

PYTHAGORAS AND BEANS: A MEDICAL EXPLANATION

From classical antiquity to the present, Pythagoras' rule that his followers must "abstain from beans"—not only from eating them, but even from walking through fields where they were growing—has been a source of both popular and scholarly wonder. Humanistic scholarship, with free association as its main guide, has offered explanations that range from the mildly ridiculous to the extremely ridiculous. W.K.C. Guthrie has a partial inventory, deriving from Diogenes Laertius and Iamblichus, in his *History of Greek Philosophy*.¹

Among others, this includes the following suggestions:

1) The prohibition may have its roots in the fact that beans were used as voting tokens in democratic elections. (This may appeal to scholars who would like to explain most of Greek philosophy by appeals to its supposed "anti-democratic" bias. On the other hand, why should there be a taboo on *eating* voting tokens? This second mystery seemed even more obscure than the first.)

2) Perhaps beans look like male, or female, sex organs. (But hyperactive imaginations can find *many* things, from doughnuts to bagels or carrots, that suggest sex organs, without this suggestion inspiring any awesome food taboos.)

3) Perhaps it is because beans cause gas on the stomach. (This is certainly a liability associated with New England baked beans, but for most diners, fava beans with oil and lemon are normally—if not eminently—digestible.)

4) Perhaps the prohibition rests on the fact that fava beans are so delicious that they conduce to gluttony. (Guthrie does not discuss this explanation, which is somewhat more plausible than the others. It has echoes, somehow, of Aristoxenus' attempt to portray Pythagoras as a complete rationalist, for whom beans were a favorite vegetable. Yet, delicious as beans are, even a vegetarian could have found other and equal temptations to gluttony in Samian or South Italian cuisine.)

It is well attested that Pythagoras gave a set of rules to his followers, and that these were not simply rational precepts. Kirk and Raven, after examining the 39 of these preserved by Iamblichus, classify them into four categories.² Some are "mere common-sense injunction"; some "are based on the doctrine of the kinship of animals"; some "insure ritual purity for sacrifices and other ceremonies"; and some "seem pure relics of sympathetic magic." Their classification looks right and exhaustive, yet the taboo on beans (rule 37 of the list) does not, on the face of it, fit neatly into *any* of these categories. (Why, for example, if one considers placing it in category two, should vegetarians treat beans as some sort of *animal*?)

The fact of the matter is, we suggest, that this most notorious of Pythagoras' rules actually fits Kirk and Raven's first category, "common sense injunction." Concentrated in South Italy, Sicily, and Sardinia, there occurs a hereditary deficiency of the enzyme glucose-6-phosphate dehydrogenase (Mediterranean type), which can result in an inability to tolerate fava beans (*Vicia faba*). Persons with this anomaly (favism) find these beans a poison, for they develop a severe hemolytic anemia within a few hours of eating the beans, which in some cases is fatal.³ Even exposure to the pollen of the flowering bean plants has been reported to precipitate these attacks.

¹ W.K.C. Guthrie, *A History of Greek Philosophy*, I (Cambridge 1963), 183-85.

² G.S. Kirk and J.E. Raven, *The Pre-Socratic Philosophers*, (Cambridge 1960), 225-27.

³ M.A. Belsey, "The Epidemiology of favism", *Bull. Wild. Hlth. Org.* 48 (1973) 1-13; C.A. Kattamis, M. Kyriazalou, and S. Chaidas, "Favism. Clinical and Biochemical Data," *J. Med. Genetics* 6 (1969) 34-41.

422

CLASSICAL WORLD

The observation of only a few cases of such deaths resulting from fava poisoning might well suggest that the safest course is to avoid a food that can prove so unexpectedly lethal altogether. Similar prohibitions against consumption of fava beans persist today in some areas where the disease is found.

The fact, noted above, that Pythagoras' prohibition included walking through bean fields would support the notion that observed and reported cases of favism suggested his injunction, if earlier medical reports are correct in reporting that the pollen of the bean can trigger an attack. (This idea is in dispute in the current medical literature. The incidence of reported attacks is high just after the beans ripen, but is low during the months plants are in flower. However, only the more severe attacks are usually reported, and the pollen-induced episodes might be milder.) But even if there finally is no proof of such a sensitivity to the pollen, medical reports from 1856 to the present reflect the *belief* that the pollen, as well as the beans themselves, can sometimes be a poison. And this belief would make the Pythagorean extension of the prohibition on beans seem reasonable, whereas none of the other proposals seems to explain why it would not be all right to walk through fields of beans, so long as one does not pick or eat them.

It turns out, though the present authors had hit upon the idea independently, that the medical literature dealing with favism had already suggested its possible connection with the Pythagorean taboo on beans.⁴ But this suggestion has not, as yet, found its way into the more humanistic studies of classical philologists, historians, or historians of philosophy: and we take this occasion to call it to the attention of specialists in these areas.