

ling with the hollow side up determined the number of places to be moved, which easy method agrees with the play of the Southern Californians. In DURAN's second game which was *patolli* proper, we meet with what seems a rule of probability, giving a much higher value to the extreme throws than to the middle or average throws, which as usual show a tendency to follow the mere number of faces turned up, as in the previous more rudimentary game; the reader sufficiently interested in the problem will make the comparison for himself between DURAN's numbers and the scoring lists here given.

The idea that the similarity between the American and Asiatic games resulted from independent invention has seemed probable to more than one anthropologist. This suggestion raises the problem, as yet only imperfectly solved, of determining what kind and amount of similarity in the arts or customs or opinions of different districts may justify us in denying the possibility of their independent development and claiming them as results of transmission. Experience has indeed led the educated world to judge positively on this question in extreme cases. If Englishmen landing on a remote island were accosted by natives in their own language, the notion that English had been developed here as well as in England would be treated as a jest. If the natives were seen shooting with guns or playing chess, the suggestion of guns and chess having been twice invented even in approximate forms would hardly fare better. Where, then, 's the limit of similarity which proves common derivation? Popular opinion is no doubt led by accumulated experience to consider that highly special or complex phenomena of thought and habit do not so readily recur as the obvious and simple, and probably this judgment is sound. The subject ought however to be brought to altogether more accurate definition. I have found it useful at any rate as a means of clearing ideas, to attempt a definite rule by analyzing such phenomena into constituent elements showing so little connexion with one another that they may be reasonably treated as independent. The more numerous are such elements, the more improbable the recurrence of their combination. In the case of a language recurrence may be treated as impossible. If the invention of the gun be divided into the blow-tube, the use of metal, the explosive, the lock, the percussion etc., and classed as an invention say of the 10th. order, and the invention of chess with its six kinds of pieces with different moves indicated as of perhaps the 6th. order, these figures would correspond to an immense improbability of recurrence. Such a game as *pachisi*, combining the invention of divining by lot, its application to the sportive wager, the combination of several lots with an appreciation of the law of chances, the transfer of the result to a counting-board, the rules of moving and taking, would place it in perhaps the 6th. order, the recurrence of which might be less than that of chess, but according to common experience still far outside any probability on which reasonable men could count.

If this argument be admitted, the relation of the *pachisi-patolli* groups of games in the Old and New World must be accounted for by intercourse before the Spanish conquest, other than that of the Northmen, which fails to answer the conditions. If communication across the Atlantic fails, the alternative is communication across the Pacific from Eastern Asia, where the sportive material required could readily be furnished.

It is with no slight satisfaction that I take this occasion of contributing to a volume commemorative of ADOLF BASTIAN. Trivial as a mere game may be in itself, its consideration involves problems coming within the wide range of interest of my honoured friend. I well remember how, soon after *Der Mensch in der Geschichte* was