

Inattentional Blindness II

Research suggests that inattentional blindness is affected by four factors, conspicuity, mental workload, expectation and capacity.

CONSPICUITY

When we are just casually looking around, sometimes an object will jump out of the background. The term "conspicuity" refers to this ability to capture attention. Since getting people to notice information can literally be "a matter of life and death," many studies that have examined the factors that underlie conspicuity.

SENSORY CONSPICUITY FACTORS

There are two general types of factors which determine conspicuity. One is sensory conspicuity, the physical properties of the object. The most important sensory factor is contrast. We see objects, not because of their absolute brightness, but by their contrast with the background. When there is higher contrast, objects are more conspicuous. For example, black cars are involved in many more accidents, presumably because they harder to notice at night. We also are more likely to notice objects which are large and which move or flicker. That's why school busses, police cars, ambulances, railroad crossings, etc. use flickering light.

COGNITIVE CONSPICUITY FACTORS

There is more to conspicuity that just sensory quality. "Cognitive conspicuity" is equally or more important for drawing attention. We are much more likely to notice things which are relevant to us in some way. The classic example is the cocktail party phenomenon. You are at a cocktail party and having a conversation with someone. You understand the words of your partner and may or may not also be aware of the buzz of other, unintelligible conversations. We are so fast at interpreting speech

sounds, that we are generally unaware that detecting the sounds and interpreting them are separate mental

processes. The buzz sounds are coded for pitch and loudness, but you do not have the capacity to interpret both your partner's "sounds" as well as those of other conversations in the room. Attention limits us to one conversation at a time.

You can scan the room and switch your attention to someone else and can then understand that conversation but your partner's words become a meaningless buzz. The stream of consciousness is unitary, so you can consciously follow only one conversation at a time.

Now, suppose someone behind you says your name.

This automatically attracts your attention to the other conversation because your name is meaningful. This happens visually as well.

When reading a newspaper,

the reader may frequently find his/her attention automatically drawn to the combination letters "OU" even if they are not in the area the reader is examining. The reason is that the reader graduated Oklahoma University, so the "OU" has a special meaning to the reader.

When driving, both sensory conspicuity factors and cognitive conspicuity factors capture our attention. The more adept a driver is as hazard perception, the less likely he/she is to be involved in a crash.

Hazard perception requires 2 steps: 1) Sensing a hazard, normally seeing the potential hazard. Sensory conspicuity factors will dictate how difficult or easy it is to see the hazard. 2) Recognizing the hazard as a hazard. Cognitive conspicuity factors will determine this interpretation of what we are seeing.



We see objects, not because of their absolute brightness, but by their contrast with the background.

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The Shield
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Quiz



Driver Name: _____ Date: _____

Please Print

Driver Signature: _____

Please circle one correct answer for each question.

1. The ability of some sensory input to capture our attention is referred to as:
 - a. Attentional vigor
 - b. Inconspicuity
 - c. Conspicuity
 - d. None of the above
2. The most important sensory factor is:
 - a. Contrast
 - b. Brightness
 - c. Color
 - d. Tone
3. "Cognitive conspicuity" is:
 - a. Not as important for drawing attention as sensory conspicuity.
 - b. Equally or more important for drawing attention than sensory conspicuity.
 - c. Both a & b
 - d. None of the above
4. When driving...
 - a. Only sensory conspicuity factors capture our attention
 - b. Only cognitive conspicuity factors capture our attention
 - c. Both sensory conspicuity factors and cognitive conspicuity factors capture our attention.
 - d. None of the above
5. When driving, hazard perception requires sensory conspicuity factors and cognitive conspicuity factors.
 - a. True
 - b. False

