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EDITORIAL

Before opening this issue of the *Revue d'histoire des mathématiques,* we recommend that our readers arm themselves with a string forming a loop. This will enable them to participate actively in the games with richly suggestive names featured in the first article of this issue. These games, recorded by ethnologists and anthropologists since the end of the 19th century on all continents, aim to distort the loop and to give the string varied geometrical figures, the number of which is unlimited. Éric Vandendriessche, the author of this first article, is, as an ethnomathematician, interested in the mathematical structure of these games and proposes two possible conceptualizations of them. He proceeds by first teaching the reader, in a remarkably effective way, the specific English vocabulary introduced in order to describe the procedures. This results in an article overlaid with English expressions which respect the method of transcription established by English-speaking ethnologists. Vandendriessche next identifies a certain number of elementary operations, the successions of which over time define sub-procedures which are iterated. These groupings and combinations require on the part of the actors for a certain amount of brain work which we can consider mathematical. But do the creators or practitioners of the games themselves identify these procedures as geometrical activities? According to Vandendriessche, the fact that certain populations, such as the Inuits, attach names to elementary gestures which succeed one another as well as sometimes to the successions of gestures or sub-procedures,bears witness to this. Thus, we find in certain vernaculars a specific technical vocabulary or even links between the hand movements executing the procedures and the chants that give rhythm to these movements. Real spadework remains to be done in order to answer the multiple questions raised by the succession of spatial configurations obtained by means of a simple string.

The second article is devoted to a more classical subject in the history of mathematics, since its central figure is François Viète, French mathematician of the Renaissance. The question posed may, however, be close to that raised in the first article. In his famous work *In artem analyticem isagoge* (1591), renowned for the introduction of a first algebraic formalism, Viète identifies the "new algebra" with the "restored analysis". This identification is the point of departure of Marco Panza's study: What did Viète

understand by "algebra"? Is the usual interpretation found in the historiography sufficient to explain, in particular, the links to ancient analysis asserted by Viète? Is it necessary to understand by "algebra" what the actors suggest themselves or what we have understood them to suggest? To answer this question — one also raised in Vandendriessche's article — Panza is led to formulate a hypothesis which subverts somewhat the traditional image of Viète's mathematical method. Panza first returns to Pappus and to his characterization of the geometrical method of analysis and synthesis, then notices, through several examples chosen over a period extending from Apollonius to Ghetaldi, the existence of another type of analysis that cannot be reduced to that found in Pappus. A simple example would be the transformation of the problem of the construction of two mean proportionals into that of the construction of two parabolas. Looking in the work of al-Khayyām, however, Panza finds an understanding of algebra as the art of giving a common form to problems which we would express by equations of the first to the third degree, of classifying these problems, and of reducing them to others which we know how to solve. Viète would refer to this technique of solving certain classes of problems, rooting in antiquity a technique also used by the medieval mathematicians.

Our last article evinces a friendly collaboration with a newly formed online journal: the *Electronic Journ@l for the History of Probability and Statistics.* Laurent Mazliak presents, in our *Revue,* letters that he published on-line in volume III / 1 (June 2007) of the *Journ@l* and that can be found at `http://www.jehps.net/`. The article concerns letters that Wolfgang Doeblin sent between 1936 and 1938 to the Czech mathematician Bohuslav Hostinský, professor at Masaryk University in Brno. In them, we see a young mathematician respectfully addressing his elder colleague in search of bibliographical information concerning Markov chains. At work on a thesis on this subject supervised by Maurice Fréchet, Doeblin communicates his first results in the hopes of seeing them published by Hostinský, a very active figure in the field of scientific publication. These letters are especially enlightening for the scientific and political relations between France and Bohemia in this politically charged period. Hostinský's contacts with France were many and sustained. Hadamard, for example, served as an intermediary between him and the Academy of sciences in Paris, while Fréchet maintained an important correspondence with him, visited him in Brno in 1927, and invited him to lecture in 1936 at the Institut Henri Poincaré, then a very active international center in the field of probability theory where Doeblin must have met him. Hostinský tried hard to make known works written in Czech, and Fréchet helped him actively. Doeblin's letters

— and especially Mazliak's highly informed commentary — paint a lively picture of Franco-Czech scientific exchanges in the interwar period.

The Editors-in-Chief