

ABOUT THE LINGUISTIC IMPOSSIBILITY OF CLAIMING THAT SMALL PLANETS ARE NOT PLANETS

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Abstract. Philology, which is, the science of language and literature, must now offer assistance to the science of astronomy, about one question of terminology and logic. Namely, if something belongs to one category, then it is, regardless of its size (large, or medium, or small) a member of that category. Therefore, it was linguistically wrong to claim that Pluto is one of the dwarf planets and therefore not a planet. This mistake, much noticed by the world's public opinion, ought to be corrected immediately.

Philology, which is, the science of language and literature, must now help the astronomers to resolve one question of terminology and logic. Namely, if something belongs to one category, then, be it a small or very small or a big or a huge member of that category, it still is, anyway, a member of that category. You can not, for instance, divide the human beings into people and tall people (above 190 cm, for instance); you can not, because tall people are also people.

We should not claim that dwarf stars (white dwarfs) are “not really” or “not in the narrower meaning of the word” stars, because they are so small; also, we should not declare that gigantic stars (red giants) are “a separate category” and not really stars, because they are too big. As everybody knows, white dwarfs and red giants are stars. There is no reason to wonder how the media, and the newspaper reporters, understand this; there is no misunderstanding, the situation is clear, and the public perception is clear, as it should be. Quite simply explained, there is no “broader” or “narrower” meaning of the word *star*. All celestial bodies that belong to the category *stars* are stars, be they big or medium or small, red or white, young or old, etc.

The category “planet” cannot be subdivided into itself whole (complete) and a remnant, a population of also planets but smaller. It was linguistically inappropriate, even impossible, to proclaim that Pluto is a dwarf planet but is not a planet. The science of linguistics, but, also, logic, tell us, and we have to learn, this: small planets, and average-size planets, and big planets, gas giants – all of them are planets. So, the mistake, very clearly noticed by the world's public opinion,¹ ought to be corrected.

As is known in the astronomical profession, but also in general public, the mistake was made on 24th August 2006 at the 26th General Assembly of the International Astronomical Union – IAU, when, in a truly complicated situation, the so-called

¹for instance, the comment: “‘Dwarf planet,’ indeed! Surely a planet of small stature is still a planet”, at: <http://news.yahoo.com/pluto-planet-once-again-151200189.html>

“Resolution 5 A” was adopted, and in it, among other things, a puzzling and peculiar claim that “planets and dwarf planets are two distinct classes of objects”.²

It is useless to accuse the journalists for the ensuing confusion: the journalists did not misunderstand. Let us not try to shift the blame on the newspapers. The journalists of the whole world got it right: Pluto was, in fact, disqualified. That is exactly what happened.

Text-books for schools, often written by geographers, now claim that there are only 8 planets in the Solar system. Our children, all over the Earth, are now taught so. Are we to blame the geographers? No. They understood the decision of the 26th General Assembly of the IAU correctly.

We will not, here, enter into many, and really difficult, questions which the astronomical science is facing in the attempts to define, with scientific exactness and clarity, what a planet is, inside and outside of the Solar (or any stellar) system, whether Vesta, Palas, Ceres, Sedna, Quaoar etc., potentially hundreds of them, might qualify, and what the criteria might be for this. We shall not discuss the administrative history of the formulating, and adopting, this odd IAU decision; neither shall we here debate the many reactions of the broad public, for whom it may not be culturally acceptable to see Pluto degraded (denied the status of planet).

Here we are talking only about the linguistic correctness; our argument is solely from the point of view of philology, and, inevitably, of logic.

Let us assume that you walk into a school classroom, and you see 25 pupils sitting in there, you examine the registrar book, then you declare that you are looking at “20 pupils and 5 excellent pupils” and finally you tell those five that they are not pupils. Would that be correct?

What if geographers should, one day, divide continents into two “distinct classes”: continents and very small continents, and what if they, then, disqualify Australia? They might tell us that Australia is “a dwarf continent, therefore not a continent”. Or, perhaps, “a continent in a broader meaning, yes, but not a continent in the narrower meaning, therefore not a continent at all”. Would you accept that? And then, when the confusion begins, would you blame the journalists?

The term “planet” must not, and, by logic, *can not* be used for anything outside the category “planet”.

A category cannot consist of itself entire, and also of something else which is firmly described as *not* being a part of that category.

We are not advocating nor cheering, here, that Pluto be called a planet again. We do not claim that it fulfills the criteria. If the existing terms such as planetoid, planetesimal, etc. are already used up (for some other purposes), perhaps somebody with very great creativity and expertise ought to invent and propose another, new word. Call Pluto whatever you will, whatever is scientifically justified, just please do not insist that Pluto “is a planet, surely, but, a dwarf planet, therefore not a planet”.

²http://en.wikipedia.org/wiki/IAU_definition_of_planet