itself, there is no doubt that it successfully captures the spirit of the *Orlando Furioso*. Waldman has followed current English usage avoiding archaic as well as popular language, which, in his opinion, is likely soon to lose favour. Waldman's prose translation of the *Orlando Furioso* is clear and lively, and renders subtle shades of meaning with great finesse and ingenuity.

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Since its appearance in 1914, the Henry Crew and Alfonso De Salvo translation of Galileo’s *Two New Sciences* has been the commonly used edition of this work in the Anglophone world. With the appearance of Stillman Drake’s new translation, the usefulness of the edition of 1914 belongs to the past. This judgment could be justified, if need be, on the basis of the fact that Drake’s edition makes available to English readers, for the first time, the “Added Day”—Galileo’s dialogue on the force of percussion which he had intended to publish as part of *Two New Sciences* in its original appearance in the Leyden Edition, 1638.

Let me add immediately that such a judgment could not be justified in terms of the other addition to the 1914 edition, namely, Galileo’s work on Centers of Gravity. In fact, the addition of this part of Galileo’s work, in some twenty pages of text between the “Fourth Day” and the “Added Day,” is puzzling. This material, which was written some fifty years before the final composition of *Two New Sciences* and twenty-five years before the latter’s first results were obtained, “has no immediate connection with the subjects treated” in the rest of the work and was here inserted” by Galileo in the Leyden Edition “only to save them from oblivion” (to use Antonio Favaro’s words from the Introduction to the 1914 English edition, pp. xii–xiii). Since their presence in the Leyden Edition secured Galileo’s objective, I see no reason for their reappearance in this context. In particular, I see no reason to interpose this material between the “Fourth Day” and the “Added Day.”

Justification for a new translation is given by Drake on pp. xvii–xix of his Introduction. I need not recapitulate the various good reasons given there. Apart from the need of a new translation and the publication in English of the “Added Day,” this new edition is further justified by the incorporation of Galileo’s marginal notes and dictated additions, the helpful glossary and footnotes, the manner in which the diagrams have been placed relevant to the argument, and the interesting and helpful Introduction. I will comment on some of these in following paragraphs. One useful feature of the 1914 edition, which Drake has retained, is the page references to Antonio Favaro’s *Le Opere di Galileo Galilei*, Edizione Nazionale, Florence, 1898. I will, in what follows, identify my references to the text in terms of the pagination of the *Opere*.

Perhaps the most interesting part of Drake’s Introduction is on pp. xxvi–xxx, a provocative section in which it is argued that Galileo adopted as a principle that inquiries
about causes are of no help in the development of physics, and that this position has important consequences for an interpretation of the role of experimentation in Galileo’s work. The conclusion drawn is that experimentation is intended to show that there is a conformity between the order found in mathematical reasoning and the order found in nature. The attempt to show the presence of this position in Two New Sciences is made in, e.g., some of the notes to the “Third Day” (see notes 8, 9, 12, 22).

Throughout the more than two hundred footnotes, Drake has been consistently successful in his choice of passages which warrant annotation. Many of the notes are either elucidations of the argument or draw attention to important differences between Galileo’s work and that of influential predecessors or successors. Especially helpful in the latter category are some of the references to Aristotle (e.g., notes 27 to p. 80 and 12 to p. 335) and Descartes (e.g., notes 32 to p. 311, and 11 to p. 334). These notes not only help to put Galileo’s arguments in a clear historical perspective; they also have the effect of making the arguments themselves stand out vividly.

The diagrams, although often less than half the size of those of the 1914 edition, are clear. Following Galileo’s arguments is made easier by the reproduction of the diagrams on each of the pages on which the argument illustrated by that particular diagram is found. This feature, absent from the 1914 edition, is particularly helpful when the diagram is somewhat complex.

The translation, by design, is not strictly literal. In the main, Drake has succeeded in providing a highly readable translation which is free from overly-long or obscure sentences. Some passages are, however, stylistically marred. In a few others, the translation perhaps reflects a philosophical bias.

For example, the last thirteen lines of p. 66 are marred through the unnecessary substitution of “heat” for “fire.” This substitution is all the more puzzling because it takes place in only two of the three occurrences of “fire” in that part of Galileo’s text. Also, it results in having the action of heat described by means of a metaphor usually reserved for the action of fire: it “goes snaking among the minimum particles . . .” The Italian gives good grounds for the use of this metaphor.

More serious questions are the following. What, in the opening phrase of the third paragraph of p. 197, is the justification for translating osservo by “consider” in “Thus when I consider that a stone . . .” And why, in Sagredo’s second speech on p. 130, is there the awkward, confusing and misleading phrase “which we deduce by seeing with our own eyes that . . .”? The 1914 translation, “the fact observed is that . . .,” is far simpler and clearer, and catches at least as well the meaning of a literal translation: “which one gathers by seeing with our own eyes.” Finally, from the translation of Salviati’s speech on p. 212, “. . . musicians, and others who confirm their principles with sensory experiences that are the foundations of all the resulting structure,” one may fairly take it that sensory experiences are the foundations of the sciences. The Italian, however, seems to imply a different doctrine: “li quali con sensate esperienze confermano i principii loro, che sono i fondamenti di tutta la sequente struttura.” Cbe, which usually refers to what immediately precedes it, would refer to principii rather than to sensate esperienze. If, in the second part of this quotation, Galileo would have wanted to refer to sensate esperienze, would he not have done so through the use of le quali instead of cbe? Again, it appears that in this case the 1914 version is superior: “. . . and others where the principles, once established

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by well-chosen experiments, become the foundation . . .” (I am indebted to Professor M. Sabatini, of the University of Alberta’s Department of Romance Languages, for confirmation of these points.)

These issues are not raised in order to detract from the value of this new translation. Rather, raising them is meant as an implementation of Professor Drake’s injunction implicit in the last sentence of his Introduction. “For how can a reader gain more from another’s words than by forcing himself to arrive at the best which he can conceive?”

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Professor Shapere introduces this work as “the first of a projected series of detailed studies, by the present author, of important episodes in the development of science,” which “will involve an attempt . . . to give coherent interpretations of the cases . . . to extract any available generalizations and systematizations from those cases . . . to provide critical analyses of interpretations of the cases by philosophers and historians.” One subdivision of the last of these three tasks is “. . . to show how the historian’s (and the scientist’s) interpretations of the historical record are frequently distorted by conceptual presuppositions or confusions” (p. x). I will assume that the second of these tasks— to extract generalizations and systematizations—is one not undertaken in the present study (if it is, I don’t know where) because I assume it to be a project which can be tackled only after a number of the “projected series of detailed studies” have appeared. What one can therefore expect from the present study is a coherent interpretation of Galileo’s work, as well as a critical analysis of interpretations of Galileo’s work by some philosophers and historians. The consistent attempt to provide both of these, in the context of two questions which are dealt with in the major portion of this study, constitutes its content. The two questions, or really sets of questions, are the following: (i) What, in Galileo’s thought, is “the role . . . of the principle of inertia?” (Did he actually enunciate this principle? or “was he well on his way towards it”? “to the extent that he had not attained it, what, if anything, was characteristically new and ‘modern’ in his thought? ”); (ii) What is “the ‘method’ by which Galileo arrived at his substantive conclusions? To what extent did he obtain his result by experiment? . . . What methodological doctrines were involved in his use of mathematics . . . ? ” Was he a “Platonic rationalist” or an (Aristotelian) “empiricist”? (pp. 9-10).

The first two chapters, “Galileo and the Interpretation of Science” and “The Intellectual Background,” provide the setting within which Shapere deals with these two sets of questions. The presentation of a coherent interpretation is handled mainly through an attempt to answer the first of these. Its specific context is chapter 3, “The Early Development of Galileo’s Thought.” The major portion of this part of the argument is found in chapter 4, “Galileo and the Principle of Inertia.” This chapter also brings into focus the critical analysis of interpretations of Galileo’s work by some philosophers and historians, particularly those of Koyré and Drake. Chapter 5, “Reason and Experience in Galileo’s