existing words taking on a new meaning when they were adapted to a mathematical context. A first lesson that can be drawn from our observations is that the vocabulary used in these activities must be recorded in close relation to the gestures that express the corresponding ideas with the help of accurate systems of
p. 344 notation. Activities of this type in traditional societies rely on precise procedures ↳ and formal rules, which need to be recorded with extreme care if one wants to preserve their consistency and allow subsequent study from a mathematical point of view. It requires from fieldworkers an ability to make use of appropriate diagrammatic records in order to faithfully capture the whole thing (Deacon's notation of the tracing path of sand drawings is a reference example from this point of view).

The second lesson that can be drawn is that video can be a useful tool for recording the successive steps of formal transformations provided that the centring of the image is done properly and that the recording is made of the whole process from beginning to end. Obviously, the ethnographer may note the details of the procedure without a video recording, but the use of media is clearly helpful. Furthermore, as I have shown in this chapter, it happens that important gestures can escape notice, and in this case the ability to play back a video recording is essential to the ethnographer. We have encountered this situation when a diviner moved the seeds on the mat to explain the difference between an even and an odd number of seeds. The same holds for the gesture we have described about the matrix transposition of a mother-*sikidy*. One can even say, in this case, that the advantage of video recording applies to the second situation to a much higher degree, since in the first case, the diviner's purpose was clearly to point out something with his fingers so that the attention of the ethnographer was drawn to his gesture, whereas in the second, his purpose was to make the gesture for himself without any intention of communicating.

Finally, a third lesson can be drawn from this study with the aim of promoting computer experiments during fieldwork (see also Majid, Chapter 2 above). As we have seen in two different situations (basic numerical abilities of Munduruku peoples and complex mental calculation of Malagasy diviners), specific tests using a computer can provide additional information on some aspects of the knowledge of native peoples that are not expressed as a verbal comment on their activity. Moreover, in the case of Malagasy diviners, we have seen that the test situation provides an efficient means for inducing the verbalization of an action. In such situations, the role of video recording is essential in assisting analysis, since the capture of an expert's comments needs to be synchronized with the corresponding screen display, so that the ethnographer can transcribe and analyse them afterwards in order to fully understand the underlying cognitive process.

Notes

1 The author would like to acknowledge the reviewers for their rich comments which helped to improve this chapter.

2 http://www.superlab.com/