Review of previous explanations

Cross-cultural studies on the topic can roughly be classified into three categories, according to the major causal force underlying their explanation. I will refer to them as the demographical, ecological, or evolutionary explanations.

By "demographical" I mean those hypotheses conceptualizing scarcity as a density-dependent phenomenon. The relationship between population density and warfare has first been statistically examined by Ember (1982) in his critique of a previous work of Sillitoe (1977). For Sillitoe's sample of 28 societies in New Guinea, Ember comes to the conclusion that war is the result of landshortages, brought about by population pressure.[3] Ember (1982) could also demonstrate a significant relationship between food shortages (another measure for population pressure, which shall indicate that carrying capacity has been reached) and warfare for a world-wide sample of 15 societies. In a later study with a world-wide sample of 70 cultures, however, this result turned out to be not significant (Ember and Ember 1984).

Sometimes scarcity caused by natural, density-independent factors (like drought) is supposed to compel people to go to war. Such an "ecological" argument is presented by Ember and Ember (1984), who show (again for a sample of 70 societies) that food shortages, created by natural disasters, will cause external warfare. On the other hand, no relationship could be found between ecological factors such as the spatial distribution of resources and the presence of blood feuds within a society, an argument developed by Black-Michaud (1975) and tested by Fleising and Goldenberg (1987).

Finally, one study takes an evolutionary perspective in seeing scarcity as a result of increasing technical and societal differentiation (Leavitt 1977). The evolution of societies is expected to be related both to external and to internal war. For external war the argument is more or less identical to the demographical explanations. The reasoning behind the explanations for internal war is, that the maldistribution of resources leads to interest conflicts within the society, which will be violently resolved. The four propositions are confirmed by the statistical tests ($n = 132$): as societies evolve, the frequency of external warfare, riots and civil wars increase, while the frequency of feuds, due to the diminishing importance of kinship in more modern societies, declines.

The socio-ecological approach

The main shortcoming of the three types of explanations is their unidimensionality. Scarcity is designed to be either ecological, demographical or distributional in origin. Hence, both the ecological and the demographical perspective neglect that resources can be unevenly distributed in society, while Leavitt's cross-cultural test of the evolutionary argument, contrary to the highly elaborated theoretical framework (see

[3] But see Hanser (1985) for a critical discussion of the land-shortage hypothesis for New Guinea.