LETTERS

Chairs and People

Getting a male or female personage properly attached to a chair seems to be a problem still afflicting, for example, the Gordon Research Conferences (14 Mar., p. 1229). We find male chairmen; male co-chairmen; male vice chairmen; male co-vice chairmen; and a female honorary chairman. A male chairman is bracketed with a female vice chairman. Variety is introduced with a male chairperson and a female vice chairperson; a female chairperson and a male vice chairperson; a male chairman and a female vice chairperson, a male chairperson and a male vice chairperson; and co-chairpersons, in one case a male and a female, and in another case, not clear.

One thing is clear: chairwoman is studiously avoided, although this, and not chairperson (whether male or female), is recognized by *Webster's II*.

Evidently no reasonable rule is being applied, and I think I am not alone in refusing to utter the salutation "Mr. (or Madam) Chairperson, Ladies and Gentlemen." Could we not substitute, in writing, the expressions chaired by, co-chaired by, vice-chaired by, and so forth; and in speech the correct (and polite) Mr. Chairman, and Madam Chairwoman?

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Galileo's Lunar Observations

My attention was recently drawn to an article by William J. Broad (News and Comment, 2 Nov. 1979, p. 534), who comments on the writings of Paul K. Feyerabend, especially as propounded in the latter's book *Against Method* (*1*). I cannot claim any exposure to the subject of philosophy of science beyond dealing with the ethics and common-sense logical thinking that are required when I write or review research papers for publication. However, I do have considerable knowledge of the features of the lunar surface, and particularly of their portrayal, mapping, and imaging from the earliest efforts up to the present day. I also recognize when someone advances an argument by methods that he decries elsewhere. For these reasons, I challenge Feyerabend's statements concerning Galileo's pioneering lunar observations.

His central theme seems to be that Galileo's lunar drawings were sloppily prepared sketches that bore no resemblance to the actual configuration of the lunar features, and that the reason Galileo got "ahead as well as he did" (*1*, p. 117) was because his contemporaries gave insufficient critical thought to the observations. Feyerabend quotes the remarks of R. Wolf, E. Zinner, and Z. Kopal in support of his contentions (*1*, p. 129) and then uses these contentions as part of his general thesis regarding the way science progresses.

The late G. Righini was the first (after more than 360 years) to make a serious attempt to correlate Galileo's lunar drawings with specific lunar phases (*2*), but Feyerabend dismisses this effort as "unimpressive" (*1*, p. 117). I would have to agree to the extent that Righini's investigations were less than thorough, and he employed incorrect selenographic methods. It was largely this fact that prompted me to undertake a thorough investigation of the whole problem. This led to the identification of numerous features, not only in the four copperplate engravings from the first edition of *Sidereus Nuncius*, but also in the seven manuscript images kept in Florence, which in turn led to the determination of the dates and even the approximate times at which the sketches were made (*3*).

The particular edition I mention had a very limited production and, hence, availability. The text of the book was reprinted in several European cities within a year or two of its first appearance, but in all cases, the lunar drawings were very poor quality woodcuts. These not only lacked the aesthetic qualities of the original copperplate versions and were grossly inaccurate by comparison, but they also failed to reproduce the familiar light-and-shade pattern produced by obliquely illuminated craters, a phenomenon that is illustrated quite satisfactorily in the originals. Thus the disparaging remarks of Wolf, Zinner, and Kopal may have stemmed from a perusal of these more readily available, low-grade versions of the originals. For example, Kopal seems to jump to conclusions about Galileo's character, abilities, and ethics when he remarks, "A mere glance at it [Galileo's sketch] will convince us that Galileo was not a great astronomical observer; or else that the excitement of so many telescopic discoveries made by him at that time had temporarily blurred his skill or critical sense . . ." (*4*). As I show in my article (*3*, pp. 166–167), the lunar drawings reproduced in *Sidereus Nuncius* were completed well before Galileo made his discoveries of the existence and motions of Jupiter's satellites, the nature of the Milky Way, and so forth. Feyerabend, according to Broad (p. 535), writes that Galileo prevailed because he wrote in Italian rather than Latin, the scholarly language of the day. The truth is that *Sidereus Nuncius* was published in Latin, being a direct copy of his handwritten manuscript. Feyerabend, in accepting and promoting these erroneous statements, provides us with a perfect example of how inaccurate, disparaging remarks are perpetuated when no one challenges them.

None of this is to say that all of Feyerabend's arguments are therefore groundless. His contention that progress in science results from the "competitive pressure between tenaciously held theories" (Broad's paraphrase, p. 534) surely holds true on many occasions. Thus, articles by others that confirm or extend my own findings I find highly satisfying, but they tend to stifle further efforts by me in that particular direction. Conversely, those papers whose authors disagree with my own ideas, or with what I think is the consensus of opinion at the time, or which contain obvious errors, pose an immediate challenge that demands resolution through further investigation.

However, it seems to me that science advances by many other means—from taking the "logical next step" to discovery by accident; from checking earlier investigations to taking "shots in the dark," and so on. And although most of us would admit to knowing of one or two scientists in our own field who have resorted to "subterfuge, rhetoric, and propaganda" (Broad's words, p. 534) when presenting their findings, to say that all or even most science proceeds this way appears to be far too extreme.

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References

1. P. K. Feyerabend, *Against Method* (New Left Books, London, 1975).
2. G. Righini, in *Reason, Experiment and Mysticism in the Scientific Revolution*, M. L. Righini Bonelli and W. R. Shea, Eds. (Neale Watson, New York, 1975).
3. E. A. Whitaker, *J. Hist. Astron.* **9**, 155 (1979).
4. Z. Kopal, *An Introduction to the Study of the Moon* (North-Holland, Amsterdam, 1966), p. 207.

Peanut Butter: A Solvent?

My father eats peanut butter and reads *Science*. The grease in the peanut butter smears your ink so I can't read it afterwards. Please change your ink.

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