tombs

By Christopher B. Donnan

Three high status Moche tombs were recently excavated at the site of Dos Cabezas, located at the delta of the Jequetepeque River on the north coast of Peru (Donnan 2003). Careful observation of the types, numbers, and locations of objects in these tombs indicates that the Moche were deliberately clustering objects in sets of five, 10, 20, and 40. The tombs also include some objects that appear to have been deliberately made using these numbers. This evidence for the deliberate and repetitive use of specific numbers implies that the Moche considered these numbers to be significant, perhaps carrying some symbolic importance, and also appreciated how the numbers could be combined and divided into sets.

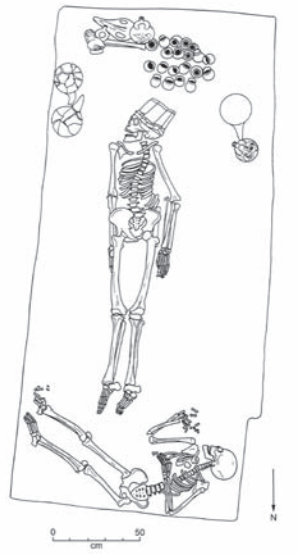

Figure 1: Plan of a Dos Cabezas tomb. Note the cluster of 20 ofrendas *at the south end of the tomb that are divided into two groups of 10.*

The three tombs were located in a massive adobe pyramid. Each tomb consisted of a rectangular burial chamber with a small compartment adjacent to one end. The compartments were meant to be miniature versions of the full size tombs. Both the tombs and their adjacent compartments had clusters *ofrendas* (small, crudely made ceramic vessels resembling cooking ollas or jars) almost invariably in groups of five, 10, or 20 (Figures 1, 2).

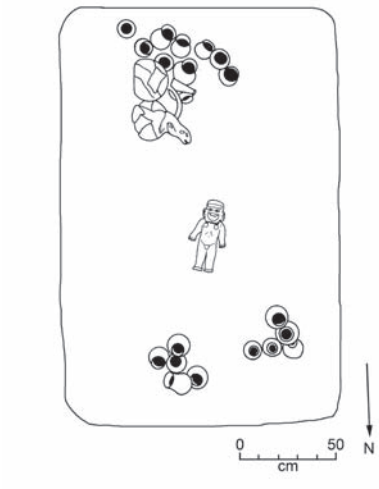

Figure 2: Plan of a Dos Cabezas compartment. Note the cluster of 10 ofrendas*, and two clusters of five* ofrendas *1.*

Two of the tombs were roofed with large wood beams. One had 10 beams extending east-west, while the other had 10 beams extending north-south and five beams extending east-west. One of the tombs had a layer of 40 adobes resting directly on top of the roof beams that were carefully positioned-20 adobes at the north end separated by a space from 20 adobes at the south end (Figure 3). Each set of 20 was arranged in four rows, with five adobes in each. The principal individual in that tomb was buried wearing a necklace of 40 quartz crystal beads, and had five gold objects in his mouth. Among the many objects inside the funerary bundle were two gilded copper headdress ornaments – each made in the form of 10 feathers.

It is also possible to observe the use of numbers and number sets in the royal tombs of Sipán (Alva and Donnan 1993). In one of the Sipán tombs there were six necklaces, each consisting of 10 large gold or silver beads, as well as 10 gilded copper backflaps decorated with lizards, and 10 silver backflaps without decoration (op. cit.: 205). The latter may have been conceptualized by the Moche as a set of 20, divided into two sets of 10. There were also 10 silver and 10 gold bells (ibid.)–again possibly seen as a set of 20 divided into

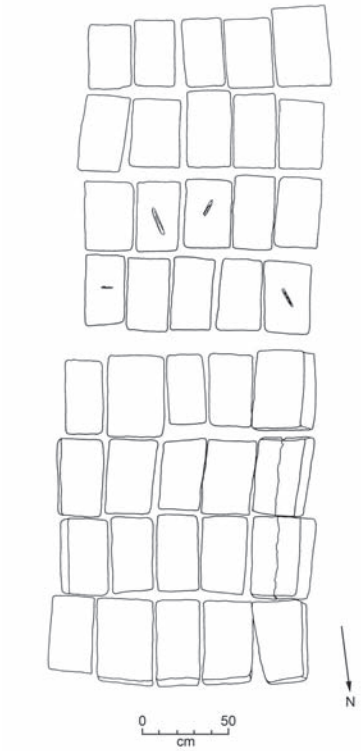

Figure 3: Plan of the adobes above one of the Dos Cabezas tombs.

BACKDIRT

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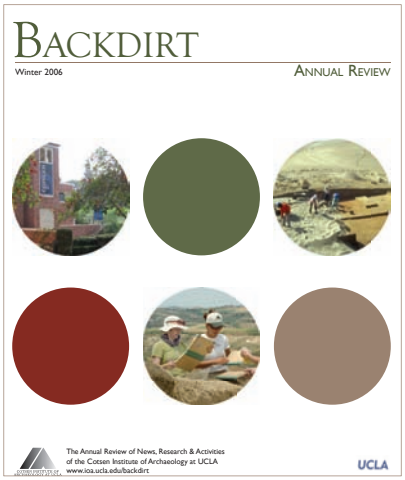

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