Reading Guide #15 - The Indispensability Argument
Quine, "On What There Is"
Quine, "Existence and Quantificaction"
Quine "On Recreation"
Secondary Reading: Quine, "Success and the Limits of Mathematization"

"On What There Is"

1. How does Quine's rejection of McX's things involve him in a predicament?  That is, how does Plato's beard dull the edge of Occam's razor?
2. "If Pegasus *were* not, McX argues, we should not be talking about anything when we use the word; therefore it would be nonsense to say even that Pegasus is not" (2).  Explain.  Is it nonsense?
3. What is the difference between the Parthenon and the Parthenon-idea?  Why might someone like McX confuse them?
4. What are unactualized possibles?  How might they solve the problem of non-being?
5. Why does Quine say that Wyman has ruined the word 'existence'?  How is he using it differently?
6. Does 'exist' have spatio-temporal connotations?  Explain.
7. How does Quine criticize Wyman's slum of possibles?
8. Where does Quine approve of the use of modalities?
9. Why is the round square cupola a problem for Wyman?  What is his solution?
10. Why might someone who calls contradictions meaningless question the method of proof by *reductio ad absurdum*?
11. What methodological drawback does the meaninglessness doctrine suffer?
12. Explain Russell's method of analyzing sentences involving definite descriptions (e.g. 'the author of Waverly', 'the round square cupola').
13. How does Russell's method treat sentences with names (e.g. Pegasus)?
14. How does Russell's method shift 'the burden of objective reference'?  That is, how does it solve the problem of non-existence?
15. What is the difference between meaning and naming?  How did McX confuse meaning and naming with Pegasus?
16. What is McX's argument for the existence of universals?  How might someone oppose that argument?
17. How do meanings help McX's argument?  Are meanings the same as attributes?
18. What are the two ways to talk about meanings?  How can Quine deny the existence of meanings?
19. How do we commit ourselves to an ontology?
20. How is mathematics committed to a realm of abstract entities?  Provide a specific example.
21. What are realism and logicism?  How are they similar?
22. What are conceptualism and intuitionism?  How are they similar?
23. What are nominalism and formalism?  How are they similar?  Why does the formalist reject logicism?  For what two reasons does the formalist reject intuitionism?
24. Why doesn't 'To be is to be the value of a variable' help adjudicate among rival ontologies?
25. What does Quine mean by 'operating on a semantic plane'?  What are two reasons to operate there?
26. "Translatability of a question into semantical terms is no indication that the question is linguistic" (16).  Explain.
27. What is the relation between ontology and simplicity, according to Quine?
28. What are the differences between a phenomenalistic conceptual scheme and a physicalistic one?  Which is fundamental?

29. What are physical objects, according to Quine?
30. How are both mathematics and physics myths?
31. How should we determine our ontology?

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"Existence and Quantification"

32. For what two reasons does Quine reject Carnap's doctrine of the meaninglessness of category
    questions?
33. For what two reasons don't names suffice to reveal the objects of of a theory?
34. When should we take a theory as committed to an object?
35. How does substitutional quantification offer an alternative to Quine's criterion of ontic commitment?
    What does Quine say in favor of substitutional quantification? What is wrong with it? How
    does Quine describe the differences between the intuitionists quantifier and the classical one?
36. How do 'x is a unicorn', 'x is a prime number between 10 and 20', and 'x is a number' differ
    regarding the evidence we accept for each claim? How does Quine reject the positivist's claim
    that there is no evidence for the last claim?
37. Explain the nominalist's nine-clause substitute for 'There is a prime number between 10 and 20'.
38. What is the Bentham/Russell theory of paraphrasis? What are its advantages? What is the problem
    with it? (See 100-102.)
39. What arguments does Quine provide for the logic of branching quantifiers/functionally existential
    second-order logic? Why does he reject it?

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"On Recreation"

40. Is there a sharp boundary between logic and mathematics, on the one side, and empirical science, on
    the other?
41. What, for Quine, determines whether a mathematical result is legitimate? What is mathematical
    recreation?

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**Secondary Reading:**

"Success and the Limits of Mathematization"

42. What are two distinguishing characteristics of mathematics?
43. What is the disinterpretation of mathematics? What motivates disinterpretation?
44. Do mathematical terms have meaning? Explain.
45. "Ordinary interpreted scientific discourse is ars irredeemably committed to abstract objects - to
    nations, species, numbers, functions, sets - as it is to apples and other bodies...The numbers and
    functions contribute just as genuinely to physical theory as do hypothetical particles" (149-50).
    Explain.
46. How do arithmetic, logic, and set theory get their mathematical virtues without disinterpretation?
47. Describe the process of analogical reinterpretation. How does it differ from disinterpretation?
48. How is even abstract algebra fully interpreted?
49. Why is measurement important to mathematics? Why is it important to science?
50. How can mathematization go too far?
51. Does the empirical scientist want complete mathematization?