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A First Glimpse of Student Attitudes about Pluto's "Demotion"

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Abstract

During the fall 2006 semester, following the International Astronomical Union's decision to no longer classify Pluto as one of our Solar System's planets, the author asked two sections of introductory astronomy students whether they thought that Pluto should still be considered a planet and why. This brief contribution describes the students' responses to the decision at two points in the semester, before and after coverage of the Solar System.

During the fall 2006 semester—the first semester following the International Astronomical Union's decision to no longer classify Pluto as one of our Solar System's planets—I asked two sections of introductory astronomy students whether they thought that Pluto should still be considered a planet and to write down why. I asked them specifically to vote *yes*, *no*, *do not know*, or *do not care*. The poll was taken before any coverage of the Solar System and was not previously announced. Some students protested that they did not know enough to cast an intelligent vote, but I assured them that I really wanted their opinions anyway.

Before

The results were that 26 of 46 students, almost 57%, voted that Pluto should still be considered a planet; only six (about 13%) voted against Pluto, nine (just under 20%), said that they did not know, and five (almost 11%) said that they did not care.

Most of Pluto's supporters, 20 of the 26, gave a somewhat "inertial" reason, stating something to the effect that Pluto has always been a planet, so why complicate things by changing what they had already learned in school? A few asked, "Why now?" Others suggested that if such a change was going to be made, it

should have been done sooner. Some asked if the change means that we had previously been taught "false information." More colorful comments included that the decision was "stupid" or "arbitrary" and that we were "picking on the little guy." One student said that he was "personally offended." Another brought up that the vote was taken late in the "convention," as he called it, and asked, "Who do they think they are?" One conspiracy theorist was convinced that the decision was somehow mixed up in a ploy for more grant money, and another student was worried about how it would affect her horoscopes because her sign, Scorpio, is ruled by Pluto.

Of the almost one-third of the voters who did not know or care, some wanted to know why a change was necessary or if there was a good reason. Some said that they may be in favor of the change once they learn more about it, especially if a good definition for what a planet is exists, and it can be determined whether Pluto fits the definition. Others were of the opinion that more study or information is needed and that scientists are always changing their minds. Thus, the decision does not matter because Pluto's status will probably change soon again anyway. One student was worried and asked, "If it can happen to Pluto, could it happen to others—like Earth?"

Those in the minority—that is, those who agreed with the decision—said that Pluto is probably really an asteroid or comet, or that when Pluto was first discovered, we did not have the technology we have now, so a more current decision is probably better informed.

After

The poll was administered a second time, also unannounced, to 42 students after coverage of the Solar System in the course. This time, 27 students, a 64% majority, agreed with the decision. Among these, 17 said that their opinion had changed based on what they learned in class. A total of 10 students, almost 24%, remained against the decision. Two students said that they still did not know, and three still did not care.

A few of those who changed from supporting Pluto as a planet said that they were sorry, or that, despite how they felt, they understood that it was the right decision. Several admitted that they did not care before, and three said that they now understand that Pluto is really different from the other planets. One wondered why, with such overwhelming evidence against Pluto being a planet, it took so long for the change to occur.

Of the nearly 12% who still did not know or care, two said that they could see the reasons for the decision, one stayed with the opinion that scientists change their minds too much, and another felt that, because we made up the categories anyway, why should Pluto have to fit in?

Within the minority still in support of Pluto as a planet, three remained opposed to changing what has always been, and one still asked why the change did not occur earlier. Several said that they still supported Pluto but now had doubts, and two said that despite the reasons for the change being sound, they just still wanted Pluto to be a planet. One voter felt that having a moon is enough to be a planet.

Although these are small numbers, I thought that this poll indicating how one set of community college students reacted to the controversy might be of interest to readers of the *AER*.

This comment is a response to "Teaching What a Planet Is: A Roundtable on the Educational Implications of the New Definition of a Planet", conducted by Andrew Fraknoi.

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