The Digital Ludeme Project Games Database: Compiling Evidence to Reconstruct Historical Games

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The main goal of the Digital Ludeme Project (DLP) is to examine how games are related to one another and to offer reconstructions of the games of the past based on quantitative measures. In the past, reconstructions of ancient and historical games have been based on the subjective application of historical and archaeological sources. In this paper, we demonstrate our methods for compiling historical and archaeological data on games of the past that will allow for quantitative analysis of the evidence that exists, and to propose historically relevant reconstructions. Furthermore, we will offer a preliminary example of how this will work using the game of senet as an example.

The DLP uses a Ludeme Library, a collection of the "game memes" that, when combined into complementary configurations, make up the pieces and rules of the games. These ludemes are associated with games in the Games Database, which will consist of 1000 of the most influential, and representative unique games in human history. Each game in this database is supported by at least one piece of "evidence." A piece of evidence is considered to be any kind of information that can provide information about the rules of a game, or the places and times in which it was played. These sources come from many types: artifacts, contemporary or historical rules texts, literary allusions, artistic depictions, and ethnographic descriptions. Every piece of evidence used in the project is referenced to a scholarly source, ensuring that every rule, place, and date attributed to a game can be corroborated. This open access database is the first of its kind relating to games, and we anticipate it being a useful tool for scholars of games and history.

Compiling this evidence will allow us to propose reconstructions for games, when used in conjunction with Artificial Intelligence. This database will help us to model the spread of games through time, allowing new methods of analysis not previously applied to games data. Where there are gaps in the historical evidence, we will select ludemes from neighboring cultures, or from the same region but in different time periods, and use AI to evaluate the playability of these reconstructions. In conjunction with historical analysis, this data will allow us to offer more plausible reconstructions than those proposed in the past. These reconstructions may be used in conjunction with other historical data to further discuss the kinds of interactions that lead to the spread of games, and under what circumstances the rules of games changed.