CHAPTER SIX

DISCUSSION: MUL.APIN, WRITING, AND SCIENCE

The MUL.APIN treatise was composed near the dawn of scientific endeavor. We began our analysis with the assumption that its composite form reflects processes underlying the articulation of a written science. That is, we assume that the treatise has an historical-cumulative aspect. We attempted to make our analysis as theory-neutral as possible by developing and applying a naturalistic analytic method, in an effort to open the text up to further analysis rather than restrict it to one interpretive perspective alone.

One of our goals, however, was to explore the text for evidence that writing may have played a causal role in conceptual change and the emergence of science. The uniqueness of MUL.APIN invites this question. If a window exists onto the role writing may have played in the early emergence of scientific thought, surely it is to be found in just such a text. A textual analysis alone cannot prove that the medium of writing caused conceptual change in the astronomer-scribes who employed it. Claims to this effect would also seem tenuous in light of our cultural-historical remove from the Mesopotamian era in which the text was composed.¹ We therefore embark on the following discussion in the spirit of reasoned speculation rather than objective proof.

6.1 A Developmental Progression

The pattern of observations summarized in Chapter 5 is consistent with a developmental progression. Both the conceptual content of the MUL.APIN treatise, and the form of written expressions by which that content is expressed, become increasingly complex and sophisticated as it progresses from early to late component sections. This pattern is common in the cuneiform corpus. The scribal curriculum itself

¹ Still, the historical gap is by no means insurmountable; see discussion in Chapters 1 and 2.
shows a simple to complex progression (Veldhuis, 2004), and other, earlier texts show a similar pattern, from simple to complex. The sort of detailed analysis we present here is not necessary to make this point, since one need only visually examine the text to see that later sections are more complex than the early ones.

Such a visual examination might suggest a straightforward explanation of the developmental progression in MUL.APIN: it reflects the additive nature of the cuneiform text tradition, in which content is preserved and added to rather than supplanted or replaced by newer material. We might, then, appeal to something like an accretion model to account for the developmental progression. On an accretion model, MUL.APIN would illustrate the development and accumulation of skills and knowledge. In other words, the astronomer-scribes who compiled the later component sections were better writers, and more knowledgeable astronomers, than those who compiled the earlier sections. In fact, they were probably both. One could hardly expect that in the process of accumulating and recording their observations, they would become less skilled at exposition or less knowledgeable about their field.

However, there are at least two problems with an accretion model. First, the later component sections do not incorporate all earlier developments, but rather, are different in form and content. They are more conventional, explicit, and procedurally complete, and the complex content they contain is expressed in more coherent language. The changes through the treatise are thus qualitative rather than simply additive.

Second, the changes that appear through the treatise are neither steady nor monotonic, but rather occur in “bursts.” These bursts of change result in a “wobble” in the developmental progression through the successive component sections of MUL.APIN, which suggests that the astronomer-scribes were not simply accumulating knowledge and skills, systematically adding new to old, but were instead engaged in a more dynamic process. An accretion model cannot explain this pattern, but it is consistent with the inferential model of the type we offer in Chapter 2, 2.4.

6.2 Applying an Inferential Model to MUL.APIN

A progression toward a more conventional, explicit, and procedurally complete text suggests an increasing grasp of requirements on text