

# The Values of the Myths of Postgraduate Studies in Computer Science

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## I. INTRODUCTION

The notion of a *myth* has several distinct meanings. On the one hand it is a “Legendary narrative, usually of gods and heroes, or a theme that expresses the ideology of a culture” [1], where the word *or* should be read inclusively. The word *ideology* often has a negative connotation which is not necessarily true for myths in this sense; what is intended is that the myths convey some truths to the society where it is accepted — irrespective of whether the actual myth is considered as true or not.

On the other hand, when a belief is declared as a *myth*, it means that the belief is declared to be false. In this sense, not any falsehood is a myth. To be considered a myth the falsehood has to be accepted as truth — or to convey some truths — by some, to be declared a myth in the first place.

Both notions of *myth* not only share the characteristic that they embody some truth; they also share the property that those truths are considered important. In the earlier sense, a myth has typically survived centuries — something it would not have done if its truths were not important. In the latter sense, the ‘truth’ of the myth is considered so harmful that someone considers it worth devoting time to demonstrate that the myth is indeed false. The actual truth is considered to have such value that the myth should not persist to undermine it.

This essay forms part of a *Festschrift* honouring Derrick Kourie on his 60th birthday. When he was a mere 41, he welcomed the attendees of an annual postgraduate conference with a talk entitled “Post-graduate Studies: Myths and Motivations” [2]. In it he identified ten myths (in the falsehood sense) about postgraduate studies. He indicated how those myths may provide inappropriate reasons for doing postgraduate studies; a student who starts studying for the wrong reasons will be demotivated once the truth is established. However, he also pointed out that there is indeed a hint of truth at the base of each myth, and indicated how those (obscured) truths, may serve as motivators. We will refer to the converse of these ten myths as Kourie’s contra-myths.

Kourie does not provide evidence that his contra-myths are correct. Presumably the correctness stems from his personal observations over many years. In this paper we contend that such empirical evidence might not form the appropriate proof of correctness. To illustrate, consider the mediocrity-is-acceptable myth that he identifies and disputes. Suppose that,

at some point in the future, empirical evidence suggests that mediocrity has become acceptable. Does one then conclude that this is no longer a myth in the falsehood sense? Has it become a myth in the mythological sense — one that conveys some eternal truth? Clearly this cannot be the case.

Kourie suggests the key to address this dilemma in many other contexts (including [3]): The fundamental element that outlasts changes in technology, tools and other facets of Information Technology is the notion of *values*. Therefore good teaching consists of conveying appropriate values to students [3].

We may therefore conclude that Kourie’s contra-myths are correct (and are worth teaching to students) if they convey appropriate values. For the purposes of this essay, we assume that such values have been encoded in myths (in the mythological sense) that have survived the onslaught of centuries. Hence, if we can demonstrate that the contra-myth corresponds to a mythological myth in terms of the values both convey, we have demonstrated the correctness of Kourie’s contra-myths.

The remainder of the paper proceeds as follows. Each of the myths Kourie identified is introduced. Each of the introductions is followed by a brief description of a mythological myth. In each case it is posited (often tacitly) that the corresponding contra-myth and the mythological myths convey the same values. At the end of the process it is concluded that the correctness of Kourie’s contra-myths has indeed been demonstrated. For the purposes of this essay, myths from the Greek Mythology has been used. It is assumed, but not demonstrated, that other mythologies will contain the same values. In the remainder of this essay we use the terms *classical mythology*, *mythological sense* and *Greek mythology* to all refer to the same notion.

Individual references are not given for each of the Greek myths considered below. Various encyclopædias [4], [5], [6], [7] have been used to verify the claims made about the mythological events. Of course, not all versions of these myths are similar. Where sources differ — or even where the same source offers different versions — the facts were chosen to best agree with the argument in this essay.

## II. KOURIE’S MYTHS

### A. *The wealth myth*

The wealth myth states that postgraduate studies will make one wealthy, which Kourie points out is incorrect. In classical

mythology, the theme of wisdom and wealth as alternatives occurs in the narrative of the golden apple that precedes the Trojan War. Paris, the son of King Priam of Troy, is given the task of deciding who the most beautiful goddess is. These goddesses try to bribe him: Athena offers him intelligence and Hera wealth. Unfortunately, the offer by Aphrodite is the most appealing, and Paris accepts her bribe, rather than wisdom or wealth. Aphrodite's offer is the most beautiful mortal woman in the world. Unfortunately, Helen is already married — and as Paris takes her to Troy the Trojan war begins to unfold. Paris clearly made the wrong choice — either wealth or wisdom would have been a better one.

However, there is an even deeper value that Kourie [2] alludes to, but does not explore. Should education perhaps be reformed to cause the educated more wealth? Here we need to remind the reader only of King Midas, who wished to receive the power to change everything he touched to gold. Dionysus granted his wish. However, the moment Midas touched his food, he realised the implications of what he had wished for.

As Kourie points out there is an element of truth in this myth — as there is in most. One expects some just reward for one's efforts. The notion of just rewards is so common in classical mythology we need not explore examples.

### *B. The studies-are-unnecessary myth*

According to some, (postgraduate) studies are unnecessary for success. Had Kourie written this paper now, he might have used Bill Gates as an example of someone who did not complete his studies, yet managed to become the most wealthy person on earth.

Kourie predicted in his original paper that this myth would disappear over time as more graduates and postgraduates were appointed to management positions. We leave it to the reader to consider whether his has, in fact, happened.

Also, interestingly for 1989, Kourie uses China as an example when he considers what South Africa needs “to survive on the international stage.”

Perhaps the same value is conveyed by the history of Asclepius, the God of medicine and healing. It was sufficient for most gods to gain godly powers simply by having gods as parents. However, Asclepius was faced by a more difficult challenge than simply to be a god — he had to get to know a science. Not even having Apollo as father was sufficient — even though Apollo is sometimes seen as the god of medicine, and even though Apollo has sometimes demonstrated the ability to heal.

For Asclepius to become the recognised god of healing, he had to spend an extended period studying under the centaur Chiron — a period that started immediately after his father, Apollo, grabbed him from the womb of his mother, Coronis. This acquired knowledge is, to this day, recognised by the use of the Rod of Asclepius as a symbol of the medical profession.

It goes without saying that computer science is much more challenging than medical science, and the fact that studies are necessary in computer science has thus been demonstrated.

It should also be pointed out that a number of the other younger gods who demonstrated special skills also studied under Chiron.

### *C. The it-is-easy myth*

The it-is-easy myth is a trap one may fall into if one thinks that postgraduate studies are trivial. Kourie points to various aspects that need time and devotion — and indicate that such studies cannot be easy.

Tantalus was an appreciated visitor to Olympus, the abode of the gods. However, he wanted to test the gods, and served his son, Pelops, as a sacrifice to the gods — something that he should not have done, because cannibalism was not tolerated.

As punishment he was sent to the deepest hell — Tartarus. The relationship with the it-is-easy myth becomes obvious when one considers his punishment: Forever standing in a pool of refreshing water and fruit growing just above his head, he cannot quench his thirst or still his hunger: Whenever he tries to drink, the water level recedes. And, whenever he tries to pick fruit, the fruit rises to just beyond his reach. What makes this punishment so cruel is the fact that the solution to his problem seems so easy, yet forever remains unachievable.

When one thinks your studies are easy, one is bound to get tantalisingly close to the end, but never reach it. This makes the student view the supervisor as a perfectionist who will never be satisfied by one's attempts — a scenario that is discussed by Kourie in this context.

### *D. The it-is-difficult myth*

Many classical myths start similar to the it-is-difficult myth: The task at hand seems so daunting that an ordinary mortal (or even a god) hardly dares to attempt it. But the heroes of classical mythology do dare and (usually) complete the task. Clearly part of the message of those myths is the fact that such tasks can be completed.

As an example, consider Heracles. In his younger days he clearly showed that intelligence was not one of his distinguishing attributes. He, for example, killed his tutor, Linus, when Linus was not satisfied with his lyre playing progress. In later life he killed his wife, Megara, while overcome with madness. And he listened to the ‘Oracle of Delphi’ when his father's wife, Hera, pretended to be the Oracle. One thing led to another, and soon he was faced with not one, but twelve impossible tasks. However, by persevering he completed these twelve so-called labours. While this does demonstrate the value of perseverance, Heracles's less than stellar academic record does not make him the best of examples for an academic it-is-difficult myth.

As a second example, consider therefore Odysseus — not only a hero of the Trojan War, but one who demonstrated problem solving skills on several occasions. It was, after all, he who suggested the Trojan Horse. And, on his long trip back home to Ithaca after the Trojan War, he needed intelligence on several occasions. But, similar to Heracles, Odysseus persevered against all odds and eventually succeeded.

### *E. The it-is-insignificant myth*

The it-is-insignificant myth describes the all too familiar feeling that one's work is insignificant, after one has done it. Often this is because one is so familiar with it, and others

who have not encountered it yet may not experience it as insignificant at all.

After losing a battle with Crete, Athens agreed to send children to king Minos of Crete once every seven years as a sacrifice, where they were fed to the Minotaur monster that lived in the labyrinth below Minos's palace. At one such occasion Theseus, the son of king Aegeus of Athens, offered to be sent as the 'sacrifice' in order to slay the monster. The parallel with the it-is-insignificant myth can be seen in king Aegeus's doubts whether his child is capable of achieving this goal — just as students are often doubtful of whether their creations will achieve their goals. King Aegeus asks Theseus to return with a white sail if he is successful. Theseus is indeed successful, but forgets to replace the ship's black sail with which he originally departed from Athens. The moment king Aegeus sees the black sail returning — in other words, at the first sign of possible trouble — he commits suicide by jumping into the sea, henceforth known as the Aegean Sea.

#### F. The self-confidence myth

The self-confidence myth states that postgraduate studies will boost one's self-confidence.

An interesting parallel exists with Cassandra, daughter of king Priam of Troy. When Apollo fell in love with her, he gave her the power of prophecy (or prescience). However, she showed no interest in him, and Apollo added a curse to her gift: Nobody would ever believe her. Amongst others, she foresees the destruction of Troy and tells everybody about it with no effect at all — they pull the Trojan Horse into the city and suffer the consequences.

The ideal of postgraduate studies is that of complete knowledge — similar to what Cassandra had. The bane of knowledge is that it will be doubted by those in power, even if the knowledge is absolute. And, absolute knowledge in itself is an unachievable ideal, since there will always be new perspectives that will yield new insights. Clearly, this is not a place to find self-confidence — if one studies purely for the sake of achieving self-confidence.

#### G. The testimony-of-intelligence myth

The danger of the testimony-of-intelligence myth is that one thinks the postgraduate qualification is sufficient proof of one's intelligence to act arrogantly. Kourie uses the rumour that "medical doctors firmly believe that their IQ rises exponentially as the number of years since graduation" to illustrate the danger.

In Greek mythology this myth is amply illustrated by the gods associated with intelligence who frequently act silly. Consider Athena. In Plato's *Cratylus* (as translated by Benjamin Jowett) Socrates speculates about the origin of Athena's (or Athene's) name:

*That is a graver matter, and there, my friend, the modern interpreters of Homer may, I think, assist in explaining the view of the ancients. For most of these in their explanations of the poet, assert that he meant by Athene 'mind' (nous) and 'intelligence' (dianoia), and the maker of names appears to have*

*had a singular notion about her; and indeed calls her by a still higher title, 'divine intelligence' (Thou noesis), as though he would say: This is she who has the mind of God (Theonoa) [...He] therefore gave her the name ethonoe; which, however, either he or his successors have altered into what they thought a nicer form, and called her Athene.*

Yet, despite this intelligence, she makes many poor (unintelligent?) decisions. When Paris has to decide who the most beautiful goddess is, Athena tries to bribe him by offering him wisdom. Why does she want to win the prize, while knowing her competition includes Aphrodite — as goddess of beauty is unquestionably the most beautiful of the goddesses? Why does she, as an intelligent being, try to resort to bribery? Why does she offer wisdom as a bribe to a young man who clearly will not appreciate its value before he has it?

At another occasion, the mortal Arachne boasts that her weaving skills exceed those of Athena. Again, Athena's ego cannot bear it. At the subsequent contest Athena acknowledges that Arachne's creation is perfect. Yet, Athena finds a reason to destroy the creation and to turn Arachne into a spider.

It therefore seems that it is difficult for even the most intelligent of the gods to personify intelligence; a mortal endeavour will never provide testimony of perfect intelligence. Kourie's advice would have been equally applicable to the gods: "I would therefore encourage in you a disposition of modesty and humility", that is, "a realistic grasp of the truth about yourself, your abilities, skills and competence in the greater scheme of things."

#### H. The mediocrity-is-acceptable myth

The mediocrity-is-acceptable myth has already been mentioned above.

Soon after the birth of Achilles, his mother, Thetis, dipped him in the river Styx to make him immortal. His entire body was thus protected, except where she held him on his heel. Some years later, during the Trojan War, Paris of Troy killed him with an arrow that found this weak spot.

Critics will find the weak spot in students' mediocre work; it simply is not adequate.

#### I. The magnum-opus myth

The *magnum-opus* myth states that the results of one's postgraduate studies should be the high point of one's academic research, while — in reality — it is merely one's entry ticket.

To see a similar message from mythology, one needs only consider Icarus. Icarus's father, Daedalus, built the labyrinth on Crete for King Minos — the same labyrinth in which the Minotaur mentioned earlier was kept. Minos imprisoned Daedalus so that his knowledge about the labyrinth could not be shared with someone. To some extent, the labyrinth was to be Daedalus's magnum opus. But, even imprisonment could not prevent him from accomplishing something even greater — the ability for man to fly.

Realising that the only way to escape from Minos was to fly, he constructed wings for him and his son, Icarus. Well aware of the limitations of his work, he warned Icarus not too

fly too high when they escaped. In another example of the magnum opus myth, Icarus thought his first attempt at flying was to be perfect, and he flew too close to the sun. Of course, the wax wings melted and he fell to his death.

- [4] A. van Reeth, *Ensiklopedie van die Mitologie*. Vlaeberg, 1994.
- [5] S. L. Harris and G. Platzner, *Classical Mythology — Images and Insights, Second edition*. Mayfield, 1995.
- [6] *The Encyclopedia of Ancient Myths and Culture*. Eagle Editions, 2003.
- [7] Anonymous, "Wikipedia," Undated, [texthttp://wikipedia.org](http://wikipedia.org).

### J. The theoretical and practical myths

Kourie cheats a little when he introduces his last myth (actually number 8 on his original list) because he slips in two myths for the price of one: the theoretical and practical myths. This warns the student about results that are only esoteric theories, or only concentrate on application.

It is hard to properly translate these principles to classical mythology. Hephaestus is to the Greek gods what Q is to James Bond. Is Hephaestus the 'practical' god and the others the 'theoretical' gods? Does 'theory' refer to the godly things, such as feasting, while 'practical' refers to meddling with human affairs? Then the gods do achieve a nice balance between 'theory' and 'practice'.

However, to return to the core premise of this essay, the value that Kourie invokes here is balance. To find examples from mythology that deal with balance is not hard. Consider, for example, Demeter, the goddess of the harvest. With Demeter hard at work, earth was a bountiful place. However, Hades abducted Demeter's daughter, Persephone, to the underworld. Demeter's grief caused her to neglect her duties and earth did not yield any further crops. Zeus intervened and arranged that Persephone could spend half the year with Demeter, and half the year with Hades as queen of the underworld. During the six months she is with Demeter, earth is green and yields crops. During the other six months, Demeter mourns, and earth yields very little.

While we have demonstrated the existence of the value of balance, this example is arguably even more open for criticism because (1) it deviates even more from Kourie's myths than the other examples; and (2) it is so much easier to find examples of excess in the acts of the gods than it is to find examples of balance...

### III. CONCLUSION

The essay set out to demonstrate that Kourie's contra-myths share values with myths that are well known from the classical mythology. The existence of parallels has been demonstrated for all ten of Kourie's myths; in fact, in most cases, we did not even need to stray far from the Trojan War to find examples.

The theme of the *Festschrift* is one that straddles disciplines. By showing that Kourie's contra-myths share values with classical myths, we have demonstrated that Kourie's paper exemplifies values well beyond the boundaries of Computer Science — the discipline in which it was originally offered.

### REFERENCES

- [1] K. VanSpanckeren, *An Outline of American Literature*, revised edition ed. U.S. Department of State's Bureau of International Information Programs, 2006.
- [2] D. G. Kourie, "Post-graduate studies: Myths and motivations," in Proceedings of the Fourth Annual Conference for MSc and PhD Students in Computer Science, Cathedral Peak, South Africa, September 1989.
- [3] —, "Personal communication," circa 1988–2008.