Teiresias, Proportions, and Sexual Pleasure

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Abstract

In this short article, I claim that Teiresias, the blind prophet of Apollo, in order to answer the question of whether "in sexual intercourse the woman had a larger share of pleasure than the man did", measured the abstract concept of sexual pleasure and acted as a present-day scholar. With the help of numerical, not geometrical, proportions, he ended up with the conclusion "a man enjoyed one-tenth of the pleasure and a woman nine-tenths".

> Mathematics is about trust and understanding: Pure mathematicians don't trust applied mathematicians, and applied mathematicians don't understand pure mathematicians. Sex is about trust and understanding: Women don't trust men, and men don't understand women.
>
> (Y. K. Cheong [4, page 46])

1. In Place of an Introduction: The Story of Teiresias

It is very common for social scientists to attempt to measure abstract concepts. Sexual pleasure is such a concept. It is abstract; we cannot touch, feel, or see sexual pleasure. Yet, we somehow have to translate this abstraction into some kind of concrete measurement. The present paper goes further to human history, into Greek mythology, and, a few centuries earlier than Trojan War, discovers the measurement of an abstract concept, such as sexual pleasure.

Teiresias (or Tiresias), the blind prophet of Apollo who appears in many Greek myths, was one of the most renowned soothsayers in all antiquity. He lived in Thebes and was the son of the shepherd Everes and the nymph Chariclo. The cause of his blindness was believed to have been the fact that he had revealed to men things which, according to the will of the gods, they ought not to know.

Acording to Greek mythology, Teiresias was walking on Mount Kyllini (Peloponnese, southern Greece) when accidentally he saw two snakes mating. The snakes were outraged by Teiresias' indiscretion and attacked him. Teiresias was holding a wooden stick and used it to defend himself. He hit one of the snakes and killed it. It was the female one and, immediately, Teiresias transformed into one of the most attractive women, in mind as well as in body. She was so beautiful that she was the sought-after courtesan of the time. After seven years, Teiresias, now a woman, was at the same point of the same mountain, and the same scene was repeated. She found herself in front of two snakes mating, but this time the male snake was killed, and Teiresias became again a man.

Zeus, the Greek father of gods, was known for his infidelities to his wife, Hera. Their relationship was tumultuous and, very often, their quarrels were quite intense. Legend says that Hera was vindictive; every time she learned about a new adultery of Zeus, she hounded and punished her rival. In one of their fights, Hera accused Zeus that of no longer wanting her, since he was wasting his energy on other women. Zeus, to defend himself, argued that the only reason why he was avoiding her was that women enjoyed sex more than men and hence he had lost interest. Hera was furious with her husband's excuse, and argued that not only was his claim not true, but the exact opposite was valid, i.e., that men during sex felt more pleasure than women. Their dialogue was a dead end and their dispute was not resolved. They decided the only person who could resolve their argument and give them an accurate answer was Teiresias since he knew both sides of the couple's argument. Teiresias was summoned, and when he heard the question, he answered without thinking: "a man enjoyed one-tenth of the pleasure and a woman nine-tenths."

Teiresias' response pleased Zeus and maddened Hera, who punished Teiresias by blinding him. Zeus, to compensate Teiresias for his suffering, gave him the clairvoyance. Since Teiresias could not see, Zeus made him be able to *see* into the future.

This is the most popular version of Teiresias' blindness, from Phlegon's book *Book of Marvels*, better known under its Latin title *Mirabilia*, which dates from the 2nd century AD. Pherecydes (c. 580–520 BC) offers us another version of the myth. Teiresias saw Athena naked at her bath. She was so angry with him that to punish him, she blinded him.

According to a third version of the story, Teiresias was originally a woman. When she refused to give herself to Apollo, Apollo changed her into a man, and the story goes on with Zeus and Hera.

2. Paradoxography, Phlegon, and the *Book of Marvels*

Paradoxography is a category of classical Greek texts (the so-called *paradoxographical*) which deals with the occurrence of anomalous or mysterious phenomena of the natural or human worlds. As a consequence, we must be very careful when we start out to make any scientific deduction based on paradoxographical texts.

Greek and Roman literature is filled with extraordinary and bizarre creatures, objects, and happenings, from centaurs and ghosts to supernatural sex changes and giants. Many prominent authors, like Aristotle and Pliny the Elder, wrote paradoxographical texts and presented them as true things that a standard contemporary reader would find impossible to take seriously.

Phlegon (80–140 AD) from Tralles in Asia Minor is the most characteristic Greek paradoxographer and his *Book of Marvels* is the most famous example of paradoxography.

Phlegon is one of the lesser-known ancient Greek writers, but he is not an unknown in the world of statistics. He is the first to employ a Stem-and-Leaf display on Roman censuses to report a long list of persons who had passed the age of a hundred years [12].

Phlegon was a prolific writer and a trusted slave of the Roman emperor Hadrian (76–138 AD), who later freed him from his status as a slave. He wrote several works[1], of which, unfortunately, only fragments remain. His book *On Marvels* has survived though not in its entirety. Utterly in line with the literary fashion of the times, Phlegon wrote about unusual events, odd people, and strange animals.

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[1]During his time, rumors had circulated that it was actually Hadrian who wrote all Phlegon's works, and that Phlegon simply published them under his own name [2, 8, 18].

Phlegon, as a paradoxographer, exaggerated and blended facts with imagination. Therefore, from a scientific point of view, Phlegon's writings may be considered untrustworthy since they are "so ailment from contemporary reality that no substantive information can be drawn from them" [15].

Phlegon "was mainly interested in sensationalistic wonders" and "more concerned with human phenomena than natural wonders" [15]. Hansen [8] who was the first to translate the *Book of Marvels* into English, characterized it as "the earliest surviving work of pure sensationalism in western literature [and of] contemporary oral narrative and folk belief". He also described it as "an ancient predecessor of the tabloids of today". Nowadays the appropriate place to read stories about sexual relationships between ghosts and humans, or dog-headed infants, or supernatural sex changes, or the existence of giants, is indeed the tabloids. And these are exactly the themes of the *Book of Marvels*, which is a compilation of 35 narratives about bizarre, strange, unusual, and sensational events referring exclusively to human beings. Its themes are wide-ranging (Phlegon's headings):

- Ghost stories (3 stories),
- Sex Changes and Hermaphrodites (7 stories),
- Finds of Giant Bones (9 stories),
- Monstrous Births (6 stories),
- Births from Males (2 stories),
- Amazing Multiple Births (4 stories),
- Abnormally Rapid Development (2 stories),
- Discoveries of Living Centaurs (2 stories).

The very first story of the Sex Changes chapter (the 4th story of the book) is the story of Teiresias.

3. A Man Enjoyed One-Tenth of the Pleasure and a Woman Nine-Tenths

Teiresias' response is indeed a remarkable statement/conclusion given its time. It is, probably, the earliest written measurement of an abstract concept, and hints a primitive application of the *Theory of Proportion*. Let us now investigate it from this point of view.

Zeus and Hera asked a straightforward question and demanded a simple answer: Male or Female? Contrary to gods' requirement, Teiresias did not give them a binary answer. He regarded sexual pleasure as a quantitative and measurable variable. He, then, transformed it into an ordinal variable, and finally, he assumed that sexual pleasure's grades are of equivalent importance and quantifiable on a proportional scale. Furthermore, by analyzing his (personal) observations, he concluded with the quantitative outcome: *A man enjoyed one-tenth of the pleasure and a woman nine-tenths.* And this is a researcher's expected reply that has previously performed the necessary measurements.

According to Phlegon's original Greek text, Teiresias states that sexual pleasure is divided into ten portions; that is Phlegon writes in Greek[2] "δέκα μερίδια ἡδονῆς" translated in English as "ten portions of sexual pleasure". Hansen translated Teiresias' response in a more free and literary way. He ignored the said wording and left the word *portion* outside his translation. From our point of view, the mere fact the word portion is accompanied by a number ("ten" in our case) is very important. The simultaneous existence of the two words, *portion* and *ten*, gives quantifiable importance to Teiresias' response. In ancient Greek, the word portion sometimes indicates the *amount*, that is, a number of people, and sometimes indicates *quality*, that is, a property owned by a number of people. It is only when portion is accompanied by a number that we can be certain that we are dealing with amounts. Only then does portion take on a quantitative meaning.

Teiresias' conclusion was accepted (by the two gods) as a viable population estimate. Zeus and Hera did not question the validity of Teiresias' measurements and conclusion because they considered the sample of Teiresias's personal observations as a sufficient sample.

4. Discussion

4.1. Teiresias and proportions

According to the known ancient mathematical texts, the *Theory of Proportion* is due to Eudoxus (407-335 BC), the ancient Greek astronomer, mathematician, scholar, and student of Plato. Euclid presented it, later on, in his fifth book of *Elements* [9]. Actually, Eudoxus discovered the irrational and

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[2]See Appendix A.

pushed forward the **geometrical** idea of the Pythagorean *Theory of Proportion* to a **numerical** *Theory of Proportion.* "The essence of the new theory was that it was applicable to incommensurable as well as to commensurable quantities" [19, page 326].

In mathematical literature, there exist numerous definitions for *proportion.* Personally, I prefer three of them, (a) the most elementary, *A proportion is a mathematical comparison between two numbers*, (b) a typical one, *A part, share, or number considered in comparative relation to a whole*, and (c) a more complicated, *A relationship between quantities such that if one varies then another varies in a manner dependent on the first.* All three apply to Teiresias' statement. Teiresias implied that each partner's sexual pleasure is a portion (mathematical number) considered in comparative relation to ten (the whole) and that it varies in a manner dependent on the other partner's sexual pleasure.

4.2. The three quantitative versions of Teiresias' response

Teiresias' response reached us in several variations. For a complete list of all variations see Appendix B. From our quantitative point of view, there are three different interpretations of it:

(i) one-tenth for males, nine-tenths for females,
(ii) one-tenth for males, ten tenths for females, and
(iii) one fourth (three twelfths) for males, three fourths (nine twelfths) for females.

The majority of classical sources report the first scenario and that is why I prefer it. All sources, however, agree that female's sexual pleasure is greater.

4.3. Sexual pleasure

The debate about whether men or women enjoy more sexual pleasure is a fairly old one. In Irish[3] and Hindu[4] traditions there are also stories similar

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[3]In Irish mythology a man encountered fairies and turned into a woman. Although he had experienced sex with both women and men, he did not reveal what gave him more pleasure, probably because the story was retold by Christian monks. He hinted it by saying "*he preferred the sound of the children who called him mother than those who called him father*" [16].

[4]In Hindu mythology the male soothsayer Bhangaswana (or Bhangashvana) was transformed from man into woman by god Indra. During his womanhood he gave birth to

to Teiresias' but with no mathematical interest. It is amazing, however, that all three stories reached the same conclusion, i.e. women enjoy more sexual pleasure than men.

Teiresias' mathematical expression has interesting consequences concerning sexual pleasure. Teiresias believed/assumed that sexual pleasure has a simultaneous meaning. Male sexual pleasure and female sexual pleasure are two complementary concepts. Both aim for the best, which according to Teiresias is ten. Their complementary nature is what differentiates them. During sexual intercourse, each partner gives and receives pleasure, out of the total pleasure achieved (the ten parts of sexual pleasure). For Teiresias, male and female sexual pleasures are "communicating vessels".

Almost three millennia ago, Teiresias made a revolutionary proposition: Sexual pleasure is measurable! This is an argument that even present-day psychology has not a definite answer. Even though it is an extremely interesting topic, it lies far beyond the scope of this article.[5]

4.4. Mythology vs. History

Theoretically speaking, I demonstrated that Teiresias was, or at least acted as, a mathematician. What can we say historically? All arguments presented so far are based on mythological issues and, scientifically speaking, mythology is not historical facts. What makes a myth convincing is different from what makes history or mathematics convincing. Myths cannot be subjected to the same test of evidence to which history and quantitative methods must submit. A historical conclusion, to be scientifically accepted, must be supported by historical evidence. Mythological issues are not history, and history is not to be inferred by mythology. History is to be inferred by reading original sources and trustworthy secondary sources, setting aside as best we can the preconceptions of our times.

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hundreds of children. After many years Indra offered to turn him back into a man but he refused, saying that he prefers "*to remain a woman*" since "*woman derives much greater pleasure than man*" [7, page 35].

[5]Similarly, though tempted, I do not dare to discuss further each partner's pleasure during sexual intercourse. All scientific works I found do not distinguish between enjoyment during sexual intercourse per se and enjoyment during sexual activity in general and/or sexual willingness.

On the other hand, Homer's *Odyssey* and *Iliad* were considered pure mythology up to the end of the 19th century. Nowadays, many Greek myths have been interpreted as folklore explanations of proven astronomical incidents that happened hundreds of centuries ago. What I argue, here, is that mythology and history represent alternative ways of looking at the past and, hence, I hope the future historians and archaeologists will prove that, during the dawn of civilization, Teiresias had the knowledge and the ability to describe and to make understandable and acceptable to the vast majority of people some real-life (mathematical) procedures.

5. Conclusion

Quantitative notions, as well as statements that hint at mathematical ideas, exist in ancient Greek texts. They usually take a general and/or theoretical form. Concerning proportions, the ancient Greeks believed that the relative sizes of two objects was a more fundamental notion than the absolute size of either of them.

Teiresias' statement on sexual pleasure, "A man enjoyed one-tenth of the pleasure and a woman nine-tenths", is an early quantitative statement. Its beauty lies in its concluding quantitative clarity. Teiresias, almost three thousand years ago, acted as a present-day scholar, measured the abstract concept of sexual pleasure, and reached a viable quantitative conclusion based on (personal) observations. He used numerical, not geometrical, proportions, and ended up with a revolutionary proposition that even present-day psychology has not a definite answer: Sexual pleasure is measurable!

Acknowledgments

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A. Phlegon's Text

Phlegon's original Greek text has been translated into English by Hansen [8, pages 37–38]. For the completeness of this study, I am reporting here the original Greek text and Hansen's translation.

A.1. The original Greek text [20, pages 130–131]

Ἱστορεῖ δὲ Ἡσίοδος καὶ Δικαίαρχος καὶ Κλέαρχος καὶ Καλλίμαχος καὶ ἄλλοι τινὲς περὶ Τειρεσίου τάδε· Τειρεσίαν τὸν Εὐήρους ἐν Ἀρκαδίᾳ ἄνδρα ὄντα ἐν τῷ ὄρει τῷ ἐν Κυλλήνῃ ὄφεις ἰδόντα ὀχεύοντας τρῶσαι τὸν ἕτερον καὶ παραχρῆμα μεταβαλλεῖν τὴν ἰδέαν·γενέσθαι γὰρ ἐξ ἀνδρὸς γυναῖκα καὶ μιχθῆναι ἀνδρί. τοῦ δὲ Ἀπόλλωνος αὐτῷ χρήσαντος ὡς, ἐὰν τηρήσας ὀχεύοντας ὁμοίως τρώσῃ τὸν ἕνα, ἔσται οἷος ἦν, παραφυλάξαντα τὸν Τειρεσίαν ποιῆσαι τὰ ὑπὸ τοῦ θεοῦ ῥηθέντα καὶ οὕτως κομίσασθαι τὴν ἀρχαίαν φύσιν.

Διὸς δὲ ἐρίσαντος Ἥρᾳ καὶ φαμένου ἐν ταῖς συνουσίαις πλεονεκτεῖν τὴν γυναῖκα τοῦ ἀνδρὸς ἐν τῇ τῶν ἀφροδισίων ἡδονῇ, καὶ τῆς Ἥρας φασκούσης τὰ ἐναντία, δόξαι αὐτοῖς μεταπεμψαμένοις ἔρεσθαι τὸν Τειρεσίαν διὰ τὸ τῶν τρόπων ἀμφοτέρων πεπειρᾶσθαι. τὸν δὲ ἐρωτώμενον ἀποφήνασθαι, διότι μοιρῶν οὐσῶν

δέκα τὸν ἄνδρα τέρπεσθαι τὴν μίαν, τὴν δὲ γυναῖκα τὰς ἐννέα. τὴν δὲ Ἥραν ὀργισθεῖσαν κατανύξαι αὐτοῦ τοὺς ὀφθαλμοὺς καὶ ποιῆσαι τυφλόν, τὸν δὲ Δία δωρήσασθαι αὐτῷ τὴν μαντικὴν καὶ βιοῦν ἐπὶ γενεὰς ἑπτά.

A.2. Hansen's translation [8, pages 37-38]

Hesiod, Dikaiarchos, Klearchos, Kallimachos, and certain other authors relate the following incident about Teiresias. They say that Teiresias, son of Eueres, saw some snakes copulating on the mountain in Kyllene in Arkadia, wounded the other of them, and forthwith changed form. He went from being a man to being a woman and had intercourse with a man. Apollo informed him in an oracle that if he observed the creatures copulating and similarly wounded the one snake, he would be as he was before. Watching for an opportunity Teiresias did what the god had said and thereby recovered his former nature.

Zeus and Hera had a quarrel, he claiming that in sexual intercourse the woman had a larger share of pleasure than the man did, and she claiming the opposite. They decided to send for Teiresias and ask him, inasmuch as he had experienced both. When they inquired of him he declared that **a man enjoyed one-tenth of the pleasure and a woman nine-tenths**. Hera angrily gouged out his eyes, making him blind, but Zeus gave him the gift of prophecy and a life span of seven generations.

B. Other Ancient Texts

Phlegon is not the only ancient writer who wrote about Teiresias' blindness. There are thirteen variations of which eleven give us some sort of quantitative information. For details see [3]. Apollodorus, Eustathius, Fulgentius, Hesiod, Hyginus, Ovid, Tzetzes, and three versions of Paradoxographus Vaticanus wrote the same Teiresias' story with some of them having minor differences in comparison to Phlegon's text. Let us see them in turn:

Apollodorus [1, page 367]

> He said that if the pleasures of love be reckoned at ten, men enjoy one and women nine.

Eustathius [5, page 390]

> . . . if pleasure is divided in ten parts, woman enjoys the nine.

Fulgentius [6, page 70]

> He said that a man has three-twelfths of love-pleasure, and a woman, nine.

Hesiod [10, page 269] also quoted by Tzetzes (Scholiast on Lycophron 683)

> Of ten parts a man enjoys one only; but a woman's sense enjoys all ten in full.

Hyginus [11, Myth 75]

> . . . he [Teiresias] decided in Jove's [Zeus'] favour.

Ovid [13, page 147]

> He [Teiresias] therefore, being asked to arbitrate the playful dispute of the gods, took sides with Jove [Zeus].

Paradoxographus Vaticanus Rohdii- Codex Vaticanus gr. 12 [14, page 110]

> . . . he [Teiresias] said that the pleasure of woman was greater.

The First Vatican Mythographer 16 [17, page 19]

> . . . he [Teiresias] declared that a woman's pleasure was three times greater than a man's.

The Second Vatican Mythographer 106 [17, page 142]

> He [Teiresias] affirmed that a woman's passion is triple that of a man's.