

Review Exercises Nature and Nurture

In the following exercise, you will use coordinators, subordinators, and parallel structures to create one sentence from each set of sentences. The logical relationships, and suggestions for using coordinators or subordinators to express the relationships, are given in brackets. You will have to discover which parts of sentences can be joined with *and*, *or*, or *but* to form parallel structures. Always plan your solution, and read your combined sentences aloud.

EXAMPLE: People have long argued about whether genes determine our personalities the most.
 People have long argued about whether the environment determines our personalities the most.
 [**coordinator—contrast**] Now many scientists believe that nature and nurture work together.

SOLUTION: People have long argued about whether genes or the environment determines our personalities the most, but now many scientists believe that nature and nurture work together.

1. Scientists now believe that genes determine only the brain's main circuits of neurons.
Scientists now believe that the environment shapes the trillions of connections between neurons.

2. [**subordinator—time**] Babies are born.
Their brains have trillions of neurons.
[**coordinator—contrast**] Only some of these neurons are functional.

3. Some of the neurons have already formed circuits that regulate breathing.
The circuits regulate heartbeat.
The circuits regulate body temperature.
The circuits regulate reflexes.

4. Other neurons have not formed circuits.
[**coordinator—reason**] These neurons become functional only when they respond to outside stimuli.

5. **[subordinator—condition or time]** The neurons are stimulated.
They are integrated into the circuitry of the brain.
[subordinator or coordinator—reason] They connect to other neurons.

6. **[subordinator—condition]** The neurons are not stimulated.
The neurons may wither.
The neurons may die.

7. Childhood experiences stimulate neurons.
Childhood experiences determine whether a child will be confident.
Childhood experiences determine whether a child will be fearful.

8. Experiments with rats show new evidence that the neurons can be stimulated with play.
Experiments are with monkeys.
Experiments are with human babies.
The neurons can be stimulated with purposeful training.

9. Scientists have found that music helps develops children's brain circuits.
[coordinator—result] Parents should sing songs with their children.
Parents should play structured, melodic music.
Parents should give their children music lessons.
[subordinator—condition] Their children show musical aptitude.
Their children show musical interest.

10. **[subordinator—time]** Children listen to classical music.
They exercise neurons.
They strengthen circuits for mathematics.
[subordinator—reason] The brain circuits for math are close to the circuits for music.

11. Scientists have found that talking to children helps develop children's brain circuits for language.
[coordinator—result] Parents should talk to their children a lot.

12. Parents can also influence their children's circuits for emotions.
[subordinator—condition] The parents recognize their children's emotions.
The parents return their children's emotions.

13. *[subordinator—condition or time]* A parent approves of his or her child's happiness.
The child's circuits for happy emotions are reinforced.

14. *[subordinator—condition or time]* A parent disapproves of his or her child's happiness.
The circuits are confused.
The circuits will not strengthen.

15. *[subordinator—condition or time]* A parent hugs an upset child.
The child learns to calm him or herself down.

16. *[subordinator—condition or time]* A parent yells at an upset child.
The child doesn't learn to calm him or herself down.
[subordinator or coordinator—reason] The parent's response does not stimulate the circuits for calming down.

17. But the parent's actions have to be repeated over time.
[subordinator or coordinator—reason] One mistake will not scar a child for life.

18. *[subordinator—reason]* Environmental influences begin very early in life.
People often confuse them with genetic or causes.
[Coordinator—contrast] Actually, the environmental stimuli are crucial for development.