Individual Differences in the Accuracy of Eyewitness Testimony

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Previous research has consistently shown that jurors find eyewitness testimony to be the most persuasive form of evidence. Unfortunately, research is just as consistent in showing that eyewitness testimony is also one of the least reliable and accurate forms of evidence. To understand this inaccuracy, researchers have studied a myriad of factors potentially affecting the accuracy of an eyewitness. Such factors have included the type, seriousness, and duration of the crime; the viewing conditions under which the eyewitness was operating; and the type of questions used to elicit the eyewitness testimony.
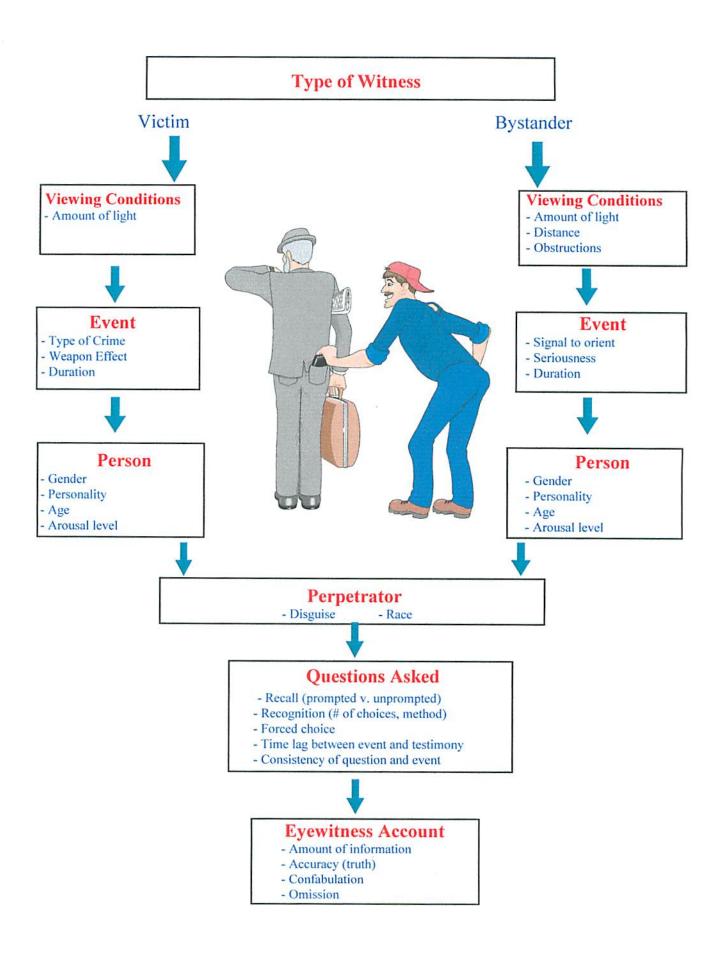
Though research has provided a reasonable understanding of the relationship between environmental factors and eyewitness accuracy, the same cannot be said about individual differences in eyewitness accuracy. That is, in identical viewing conditions, why are some eyewitnesses more accurate than others? Previous research has reported inconsistent results in suggesting that females and extroverts provide the most accurate eyewitness accounts.
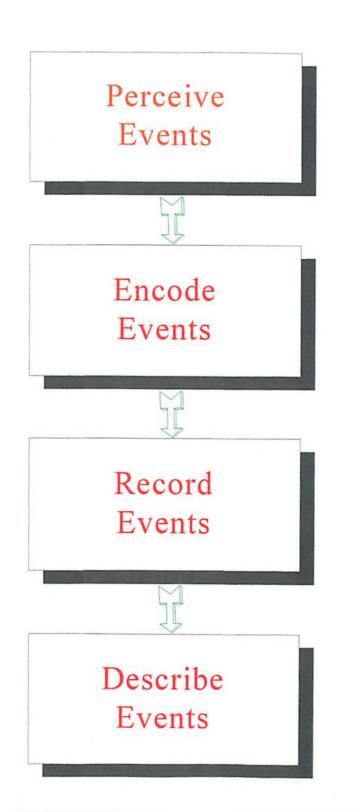
It is the purpose of the present paper to report the results of an attempt to develop a test that could be used to measure individual differences in the predisposition to be an accurate eyewitness. The *Test of Eyewitness Accuracy* contains three scales:
1) Memory ability (5 questions)
2) Tendency to notice events (4 questions)
3) Ability to distinguish differences in people (3 questions)

The scale was administered to 304 undergraduate students several weeks prior to a crime being staged in their psychology classes. Table 1 shows the internal reliability coefficients and factor loadings for the three scales. As can be seen in the table, the test contains the hypothesized three factors yet the internal reliability of these factors is low.

Though the scales have poor internal reliability, an earlier version of the *Test of Eyewitness Accuracy* significantly predicted eyewitness accuracy in two pilot studies. In the first, Davis (1995) found a correlation of .31 between the total test score and the accuracy of eyewitnesses to a staged theft. In the second, Aamodt (1995) found a correlation of .20. A larger validation study using eight separate classes is currently underway as are further analyses investigating the psychometric properties of the test and its three scales.

Type of Witness

Victim

Bystander

Viewing Conditions
- Amount of light

Viewing Conditions
- Amount of light
- Distance
- Obstructions

Event
- Type of Crime
- Weapon Effect
- Duration

Event
- Signal to orient
- Seriousness
- Duration

Person
- Gender
- Personality
- Age
- Arousal level

Person
- Gender
- Personality
- Age
- Arousal level

Perpetrator
- Disguise   - Race

Questions Asked
- Recall (prompted v. unprompted)
- Recognition (# of choices, method)
- Forced choice
- Time lag between event and testimony
- Consistency of question and event

Eyewitness Account
- Amount of information
- Accuracy (truth)
- Confabulation
- Omission

Perceive Events	Predisposition to notice events
↓	
Encode Events	Ability to differentiate and understand
↓	
Record Events	Memory Skills
↓	
Describe Events	Verbal ability and style

	X	sd	KR_{20}	Factor Loadings		
				I	II	III
Memory	3.15	1.43	.57			
I remember events better than most people do	.69			.67		
I have a good memory for conversations	.74			.65		
I am good at remembering exact lines or scenes from movies	.57			.56		
I am good at remembering peoples' names	.47			.55		
I am good at remembering phone numbers	.69			.49		
Notice	2.60	1.21	.60			
I usually notice how people dress	.85				.59	
I usually notice when friends do something a little different with their hair	.76				.61	
If I met a stranger, I could tell if they have dyed their hair	.43				.68	
I will usually notice if a person's shoes don't match their outfit	.56				.76	
Distinguish	2.58	.68	.36			
To me, most people look alike (r)	.08					.66
I can recognize a person weeks after I have met them	.77					- .48
When at a restaurant, I have trouble recognizing my server (r)	.11					.65
Total Score	8.33	2.29	.62			

n = 304

Variable	Scale			
	Memory ability	Tendency to notice events	Ability to distinguish	Total Score
Demographics				
Gender (1 = male, 2 = female)	.06	.45*	.00	.27*
Race (1 = white, 2 = minority)	.09	.02	.04	.08
Age	-.13	-.14	-.08	-.18*
Cognitive Ability				
SAT Score	.01	-.16	-.06	-.11
High School GPA	.02	.10	.00	.07
Personality				
Employee Personality Inventory				
Thinking	.07	-.20*	-.02	-.07
Directing	.03	.08	-.15	.01
Communicating	.13	.16	.00	.16
Soothing	-.19	-.24*	.02	-.24*
Organizing	-.02	.07	.14	.07
Eysenck Personality Inventory				
Extroversion	.11	.07	-.04	.09
Neuroticism	-.10	.05	.04	-.02
Lie Scale	.00	-.12	.10	-.03
Test of Eyewitness Ability				
Memory ability		.13	.25	.77
Tendency to notice events			.21	.67
Distinguishing differences in people				.56

n = 304

Name_____   SSN_____

Gender _____   Age _____   Race _____   Instructor _____

Astrud Personality Inventory

.78 .80	1. .80	I have an eye for detail	T	F
.84	2. .85	I usually notice how people dress	T	F
.11	3. .08	To me, most people look alike	T	F
.46	4. .44	I usually pay more attention to my thoughts than what goes on around me.	T	F
.30	5. .26	I get lost or disoriented easily	T	F
.36	6. .38	I use words such as maroon or aqua rather than red or green to describe colors	T	F
.40	7. .39	When talking about time, I am precise (e.g. 5:03) rather than general (e.g. "about five o'clock)	T	F
.77	8. .76	I usually notice when friends do something a little different with their hair	T	F
.73	9. .75	I am almost always aware of what goes on around me.	T	F
.71	(10.) .69	I remember events better than most people do	T	F
.74	(11) .74	I have a good memory for conversations	T	F
.58	(12) .57	I am good at remembering exact lines or scenes from movies I have seen	T	F
.75	(13) .77	I can recognize a person weeks after I have met them, even if I only spoke to them for a short period of time	T	F
.13	14. .11	When at a restaurant, I have trouble remembering or recognizing my server	T	F
.51	(15) .47	I am good at remembering peoples' names	T	F
.91	16. .91	When at a restaurant or social event, I look around often to see who is there and what they are doing	T	F
.52	17. .53	When out in public, I like to listen to other peoples' conversations	T	F
.66	(18) .69	I am good at remembering phone numbers	T	F
.45	19. .46	I almost always know what date it is (e.g. May 12th)	T	F
.70	20. .65	I am very outgoing	T	F
.44	21. .43	If I meet a stranger, I can tell if they have dyed their hair	T	F
.13	22. .12	When watching a TV show, I often get the actors confused	T	F
.36	23.⌉ .36	I am good at remembering and telling jokes	T	F
.90	24.⌋ .88	I enjoy telling stories about things that have happened to me	T	F
.53	25. .56	I will usually notice if a person's shoes don't match their outfit	T	F

What was your SAT or ACT score? _____   What was your high school GPA? _____

Memory (10, 11, 12, 13, 14, 15, 18)

ate   16

notice (2, 8   21, 27)

Distinguish (3, 13, 14)

Awaren (4, 9)

confusion (5, 22)