16. All styles are good, except the tiresome.
17. They also serve who only stand and wait.
18. Happy indeed is she who knows her own limitations.
19. A thing of beauty is a joy forever.
*20. He prayeth well who loveth well.
21. All that glitters is not gold.
22. None think the great unhappy but the great.
23. He jests at scars that never felt a wound.
24. Whosever a man soweth, that shall he also reap.
*25. A soft answer turneth away wrath.

7.4 Uniform Translation

For a syllogistic argument to be testable, it must be expressed in propositions that together contain exactly three terms. Sometimes this aim is difficult to accomplish and requires a more subtle approach than those suggested in the preceding sections. Consider the proposition, “The poor always you have with you.” It clearly does not assert that all the poor are with you, or even that some (particular) poor are always with you. There are alternative methods of reducing this proposition to standard form, but one perfectly natural route is by way of the key word “always.” This word means “at all times” and suggests the standard-form categorical proposition, “All times are times when you have the poor with you.” The word “times,” which appears in both the subject and the predicate terms, may be regarded as a parameter, an auxiliary symbol that is helpful in expressing the original assertion in standard form.

Care should be taken not to introduce and use parameters in a mechanical, unthinking fashion. One must be guided always by an understanding of the proposition to be translated. Thus the proposition, “Smith always wins at billiards,” pretty clearly does not assert that Smith is incessantly, at all times, winning at billiards! It is more reasonable to interpret it as meaning that Smith wins at billiards whenever he plays. And so understood, it translates directly into “All times when Smith plays billiards are times when Smith wins at billiards.”

Not all parameters need be temporal. To translate some propositions into standard form, the words “places” and “cases” can be introduced as parameters. Thus “Where there is no vision the people perish” and “Jones loses a sale whenever he is late” translate into “All places where there is no vision are places where the people perish” and “All cases in which Jones is late are cases in which Jones loses a sale.”
The introduction of parameters often is requisite for the **uniform translation** of all three constituent propositions of a syllogistic argument into standard form. Because a categorical syllogism contains exactly three terms, to test a syllogistic argument we must translate its constituent propositions into standard-form categorical propositions that contain just three terms. The elimination of synonyms and the applications of conversion, obversion, and contraposition have already been discussed in Section 7.2. However, for many syllogistic arguments, the number of terms cannot be reduced to three either by eliminating synonyms or by applying conversion, obversion, or contraposition. Here uniform translation requires the introduction of a parameter—the *same* parameter—into all three of the constituent propositions. Consider the following argument:

Soiled paper plates are scattered only where careless people have picnicked.

There are soiled paper plates scattered about here.

Therefore careless people must have been picnicking here.

This argument is perfectly valid, but before it can be proved valid by our diagrams or rules, its premises and conclusion must be translated into standard-form categorical propositions involving only three terms. The second premise and the conclusion may be translated most naturally into “Some soiled paper plates are things that are scattered about here” and “Some careless people are those who have been picnicking here,” but these two statements contain four different terms. To reduce the argument to standard form, we begin with the first premise, which requires a parameter for its standard-form expression, and then we use the same parameter in translating the second premise and the conclusion into standard form. The word “where” in the first premise suggests that the parameter “places” can be used. If this parameter is used to obtain uniform standard-form translations of all three propositions, the argument translates into:

All places where soiled paper plates are scattered are places where careless people have picnicked.

This place is a place where soiled paper plates are scattered.

Therefore this place is a place where careless people have picnicked.

This standard-form categorical syllogism is in *Barbara* with mood and figure AAA–1 and has already been proved valid.

The notion of standardizing expressions through the use of a parameter is not an altogether easy one to grasp, but some syllogistic arguments cannot be translated into standard-form categorical syllogisms by any other method. Another example may help to make clear the technique involved. Let us take the argument:

The hounds bay wherever a fox has passed, so the fox must have taken another path, because the hounds are quiet.
First, we must understand what is asserted in the given argument. We may take the statement that the hounds are quiet as asserting that the hounds are not baying here and now. This step is part of the necessary process of eliminating synonyms, because the first assertion makes explicit reference to the baying of hounds. And in the same manner we may understand the conclusion that the fox must have taken another path as asserting that the fox did not pass here. The word “wherever” in the first assertion should suggest that the parameter “places” can be used in its translation. The standard-form translation thus arrived at is

All places where a fox has passed are places where the hounds bay.

This place is not a place where the hounds bay.

Therefore this place is not a place where a fox has passed.

This standard-form categorical syllogism is in *Camestres*, with mood and figure AEE–2, and its validity is easy to establish.

**EXERCISES**

A. Translate the following propositions into standard form, using parameters where necessary.

**EXAMPLE**

1. He groans whenever he is reminded of his loss.

**SOLUTION**

Standard-form translation: All times when he is reminded of his loss are times when he groans.

2. She never drives her car to work.

3. He walks where he chooses.

4. He always orders the most expensive item on the menu.

*5. She does not give her opinion unless she is asked to do so.

6. She tries to sell life insurance wherever she may happen to be.

7. His face gets red when he gets angry.

8. If he is asked to say a few words, he talks for hours.

9. Error of opinion may be tolerated where reason is left free to combat it.

*10. People are never so likely to settle a question rightly as when they discuss it freely.
B. For each of the following arguments:

a. Translate the argument into standard form.
b. Name the mood and figure of its standard-form translation.
c. Test its validity using a Venn diagram. If it is valid, give its traditional name.
d. If it is invalid, name the fallacy it commits.

**EXAMPLE**

1. Since all knowledge comes from sensory impressions and since there’s no sensory impression of substance itself, it follows logically that there is no knowledge of substance.

**SOLUTION**

a. Standard-form translation:

   No things derived from sensory impressions are items of knowledge of substance itself.
   
   All items of knowledge are things derived from sensory impressions.
   
   Therefore, no items of knowledge are items of knowledge of substance itself.

b. Mood and figure: **EAE–1**
c. Valid; **Celarent**

![Venn Diagram](image-url)

2. . . . no names come in contradictory pairs; but all predicables come in contradictory pairs; therefore no name is a predicable.

3. Barcelona Traction was unable to pay interest on its debts; bankrupt companies are unable to pay interest on their debts; therefore, Barcelona Traction must be bankrupt.
4. Extremism in defense of liberty, or virtue, or whatever is always a vice—because extremism is but another name for fanaticism which is a vice by definition.

   —Irving Kristol, “The Environmentalist Crusade,”
   The Wall Street Journal, 16 December 1974

*5. All syllogisms having two negative premises are invalid. Some valid syllogisms are sound. Therefore some unsound arguments are syllogisms having two negative premises.

6. Not all is gold that glitters, for some base metals glitter, and gold is not a base metal.

7. Where there’s smoke there’s fire, so there’s no fire in the basement, because there’s no smoke there.

8. It seems that mercy cannot be attributed to God. For mercy is a kind of sorrow, as Damascene says. But there is no sorrow in God; and therefore there is no mercy in Him.

   —Thomas Aquinas, Summa Theologiae, I, question 21, art. 3

9. . . . because intense heat is nothing else but a particular kind of painful sensation; and pain cannot exist but in a perceiving being; it follows that no intense heat can really exist in an unperceiving corporeal substance.

   —George Berkeley, Three Dialogues Between Hylas and Philonous, in Opposition to Sceptics and Atheists, 1713

*10. Only those who ignore the facts are likely to be mistaken. No one who is truly objective is likely to be mistaken. Hence no one who ignores the facts is truly objective.

11. All bridge players are people. All people think. Therefore all bridge players think.

   —Oswald and James Jacoby, “Jacoby on Bridge,”
   Syndicated Column, 5 November 1966

12. Whenever I’m in trouble, I pray. And since I’m always in trouble, there is not a day when I don’t pray.

   —Isaac Bashevis Singer, interview in The New York Times

13. The after-image is not in physical space. The brain-process is. So the after-image is not a brain-process.

   —J. J. C. Smart, “Sensations and Brain Processes,”
   Philosophical Review, April 1959
14. It must have rained lately, because the fish are not biting, and fish never bite after a rain.

*15. . . . it is obvious that irrationals are uninteresting to engineers, since they are concerned only with approximations, and all approximations are rational.

—G. H. Hardy, *A Mathematician’s Apology* (Cambridge: Cambridge University Press, 1940)

16. Since to fight against neighbors is an evil, and to fight against the Thebans is to fight against neighbors, it is clear that to fight against the Thebans is an evil.

—Aristotle, *Prior Analytics*

17. According to Aristotle, none of the products of Nature are due to chance. His proof is this: That which is due to chance does not reappear constantly nor frequently, but all products of Nature reappear either constantly or at least frequently.


18. Not all who have jobs are temperate in their drinking. Only debtors drink to excess. So not all the unemployed are in debt.

19. It will be a good game tomorrow, for the conference title is at stake, and no title contest is ever dull.

*20. Bill didn’t go to work this morning, because he wore a sweater, and he never wears a sweater to work.

21. Cynthia must have complimented Henry, because he is cheerful whenever Cynthia compliments him, and he’s cheerful now.

22. There must be a strike at the factory, for there is a picket line there, and pickets are present only at strikes.

23. Epidemiology is not merely the study of epidemics of infectious disease; it is the broad examination of the rates and patterns of disease in the community. By almost any standard drug abuse can be regarded as a disease; accordingly it can be profitably investigated by the methods of epidemiology.

—“Science and the Citizen,” *Scientific American*, February 1975

24. Since morals, therefore, have an influence on the actions and affections, it follows, that they cannot be deriv’d from reason; and that because reason alone, as we have already prov’d, can never have any such influence.

—David Hume, *A Treatise of Human Nature*, 1739
25. All valid syllogisms distribute their middle terms in at least one premise, so this syllogism must be valid, for it distributes its middle term in at least one premise.

26. No valid syllogisms have two negative premises. No syllogisms on this page are invalid. Therefore no syllogisms on this page have two negative premises.

27. Good poll numbers raise money. Good press gets you good poll numbers. Good press gets you money.
   —an advisor to Elizabeth Dole, during her campaign for the Republican presidential nomination, quoted in The New York Times, 15 April 2000

28. There are plants growing here, and since vegetation requires water, water must be present.

29. No one present is out of work. No members are absent. Therefore all members are employed.

30. The competition is stiff, for there is a great deal of money involved, and there is never easy competition where much money is at stake.

31. There are handsome men, but only man is vile, so it is false that nothing is both vile and handsome.

32. What is simple cannot be separated from itself. The soul is simple; therefore, it cannot be separated from itself.
   —Duns Scotus, Oxford Commentary on the Sentences of Peter Lombard, 1302

33. Although he complains whenever he is sick, his health is excellent, so he won’t complain.

34. We... define a metaphysical sentence as a sentence which purports to express a genuine proposition, but does, in fact, express neither a tautology nor an empirical hypothesis. And as tautologies and empirical hypotheses form the entire class of significant propositions, we are justified in concluding that all metaphysical assertions are nonsensical.

35. This syllogism is valid, for all invalid syllogisms commit an illicit process, and this syllogism commits no illicit process.

### 7.5 Enthymemes

Syllogistic arguments occur frequently, but their premises and conclusions are not always stated explicitly. Often only part of the argument is expressed, the rest being “understood.” Thus one may justify the conclusion...