

SUMMARY

Number Systems and Their Cultural Meaning: An Ethnonumerological Study from a Symbolic Perspectives in the Ethnic of Lamaholot In the East Nusa Tenggara

Felysianus Sanga

Background: This research with the topic “Number Systems and Their Cultural Meaning: An Ethnonumerological Study from a Symbolic Perspectives in the Ethnic of Lamaholot in the East Nusa Tenggara” appeared as an inspiration when the researcher conducted a study of local languages and cultures in the East Nusa Tenggara Province between the years of 1992 – 1996. This inspiration is backgrounded by a phenomenon of the existence of different number systems among approximately 40 ethnic groups in the whole province of East Nusa Tenggara. The system of numbering is found in all aspects of life, from the most sacred to the most profane. The general picture about the variation in numbers system between ethnic groups becomes the basis in deciding one ethnic group to become the object of deeper study. The ethnic group taken to be studied is the “Lamaholot” ethnic group, that inhabits the most eastern part of Flores island and Solor islands—East Nusa Tenggara.

Problems: The general problem that arises when observing critically the above phenomenon is: “The perception and cognitive pattern of Lamaholot ethnic group as reflected in numbers system quantitatively and qualitatively when they classify and categorize their environment.”

To answer the problem above, there are several research questions raised to be answered in this research, as follows: How do people of Lamaholot ethnic group use numbers to abstract their environment? How are the meanings of basic numbers and the system of development according to the people of Lamaholot ethnic group? Does the numbers system reflect/reveal the total cultural system, which is indispensable from the whole value systems in Lamaholot ethnic group? Are there any relationships between numbers system and the system of society, technology, ideology in Lamaholot ethnic group? And does the numbers system reflect the character and identify of Lamaholot ethnic group?

The Objectives: The general objective of this research is to find out the concept and the understanding of the cognitive system of Lamaholot ethnic group in perceiving their world through numbers system, both qualitatively and quantitatively.” Specifically this research aims to (1) find out the way people abstract their environment through basic numbers and numeric systems in general; (2) find out pattern of the development of numerals vertically and horizontally and quantitatively and qualitatively; (3) find out the relationships between basic numbers and aspects of cultural values, wisdoms, and traditional technology, and social systems in the society; (4) find out mutual relationships between numbers system and traditional technology in the society.

Methodology: The approach applied in this research is ethnography as proposed by Spradley called *Development Research Sequence* with twelve steps of activities,

combined with Reflexive approach; and the theory used in this research is the classification theory, specifically “Linnaen Classification Systems” by Carl Linne (1707 – 1773). The problems above are seen in the light of the statement of Pythagoras that says “*numbers are the results of the expressions of all natural phenomenon and mathematical comparisons*” with his theorem “*number rules the universes*” Encyclopedia Indonesiana, Special Edition 1986:2807). In addition to this, Berkley (1685 –1753) gives a basic concept that every ethnic possesses a set of core values that serve as essential symbols of a society. Those cultural values become the repertoire (Harris, 1979:47) that becomes the basis for the formation of structures in the form of social systems and infrastructures in the form of attitude and behaviour in social life of the ethnic group. Beside that, in the development of the understanding about mystics and religion—Taylor (1832 – 1917) and Frazer (1854 – 1941)—human beings come to possess also suprastructures.

Analysis: Based on the objectives and the data from the field this research analyzes in detail the numbers systems in Lamaholot ethnic group, specifically the number and the name of basic numerals, the system of the development of the basic numbers, qualitatively and quantitatively, and the techniques of using the numbers system in Lamaholot ethnic group. The second point analyzed in this research is numbers system as the tools for the Lamaholot people to perceive their world. In this case, the numeric system is seen in four different contexts, they are (1) sacred situation, (2) formal situation, (3) social situation, (4) the application of numbers system in mathematical tradition. The third point of analysis is the numbers system as the reflection of the characters of an ethnic group or a set of character types of a group, giving special emphasis on the meaning of numbers qualitatively and quantitatively in time and space, and man as well, specifically, in terms of aspects of social life, traditional technology, and daily life.

Conclusions: Based on the results of the analyses, it can be concluded that: (1) Lamaholot ethnic group possesses decimal (ten) basic numbers, with qualitative and quantitative pattern of development; (2) Lamaholot ethnic group perceive human beings as good, not spoilt, and valuable (*atadiken* = good/not spoilt person); (3) Lamaoholot ethnic group give high appreciation to time; (4) Lamaholot ethnic group perceive their natural environment as always good, orderly, friendly, and full of forces, and therefore must be appreciated; (5) Lamaholot ethnic group obey the rules and norms of daily activities, natural environment, and religious activities; (6) the life of Lamaholot people is very much influenced by their religious perception.

Implications: The data and the conclusions have theoretical implication to the concept of semiotics of F. De Saussure (1857 – 1913) and semiology of Charles Sanders Peire (1835 – 1914), to the concept of etic and emic in relation to culture, as developed by Kenneth Lee Pike (1940), Frans Boas (1943), Edward Sapir (1949), and to the concept of the meaning and magical value of numbers as proposed by Isidore Kozminsky (1912).

Propositions: Based on the findings and the theoretical implications above, four theoretic-hypothetic propositions are made, as the findings of this research, they are:
One: If a local government of a multiethnic society finds difficulties in finding the vision and missin of the region as the main factor in designing the development, the ethnonumerological study can become the first step to overcome the problems.

Two: In designing a development plan with cultural approach, a designer must first understand fully the culture of the people. The most comprehensive source of learning the culture is the numbers system of the people. Therefore, an ethnonumerological study is the prerequisite for the development planning.

Three: The concept of diversity has become a threat, aside from being the pride of the Indonesian nation. The most effective way out is to find the etic and emic among the races, ethnic groups, and regions, so that etic produces general norms and emic brings about mutual understanding and mutual appreciation. One of the analysis as the first aid is the traditional number system in each ethnic group.

Four: If the local government plan to develop mathematics in local educational institutions and to change the opinion of the people that mathematical education is expensive and all important, the realistic mathematic approach must be developed. And the material for realistic mathematics can be based on the results of the analysis of local numbers system.

