Exam 1

1. Psychological labs, books, and degrees became common in the mid-________.
   A. 1600’s
   B. 1700’s
   *C. 1800’s
   D. 1900’s
   % Correct: 66.96%
   Notes: Though the field of psychology has bloomed since the 1900’s, the mid-1800’s marked the scientific start of the field of psychology. Before this time, people studying the mind usually approached it through a philosophical perspective, without any labs to scientifically explore the mind.

2. The field of psychology covers topics at
   A. the sociocultural level.
   B. the biophysical level.
   C. the psychological level.
   *D. both the sociocultural, biophysical, and psychological levels.
   % Correct: 99.13%
   Notes: Psychologists can approach topics relating to the mind and human behavior from a variety of different levels. Though early psychologists focused on the physiological/basic level responses to stimuli, the field has greatly expanded in recent decades. It now examines the mind from the cellular level to the societal/cultural level and every level in between.

3. Which of these research questions is most closely related to the mind-brain problem?
   A. Why do the people in some countries drink more alcohol than others?
   B. Why do boys and girls play with different kinds of toys?
   *C. Are different areas of the brain more or less active during different behaviors?
   D. Are certain kinds of behavior unpredictable or random?
   % Correct: 73.04%
   Notes: The mind/body/brain question has been debated for centuries. The aim for those studying this topic is to determine the distinction between—and potentially direction of control for—the mind and brain. Though original research on the topic had focused on establishing a connection between the two, our current focus is on determining if there is a way to link EVERY aspect of the mind to different parts of the brain.

4. Which of the following correctly states how a particular type of psychologist would study behavioral differences between boys and girls?
   A. A cognitive psychologist would investigate brain differences.
   B. A psychoanalyst would measure the differences without trying to explain them.
   C. A human factor specialist would compare boys’ and girls’ thought processes.
   *D. A social psychologist would study how adults’ expectations affect boys and girls.
   % Correct: 85.22%
   Notes: This question asks for students to identify the goal of the different branches of psychology. Answers A through C describe improper pairings of research areas with questions. Answer D covers a project that a social psychologist would study. In essence, it’s showing how social psychologists focus their research on the impact of our environment on our thoughts/behaviors/emotions.

5. William James advocated which approach to psychology?
   *A. functionalism
   B. structuralism
   C. humanistic psychology
   D. psychoanalysis
   % Correct: 92.17%
   Notes: William James was a towering figure in the field of psychology. He was one of our earliest psychologists. He attempted to understand a large variety of concepts related to the mind, but one of his major focuses in his
work was on the topic of functionalism. Functionalism, in basic terms, is the attempt to understand an aspect of the mind through looking at its purpose/use. In essence, someone using this approach would ask “why” our eyes are designed the way that they are, not just how they are designed.

6. Of the various parts of a neuron, the part that receives information from other neurons is the _____ and the part that sends messages to other cells is the _____.
   *A. dendrites... axon
   B. axon... cell body
   C. cell body... dendrites
   D. axon... dendrites
   % Correct: 98.26%
   Notes:
   This is a question about the structures found on a neuron. Though neurons do have different features from cell to cell, dendrites are always one of the structures on a neuron. They receive chemical/physical information from the environment. Axons are another universal structure in the cell. They are involved in transmission of neural messages. We often call this messaging process an action potential.

7. What is an “action potential” in the nervous system?
   A. a chemical that builds up at the tip of the axon
   B. an electrical charge that builds up at the tip of the axon
   *C. a message that travels along an axon
   D. a pattern of simultaneous activity in the left and right hemispheres
   % Correct: 66.96%
   Notes: As was mentioned in the previous question, an action potential is the process of a neuron sending a message to some adjacent neuron/structure in the body. This action potential propagates along the axon, eventually reaching the terminal branches and buttons. At these buttons, the potential causes a release of neurotransmitters into synapses—the microscopic gap between a neuron and another structure (usually an adjacent neuron).

8. Our ability to see constellations in the stars found in the sky relate to the ______ view of perception.
   A. ecological
   B. constructivist
   *C. minimalist
   D. maximalist
   % Correct: 83.48%
   Notes: The constructivist approach contends that our perception of the world around us comes from a combination of the stimuli presented AND the expectations that we ourselves place on the stimuli. Since the constellations in the stars aren’t physically in the sky, our ability to see them requires more than just the stars themselves. In particular, we see them as a result of the placement of the stars AND our expectations of what is there. This phenomenon is a great example of the constructivist approach.

9. Which of the following is a common effect of alcohol consumption?
   A. increased tension and anxiety
   B. increased energy and alertness
   *C. reduction of inhibitions against sexual or aggressive behavior
   D. increased speed of muscle responses
   % Correct: 93.04%
   Notes: This question related to the topic of drugs and the brain covered in the readings. Though many individuals personally relate alcohol to a wide variety of effects, alcohol is defined chemically as a depressant. This means that alcohol inhibits the activity of particular regions of our nervous system. For those of you that are skeptical, there’s an explanation for some of the rowdy behavior displayed while people are consuming this drug. Alcohol doesn’t really energize us like many think it does, it instead inhibits areas of our brain that are critical for higher order thinking and the prevention of impulsive/aggressive behaviors.
10. Someone with cerebral cortex damage has impaired vision. Which area is probably damaged?
   A. parietal lobe
   B. motor cortex
   C. prefrontal cortex
   *D. occipital lobe
   % Correct: 96.52%
   Notes: This is an identification question. It’s asking about the different lobes of the brain. Our back (posterior) region of our brain, contains a lobe that we call the occipital lobe. It has been linked to visual processing. Within this lobe, there are different sections (V0, V1, etc.) that have been linked to different types of visual processing.

11. EEG, MEG, PET, and fMRI are all methods of measuring what?
   A. intelligence
   B. visual perception
   C. emotional maturity
   *D. brain activity
   % Correct: 100.00%
   Notes: Each of the above mentioned techniques are approaches to measuring brain structure/activity. Each of the techniques have their own advantages/shortcomings. All are still currently used by researchers and others that are interested in research related to the brain and surrounding nervous system.

12. Someone who has control of speech in the left hemisphere and whose corpus callosum has been split can describe what he or she sees if and only if it is seen
   *A. in the right half of the visual field.
   B. in the left half of the visual field.
   C. in either half of the left eye.
   D. in either half of the right eye.
   % Correct: 80.00%
   Notes: The corpus callosum is a portion of the brain that allows for communication between the two hemispheres of the cerebral cortex. Severing this structure prevents communication between the two hemispheres. Because of this, the only information that can be processed by the left hemisphere of the brain by someone who has their corpus callosum severed is information that is being processed somewhere else in the left hemisphere. Since the left hemisphere of the brain actually processes information from the right side of our body/right visual field, this would mean that someone could only articulate visual information that is presented to their right visual field.

13. During danger, the ___ system is more active. When danger passes, the ___ system is more active.
   A. sympathetic... sympathetic
   *B. sympathetic... parasympathetic
   C. parasympathetic... sympathetic
   D. parasympathetic... parasympathetic
   % Correct: 95.65%
   Notes: This question relates to the distinction between the two different autonomic nervous systems that we possess. The sympathetic nervous system links our mind and neural network to several organs within our body. When activated, it initiates what psychologists call the “fight-or-flight” response. The parasympathetic nervous system links the brain and neural network to almost all of the same organs. However, with this parasympathetic system, activation initiates what psychologists call the “rest-or-digest” response.

14. Damage to the hippocampus has the largest impact on a person’s _________.
   *A. memory
   B. sense of self
   C. motor skills
   D. emotion regulation
Notes: Though other areas of the brain have now been linked to the topic of memory, the hippocampus is still considered a very important area of the brain for memory. In particular, it seems to play a critical role in the retention of explicit memories. Damage to this area can impact consolidation of information, retention of information, and recall.

15. The primary somatosensory cortex is located along the _________ lobe.
   *A. parietal
   B. frontal
   C. temporal
   D. occipital

16. A sulcus is a
   *A. bulge in the cerebral cortex.
   B. crease in the cerebral cortex.
   C. point of damage on the cerebral cortex.
   D. spot where the cerebral cortex connects to the brainstem.

17. The ability of a person to regain some mental ability after losing that ability through damage to an area on the cerebral cortex highlights the _________ of the brain.
   *A. flexibility
   B. neuroplasticity
   C. multiple allocations of areas
   D. rigid nature

18. The “dominant” side of most people’s brains is the
   *A. front.
   B. back.
   C. left hemisphere.
   D. right hemisphere.
of us, the majority of the population ends up with slightly larger and more developed left hemispheres as a result of their comparatively increased activity.

19. Jane Goodall spent years observing chimpanzees in the wild. Her technique was
A. an experiment
B. correlational analysis.
*C. naturalistic observation.
D. a case history.
% Correct: 100.00%
Notes: This was an experimentation design question. Jane Goodall, a well-known psychologist/anthropologist, dedicated her life to observing chimpanzees in their natural habitat. This practice of observation in the environment of the observed is called a naturalistic observation. It might be worth noting that some have objected to this definition for Goodall’s research. They contend that since Goodall did interact with her chimpanzees, it should be defined differently.

20. A research study found that number of friends a child reports overlaps with how generally happy the child is on a scale of 1 to 10. What kind of research design was probably used in this study?
*A. correlation
B. anecdote
C. case history
D. experiment
% Correct: 94.78%
Notes: Since the study mentioned appears to be examining the overlap between two scale variables, we call this particular type of research correlational. Correlational research attempts to understand the strength of the relationship between variables. It can also be used to predict where a level in one variable should lie when provided information about the second variable.

21. What is a dependent variable?
A. something the participants themselves measure
*B. something that an experimenter measures to see how another variable affected it
C. something the experimenter changes or controls
D. something irrelevant to what happens in the experiment
% Correct: 97.39%
Notes: This is a definition question. Dependent variables are only found in experimental studies. When someone manipulates one variable in order to see how it impacts the levels of a second variable, the person is running an experimental study. The impacted variable in this scenario is called the dependent variable. The one being manipulated is called the independent variable.

22. Your soccer team scored 1, 1, 2, 3, and 8 goals (a total of 15) in their first five games. What was their median number of goals?
A. 1
*B. 2
C. 3
D. 8
% Correct: 98.26%
Notes: The median is the “middle” score in a distribution of scores in a scale variable. The median for this example is 2. That is because it is the 3rd largest score in a group of 5 scores. To find this score, one must order the scores for this variable from smallest to largest and find the score that was situated in the middle of the 5 scores.

23. Imprinting is an example of a(n)
*A. instinct.
B. taxis.
C. reflex.
D. learned response.
% Correct: 77.39%
Notes: Imprinting involves the sustained following of/attachment to a moving figure encountered almost immediately following birth. It is primarily displayed in birds. It is a very elaborate and sustained response that results from a fairly simplistic combination of stimuli. Because of the nature of this response and situation, we call it an instinct.

24. Little Baby Albert was experimented upon by
A. Edward Thorndike.
B. Ivan Pavlov.
C. BF Skinner.
*D. John B Watson.
% Correct: 96.52%
Notes: In his attempts to show the value of behavioral principles and techniques, John B Watson conducted a series of experiments on little baby Albert. These studies involved Watson generating a fear response to a white rat—and then later white and fluffy objects—in Albert over repeated exposures. This study made Watson very famous, but also very controversial, within the field.

25. Bob mercilessly rings a bell every time he blows in his dog’s face. This blowing causes the dog to sneeze. Over time, Bob’s dog starts to sneeze just at the sound of the bell. In this formula, Bob’s ringing of the bell would be called a _____________.
A. unconditioned stimulus
B. punishment
*C. conditioned stimulus
D. reinforcement
% Correct: 95.65%
Notes: This question relates to the topic of classical conditioning. Since the dog did not originally respond to the bell in any way, the bell would have been defined as a neutral stimulus. Since the dog eventually started responding to the bell after the pairing of the bell with the puff of air, its response to the bell eventually became what is called a conditioned response. Conditioned responses only occur through the process of pairing found in classical conditioning.

26. Which of the following responses are believed to be changeable and eventually passed onto offspring through conscious effort?
A. Instincts
B. Taxis
C. Reflexes
*D. None of these can be passed onto offspring
% Correct: 78.26%
Notes: Technically, through large amounts of exposure and effort, each of the listed automatic responses to stimuli can sometimes be changed in an individual—though this is extremely rare. However, even if any of these is changed within an individual, none of this learned change is passed down to offspring. The fact that they’re inherent and unlearned is also a part of how each is defined. Though some theorists have tried to change these reactions across offspring over the years, it is now well established that whatever is learned or undone through exposure cannot be passed down to offspring.

27. Instincts, taxis, and reflexes ALL involve
A. learning.
B. multiple body parts in order to initiate.
C. only a few body parts in order to initiate.
*D. a stimulus and response.
% Correct: 94.78%
Notes: Though the complexity of these response categories varies widely, each involve some type of a response to a stimulus—or combination of stimuli. Though learning can eventually add to the complexity of all of these, they are all present at birth, with no learning being required to exhibit them.

28. Pavlov paired a sound with the presentation of food and measured salivation to each. In this experiment the conditioned stimulus was the
A. food.
*B. sound.
C. salivation to food.
D. salivation to the sound.
% Correct: 91.30%
Notes: This is an identification question. It relates to the topic of classical conditioning. It also references the work of the founder of this topic, Ivan Pavlov. Since conditioned stimuli are stimuli that produce a response only after a learned connection has been made between this stimulus and an unconditioned stimulus, the sound in this example would be considered the conditioned stimulus.

29. What is meant by “extinction” of a conditioned response?
*A. forgetting a response after a long delay without training
B. learning to suppress the response
C. total obliteration of the connection between stimulus and response
D. generalization of the response to new stimuli
% Correct: 18.26%
Notes: This was apparently a bad question so everyone earned credit for it. Since a conditioned response relates to the topic of classical conditioning, the answer has to relate to that concept as well. Many students answered C in this question, though this isn’t what extinction is about. For extinction to occur, the connection between a UCS and CS need to be severed. This will result in a lack of a CR to a CS, but extinction doesn’t focus on breaking that connection.

30. According to Thorndike, reinforcement is an event that
A. physically forces an animal to make a certain response.
B. reminds an animal of a previous experience.
C. an animal desires.
*D. increases the probability of the preceding response.
% Correct: 84.35%
Notes: Thorndike was one of the first theorists to describe the concept of reinforcers and punishers. Punishers are consequences to behaviors that reduce the likelihood of that behavior occurring in the future. Reinforcers are consequences to behaviors that increase the likelihood of that behavior occurring in the future.

31. What is a secondary reinforcer?
A. Something that can reinforce some behaviors but not others.
B. Something that reinforces a difficult skilled behavior.
C. Something with only weak reinforcing properties.
*D. Something that became reinforcing by previous learning.
% Correct: 88.70%
Notes: The concept of secondary reinforcers utilizes the addition of another level of learning to the concept of operant conditioning. In essence, it involves pairing a stimulus that is originally not a reinforcer to a stimulus that is a primary reinforcer. An example of a primary reinforcer would be food, or mental stimulation, or something else where learning is not required to make these things enjoyable. Through repeated pairings with a primary reinforcer, a secondary reinforcing stimulus can become reinforcing. When it becomes reinforcing, it is called a secondary reinforcer.
32. An individual receives reinforcement for a response, but timing of the reinforcement is not consistent, sometimes occurring as little as 10 seconds after the response and as long as 3 minutes. This is an example of what schedule of reinforcement?
A. fixed ratio  
B. variable ratio  
C. fixed interval  
*D. variable interval  
% Correct: 92.17%

Notes: This question deals with schedules of reinforcement. Though much of the early research on the topic of operant conditioning utilized continuous reinforcement (reinforcement for a behavior EVERY time), later research shifted focus and examine the impact of occasional reinforcement for a behavior. These schedules have shown to impact a wide range of things, including response rates. The example above is an example of a variable interval schedule. Variable because of the inconsistent nature of the response time required before a behavior is reinforced; interval because time is the critical component that is being used to set the reinforcement schedule for the behavior.

33. Vicarious learning was studied by Mineka et al. in 1984 by examining fear in Rhesus monkeys of
A. puzzles. 
B. water. 
C. food. 
*D. snakes. 
% Correct: 98.26%

Notes: This study was mentioned in the book and presentations. Mineka was one of the first researchers to clearly show that other species could display what we call vicarious learning. In the Mineka experiments, monkeys that had never shown a fear of snakes watched another monkey display a strong fear reaction. In one condition, the monkeys saw that the other monkey was reacting to a snake. In another condition, the observing monkeys never saw what was triggering the fear reaction. Mineka was then able to show that this fear reaction began to emerge in the monkeys that saw the snake, and didn’t emerge in the monkeys that didn’t see the snake.

34. Which of the following is NOT an important part of the social learning approach?
A. imitation  
*B. classical conditioning  
C. vicarious reinforcement  
D. self-reinforcement  
% Correct: 74.78%

Notes: Social learning involves learning that extends beyond the traditional stimulus/response or behavior/response relationship. Most versions of social learning focus on some type of social interaction during the learning process, but this is not required—see self-reinforcement. The only term above that doesn’t relate to the concept of social learning is classical conditioning. This is simply a basic version of learning.

35. You observe that your older cousin has been praised as a successful physician, so you decide you would like to become a physician too. What kind of learning has taken place here?
A. classical conditioning  
*B. vicarious reinforcement  
C. primary reinforcement  
D. backward conditioning  
% Correct: 99.13%

Notes: When a pursuit/behavior/reaction is changed through observation of another’s pursuit/behavior/reaction being changed, we say that vicarious learning has occurred. In the example, since the observer is seeing someone being reinforced for a decision, the observer is experiencing what is called vicarious reinforcement.

36. When you see something,
A. energy comes out of your eye.
37. On a dark night, you see a faint star slightly to the periphery of your eyes. Then when you focus onto it with your fovea, it disappears. Why?
A. Cells in the fovea have greater convergence onto the next layer of cells.
B. The fovea responds only to moving objects.
*C. The fovea has only cones.
D. The fovea is in the shadow of the pupil.
% Correct: 88.60%
Notes: Since the cells that process dim light and movement are densest in the periphery of the back of our eyes (the back of our eyes are called the retina), we can process dim light and movement very well in the periphery of our visual field. We call these cells rods. Since the cells that process color and detail are of highest concentration in the center of the back of our eyes (this specific area is called the fovea), we can only process color and fine details of objects in the center of our visual field. We call those cells cones.

38. Which of the following most directly supports the opponent-process theory of color vision?
A. We can recognize all colors even while wearing tinted glasses.
B. Rods and cones contribute to vision in different ways.
*C. We see negative afterimages after staring at a bright-colored image.
D. It is possible to match any color of light by mixing three other colors.
% Correct: 90.43%
Notes: The opponent process theory of color vision suggests that part of the perceptual process of colors comes from our brain’s determination of a ratio message of opposing color pairs. In essence, instead of our brain simply receiving a message saying “I see red”, it receives a message saying “I see red, not green”. The result above that supports this theory is answer C. The afterimage effect is the term we use to describe how we see opposing colors after staring at one color for an extended period of time and then looking a white background immediately afterward.

39. The parts of our body that convert stimuli into a neural message are called
A. homunculi.
B. projection areas.
C. sensory tracts.
*D. receptor organs.
% Correct: 66.09%
Notes: This is a definition question. We have a large number of receptor organs throughout our body, but all do the same thing. They take some type of stimulus from our environment and find a way to convert that stimulus into a neural message that can be processed by our body and brain. The structure of these organs and how they work is the focus of sensation researchers.

40. Most of our touch and motor processes pass messages along the _________. This does not occur with our other senses.
A. thalamus
*B. spinal cord
C. frontal lobe
D. occipital lobe
% Correct: 73.04%
Notes: Touch and motor messages both pass through the thalamus—but so do the messages from almost every sensory processes in the body. The frontal lobe initiates movement. Touch is processed in the parietal lobe. The spinal cord DOES get used by both systems. Moreover, it is not a component to any of our other senses (vision, taste, olfaction, and audition).

41. Research suggests that our senses are “experienced” in the ______________.
   *A. cerebral cortex
   B. thalamus
   C. nerves
   D. receptor organs
   % Correct: 66.09%

Notes: Experience relates to the actual mental identification of stimuli in our environment. Though receptor organs, nerves, and the thalamus all play a role in the conversion of a stimulus into a neural message, research suggests that we don’t actually “experience” a stimulus until it is processed by areas of the cerebral cortex. Most of this research attempting to verify this concept has focused on how we can experience phantom sensations of different types of stimuli even after damage to all of the three of the aforementioned areas.

42. In the human ear, the ability to perceive intermediate frequencies (about 100-5000 Hz) depends on neurons working according to the __________ principle.
   A. place
   B. gate
   *C. volley
   D. frequency
   % Correct: 78.26%

Notes: The processes involved in our ability to hear different tones varies depending upon the frequency of the sound being sensed. For mid-level frequencies like the one in the question, the volley theory seems to be the process involved in sensing these frequencies. The volley theory involves determining frequency through a pattern of responses by a cluster of neurons. This pattern allows for us to hear sounds that have frequencies which are slightly faster than the refractory period of a single neuron.

43. Which sensory system is most impaired in astronauts experiencing weightlessness in space?
   *A. vestibular sensation
   B. vision
   C. olfaction
   D. somatosensory sensation
   % Correct: 93.91%

Notes: Since our vestibular system allows us to determine directionality through gravity’s weight placed on different organs, the lack of gravity in space would make this system essentially useless. Though this disorientation in space can throw off other senses to a small extent, the only answer above that is clearly correct is our vestibular system.

44. What is meant by subliminal perception?
   *A. responding behaviorally to a stimulus you don’t consciously perceive
   B. having a sensation unlike the stimulus, such as perceiving Tuesday as green
   C. receiving information without the use of any sense organ
   D. intuitively understanding what someone else must be feeling at the moment
   % Correct: 97.39%

Notes: Subliminal perception is a topic explored in research examining sensation and consciousness recognition of stimuli. When someone subliminally perceives an object, they are reacting to the presence of the object without conscious recognition of that stimulus’ presence. There are a variety of ways to study this type of perception, but all involve looking at some version of a reaction to a stimulus that seems to be occurring more than we would expect to see through mere chance.
45. What is the slogan of Gestalt psychology?
A. Every action has a reaction.
*B. The whole is different from the sum of its parts.
C. Monkey see, monkey do.
D. Birds of a feather flock together.
% Correct: 99.13%
Notes: Gestalt psychologists focus their attention on the topic of perception. In particular, their aim is to determine how our expectations and processes of the mind impact the perception of stimuli that we are presented. They have established that much of our perception of our environment is strongly shaped by not only the stimuli from the environment, but also our own minds. This concept relates to the constructivist approach to perception. The slogan that best epitomizes this idea is “the whole is different from the sum of its parts”.

46. A one-eyed person can detect depth in many ways, but is unable to use these two ways:
*A. retinal disparity and convergence
B. linear perspective and detail
C. interposition and texture gradient
D. object size and motion parallax
% Correct: 93.91%
Notes: Retinal disparity and convergence are both binocular cues. Retinal disparity involves our perception of depth through the slightly altered image of stimuli that hit our two eyes. Convergence involves our perception of depth through the amount of movement required by our eyes to focus on a stimulus. They are defined as binocular cues because without two eyes, both cues cannot be accessed.

47. Someone with high sensitivity in a sensory detection study would probably commit more
A. misses.
B. false alarms.
C. hits and false alarms.
*D. hits.
% Correct: 59.13%
Notes: High sensitivity in a sensory detection study means that you’re detecting a stimulus almost perfectly. This means that you can detect a stimulus every time it’s present, and almost never identify when it’s not present. This would mean you would commit very few false alarms, very few misses, and a large number of hits during a stimulus detection activity.

48. Shadowing, texture gradients, linear perspective, and superposition are all cues used for
*A. depth perception.
B. visual organization.
C. auditory processing.
D. constructivist processes.
% Correct: 90.43%
Notes: All of the topics covered here are different examples of monocular cues for depth/size perception. Since nothing is being added to the material in order for perception to occur, they’re not technically constructivist processes. Visual organization is also a term that really doesn’t relate to the situation, and these concepts do not apply to any type of auditory processing.

49. Mark’s ability to feel pain when his arm is exposed to a fire—even when he doesn’t notice the fire—is an example of ______________.
A. Gestalt principles
*B. bottom-up processing
C. top-down processing
D. the constructivist approach to pain perception
% Correct: 68.70%
Notes: Our ability to perceive stimuli without having expectations play any role in the perception defines the concept of bottom-up processing. The other answers are all related to each other, but not the situation described in the question.

50. The Muller-Lyer and Ponzo illusions both involve misperception of _________.
A. shape
B. color
*C. size
D. speed
% Correct: 68.70%
Notes: Both illusions are considered classic stimuli in the field of sensation and perception. They both generate misperceptions of size through the inclusion of misleading visual cues in the stimuli. Since both create misperceptions through top-down processing, we can link these to the constructivist approach to perception.