

The Case for Teaching Ignorance

In the mid-1980s, a University of Arizona surgery professor, Marlys H. Witte, proposed teaching a class entitled “Introduction to Medical and Other Ignorance.” Her idea was not well received; at one foundation, an official told her he would rather resign than support a class on ignorance.

- 5 Dr. Witte was urged to alter the name of the course, but she wouldn’t budge. Far too often, she believed, teachers fail to emphasize how much about a given topic is unknown. “Textbooks spend 8 to 10 pages on pancreatic cancer¹,” she said some years later, “without ever
10 telling the student that we just don’t know very much about it.” She wanted her students to recognize the limits of knowledge and to appreciate that questions often deserve as much attention as answers. Eventually, the American Medical Association funded the class, which
15 students would fondly remember as “Ignorance 101.”



Classes like hers remain rare, but in recent years scholars have made a convincing case that focusing on uncertainty can foster latent curiosity, while emphasizing clarity can convey a warped understanding of knowledge.

- 20 In 2006, a Columbia University neuroscientist, Stuart J. Firestein, began teaching a course on scientific ignorance after realizing, to his horror, that many of his students might have believed that we understand nearly everything about the brain. (He suspected that a 1,414-page textbook may have been culpable.)

- As he argued in his 2012 book “Ignorance: How It Drives Science,” many scientific facts
25 simply aren’t solid and immutable, but are instead destined to be vigorously challenged and revised by successive generations. Discovery is not the neat and linear process many students imagine, but usually involves, in Dr. Firestein’s phrasing, “feeling around in dark rooms, bumping into unidentifiable things, looking for barely perceptible phantoms.” By
30 inviting scientists of various specialties to teach his students about what truly excited them — not cold hard facts but intriguing ambiguities — Dr. Firestein sought to rebalance the scales.

Presenting ignorance as less extensive than it is, knowledge as more solid and more stable, and discovery as neater also leads students to misunderstand the interplay between answers and questions.

- 35 People tend to think of not knowing as something to be wiped out or overcome, as if ignorance were simply the absence of knowledge. But answers don’t merely resolve questions; they provoke new ones.

- Michael Smithson, a social scientist at Australian National University who co-taught an
40 online course on ignorance this summer, uses this analogy: The larger the island of knowledge grows, the longer the shoreline — where knowledge meets ignorance — extends. The more we know, the more we can ask. Questions don’t give way to answers so much as

¹ Germ. Bauchspeicheldrüsenkrebs

the two proliferate together. Answers breed questions. Curiosity isn't merely a static disposition but rather a passion of the mind that is ceaselessly earned and nurtured.

45 Mapping the coast of the island of knowledge, to continue the metaphor, requires a grasp of the psychology of ambiguity. The ever-expanding shoreline, where questions are born of answers, is terrain characterized by vague and conflicting information. The resulting state of uncertainty, psychologists have shown, intensifies our emotions: not only exhilaration and surprise, but also confusion and frustration.

50 The borderland between known and unknown is also where we strive against our preconceptions to acknowledge and investigate anomalous data, a struggle Thomas S. Kuhn described in his 1962 classic, "The Structure of Scientific Revolutions." The center of the island, by contrast, is safe and comforting, which may explain why businesses struggle to stay innovative. When things go well, companies "drop out of learning mode," Gary P. Pisano, a professor at Harvard Business School, told me. They flee uncertainty and head for
55 the island's interior.

The study of ignorance — or agnotology², a term popularized by Robert N. Proctor, a historian of science at Stanford — is in its infancy. This emerging field of inquiry is fragmented because of its relative novelty and cross-disciplinary nature (as illustrated by a new book, "Routledge International Handbook of Ignorance Studies"). But giving due
60 emphasis to unknowns, highlighting case studies that illustrate the fertile interplay between questions and answers, and exploring the psychology of ambiguity are essential. Educators should also devote time to the relationship between ignorance and creativity and the strategic manufacturing of uncertainty.

65 The time has come to "view ignorance as 'regular' rather than deviant," the sociologists Matthias Gross and Linsey McGoey have boldly argued. Our students will be more curious — and more intelligently so — if, in addition to facts, they were equipped with theories of ignorance as well as theories of knowledge.

By JAMIE HOLMES, AUG. 24, 2015, The New York Times

² Agnotology is the study of culturally induced ignorance or doubt, particularly the publication of inaccurate or misleading scientific data.



Part I: Text-related Tasks

(40 points)

A) Reading Comprehension

Please answer the following questions in complete English sentences.

Points are given for content and correct use of English (content/use of English).

1. According to the text, why is it important to teach ignorance? Explain in one sentence.

(1/1)

2. Explain the metaphor of the “island of knowledge” (l. 39) that runs through the text in your own words and say what its most important element is. (2/1)

Explanation: _____

Most important element: _____

3. Why should educators devote time to the “strategic manufacturing of uncertainty” (l. 63)? Please provide two aspects. (2/1)

Aspect 1: _____

Aspect 2: _____

4. Explain the following sentences in your own words and say what its consequence is: “When things go well, companies, drop out of learning mode’ [...]. They flee uncertainty and head for the island’s interior” (ll. 52-54). (2/1)

Explanation: _____

Consequence: _____

/11 pts.

B) Vocabulary I

Tick the correct synonym of the given words. Each word must be understood in the context of the text.

1 point for each correct answer.

1. foster (l. 18)

help develop

decrease

impede

2. immutable (l. 25)

understandable

reasonable

unchangeable

3. ambiguities (l. 30)

uncertainty of meaning

explicitness

new ideas

4. interplay (l. 33 / l. 60)

condition

connection

interaction

5. ceaselessly (l. 43)

continuously

occasionally

sporadically

/5 pts.

C) Vocabulary II

Explain the following words from the text in a complete sentence. Each word must be understood in context of the text.

You can lose 0.5 point for wrong use of language. 1 point for each correct answer.

1. alter (l. 5)

2. intriguing (l. 30)



3. analogy (l. 39) _____

4. breed (l. 42) _____

5. preconception (l. 50) _____

/5 pts.

D) Vocabulary III

Find the words in the text that have a similar meaning to the definition given. Give the word and the line number. The words occur within the given section.

1 point for each correct answer.

Lines 5-23:

1. to change your mind _____ (l. _____)

2. existing but not yet noticeable _____ (l. _____)

3. responsible for doing sth _____ (l. _____)

Lines 38-51:

4. increase rapidly _____ (l. _____)

5. unusual _____ (l. _____)

/5 pts.

E) Word families

Supply the synonym (s) or antonym (a) (= opposite) of the following words.

1 point for each correct answer.

1. convincing (l. 17) (a) _____

2. successive (l. 26) (s) _____

3. perceptible (l. 28) (a) _____

4. conflicting (l. 46) (s) _____

/4 pts.

F) Word formation

Complete the table with the correct form of the word given.

n: abstract noun, adj: adjective, adv: adverb, p: person, v: verb

For adjectives, do not use '-ed' and '-ing' forms.

0.5 point for each correct answer.

receive (l. 3)	n:	adj:	
emphasize (l. 18)	n.	adj:	
suspect (l. 22)	n:	adj:	p:
imagine (l. 27)	n:	adj:	
perceptible (l. 28)	n:	v:	
extensive (l. 32)	n:	v:	adv:
stable (l. 32)	n:	v:	
provoke (l. 37)	n:	adj:	
intensify (l. 47)	n:	adj:	

/10 pts.

Reading Comprehension

Total:

/40 pts.

Part II: Grammar

(40 points)

A) Mixed Tenses

Please read the following text and carefully decide which verbal forms (active / passive tenses, gerunds, infinitives) the verbs in brackets need to be put into.

0.5 point for each correct verb form.

The conversation that was to be the last by John Crace (British Journalist and Critic)

“Bit of a nuisance,” said my dad while I _____ (1. listen) at the other end of the line. “The quack has told me that I need a heart bypass operation.”

“That _____ (2. sound) a bit more than a nuisance,” I _____ (3. reply). My father _____ (4. suffer) from angina for years and his breathlessness _____ (5. get) progressively worse.

“It’s nothing to worry about, just a standard operation. I _____ (6. give) an appointment for January. The quack says I _____ (7. be) up and about in no time.”

I wasn’t entirely sure that my father _____ (8. believe) that, but even if he _____ (9. do), I _____ (10. have) my doubts. I _____ (11. always have) my anxieties on matters of health.

I’d also come to be extremely fond of my father – rather later in life than I _____ (12. like). For years, we _____ (13. barely speak). For the first seven years of my life he _____ (14. be) scarcely around, and thereafter he _____ (15. be) an almost constant presence in the house. I _____ (16. never be) entirely sure which I _____ (17. prefer) back then.

It wasn’t till I _____ (18. be) in my 30s that we _____ (19. begin; build) a relationship. Our conversations always _____ (20. tend; stay) on the brief side, but we _____ (21. manage) to cram a lot in. I was able to sort of apologise _____ (22. preposition + be) such a difficult son, and he was sort of able to express his regret that he _____ (23. not try) harder to get to know me. We also found one thing on which we _____ (24. can) agree completely. My children – his grandchildren – were just wonderful. If quite hard work.

All that needed to be said _____ (25. already say) in the silences and looks, as much as in our conversations, and yet it _____ (26. not feel) quite enough. So I visited him a couple of weeks before his operation _____ (27. schedule).

“I’m sure everything _____ (28. be) fine,” I said. “But just in case it isn’t and you do die, I want you to know that whatever difficulties we



_____ (29. **have**) in the past _____
(30. **long since resolve**). As far as I'm concerned, Dad, the slate
_____ (31. **be**) clear for years. I love you."

"Thank you. I feel exactly the same way. I love you. I _____
(32. **always love**) you."

It _____ (33. **be**) one of our longer conversations and also one
of our last. If it hadn't been for this conversation, much _____
(34. **leave**) unsaid.

/17 pts.

B) Rephrasing

Complete the second sentence so that it has a similar meaning to the first sentence, using the word(s) given. Do not change the word(s) given. You must use between three and seven words including the word(s) given.

1 point for each correct sentence.

- Why do they require that the students comply with the rules? (REQUIRED)
Why _____ comply with the rules?
- "Will you visit me in Carnforth next year?" Sue asked Harry and Sally. (IF)
Sue asked Harry and Sally _____ in Carnforth the following year.
- Rob had no idea that he would soon be promoted junior partner. (KNOW)
Little _____ that he would soon be promoted junior partner.
- Does Liz wish she hadn't split up with Curt? (REGRET)
Does Liz _____ ?
- We missed the bus because we arrived at the meeting point too late. (BY)
The bus _____ we arrived at the meeting point.
- The final pages were missing from the book, so I never found out who the protagonist's father was. (NOT)
If the final pages of the book _____ have found out who the protagonist's father was.
- Somebody should have told us that the date had been changed. (INFORMED)
We _____ the change of date.
- We assumed that the shipping of the box would be free. (GRANTED)
We _____ that the shipping of the box would be free.
- My suit needs dry-cleaning because I'm attending a wedding next month. (GET)
I need _____ because I'm attending a wedding next months.



10. Unfortunately, I was in charge of the unsuccessful project. (IF ONLY)
_____ in charge of the unsuccessful project!

/10 pts.

C) Open cloze

For each space, choose ONE word which best completes the sentence.

0.5 point for each correct answer.

1. His mother had warned Jack that dinner would be at 6 p.m. but _____ this he was eating a chocolate bar half an hour before.
2. _____ from yourself, do you know anyone else _____ might be interested in joining the chess club?
3. _____ tutoring children with learning difficulties, what else does Liz do for a _____?
4. _____ our country is tiny, it is very wealthy thanks _____ its ground being rich _____ minerals and oil.
5. Harry should smarten himself _____ if he wants to make a good impression _____ his future parents-in-law.
6. The police _____ into the murder case.
7. I will not _____ up with your bad behaviour any longer!
8. With 1.5 children, the typical family now has _____ children than in the 19th century when a woman, on average, gave birth to 4.6 children.
9. People spend a lot less of their income _____ food than they used to.

/7 pts.

D) Spot the Mistake

Correct the mistake in each sentence if there is one. Cross out the mistake and write its substitute (if necessary) on the line.

0.5 point for each correct sentence.

1. We had our gardener to mow our lawn yesterday.
- _____

2. He hasn't talked to his brother since they have been 18.
- _____

3. The police are used to have to listen to lies.
- _____



4. I vaguely remember to read something about it in the paper.

5. It's high time you got that bad knee looked at by a doctor!

6. The English market town Stratford-upon-Avon, that is Shakespeare's birthplace, has often been the subject of travel writing.

7. The views across the valley are particular impressive at dawn.

8. If there is a mechanical problem, we suggest to contact the manufacturer directly.

9. He claimed that he has never wanted to hurt anyone.

10. You should have the own idea of what happiness means.

11. The old man is believed to be a former CIA agent.

12. I feel as if I have been run over by a train.

/6 pts.

**Grammar
Total:**

/40 pts.

Part III: Essay Writing

(40 points)

40 points in total: 20 points for content and structure; 20 points for language and style.

Hilfsmittel: English-English Dictionary

A) Content/Ideas	10	
B) Structure/Coherence	10	
C) Language / Grammar / Spelling	10	
D) Style / Vocabulary	10	
Total	40	

Select one of the given topics and write an argumentative essay of about 350 – 450 words. Indicate the number of words at the end of your text.

1. Last year, Europe started to face the biggest number of refugees in 50 years. Among the thousands of people seeking asylum there are those who have fled war and oppression while others have left their home countries because of desperate economic situations. Most of them have risked their lives on their journey. Shouldn't they all be given a chance to live a better life?
Discuss.

2. A Harvard psychologist, Dr. David McClelland, has stated that the three ingredients to successful learning are: wanting to learn, knowing how to learn, and having a chance to learn.
Discuss this in an essay using personal examples from your own learning.

3. "You don't read Gatsby, I said, to learn whether adultery is good or bad but to learn about how complicated issues such as adultery and fidelity and marriage are. A great novel heightens your senses and sensitivity to the complexities of life and of individuals, and prevents you from the self-righteousness that sees morality in fixed formulas about good and evil."
— Azar Nafisi, *Reading Lolita in Tehran: A Memoir in Books*

Discuss the following quote referring to at least one work that you have studied in class, read as a home reader or prepared for your reading list.

4. According to a Guardian newspaper article, saving the world's endangered species will cost £50bn, estimates a coalition of conservationists and academics. (This is approximately sFr. 75 billion a year which about equals the amount of money all people in Switzerland will spend on health care in 2016). (Why) Should we bother?
Discuss.
