Clare & Lewandowsky (2004)

Verbal Overshadowing Study – Experiments 1 and 2

Table 7.1 Eyewitness Responses in Two Experiments Reported by Clare and Lewandowsky (2004)

			Verbalization Condition		
Lineup [a]	Decision	Response Type [b]	Control	Holistic	Featural
		Experiment 1			
PP	Optional choice	Hit	.80	.57	.69
		False ID	.13	.06	.12
		Miss	.07	.36	.19
PA	Optional choice	CR	.23	.52	.52
		False ID [c]	.77	.48	.48
		Suspect	.04	.20	.00
		Foil	.73	.28	.48
		Experiment 2			
PP	Forced choice	Hit	.86	.81	.84
		False ID	.14	.19	.16

a. PP = perpetrator present; PA = perpetrator absent.

b. Hit = correct identification; False ID = identification of foil; Miss = erroneous "not there" response; CR = correct rejection.

c. False IDs with the perpetrator-absent lineup are further broken down by "suspect" versus the other foils.

Simplified WITNESS Model

Table 7.2 Free Parameters in WITNESS

Parameter		Best-Fitting Estimate
Encoding strength	s	.27
Similarity	sim	.29
Baseline criterion	$c_{rec}(C)$	1.20
Holistic criterion	$c_{rec}(H)$	1.84
Featural criterion	$c_{rec}(F)$	1.64

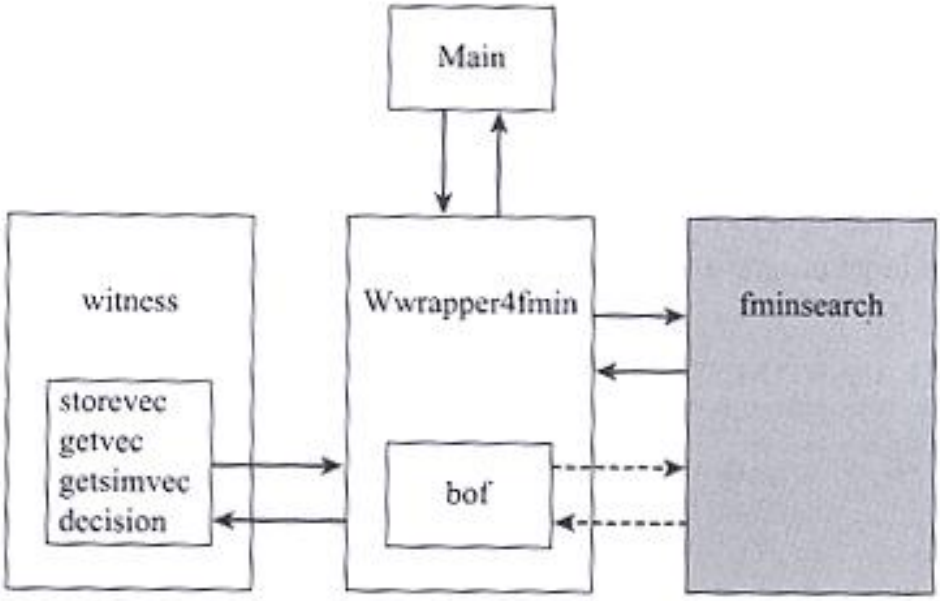

Figure 7.1 The relationship between the MATLAB functions used in the WITNESS simulation. The names in each box refer to the function name(s) and file names. Boxes within a box represent embedded functions. Arrows refer to exchanges of information (via function calls and returns or global variables). Solid arrows represent information exchanges that are managed by the programmer, whereas broken arrows represent exchanges managed by MATLAB. Shading of a box indicates that the function is provided by MATLAB and does not need to be programmed. See text for details.

Global Control Variables

Table 7.3 Members of the `consts` Structure in WITNESS

Member Name	Explanation	Value
`consts.seed`	Seed for random generator	21335
`consts.lSize`	Size of lineup	6
`consts.nRep`	Number of simulation replications	1000
`consts.n`	Number of features in vectors	100
`consts.nCond`	Number of conditions modeled	7
`consts.fChoice`	Forced-choice conditions*	[7 8 9]
`consts.paLineup`	Conditions without perpetrator*	[4 5 6]
`consts.ptToCrit`	Pointer to appropriate criterion*	[3 4 5 3 4 5]
`consts.maxParms`	Maximums for parameters*	[1 1 inf inf inf]

Experimental Conditions in Simulation

Experiment	1						2		
Lineup	PP			PA			PP		
Condition	Control	Holistic	Featural	Control	Holistic	Featural	Control	Holistic	Featural
iLineup	1	2	3	4	5	6	7	8	9
consts.ptToCrit	3	4	5	3	4	5	n/a	n/a	n/a
criterion	parms (3)	parms (4)	parms (5)	parms (3)	parms (4)	parms (5)	0	0	0
any(iLineup==consts.paLineup)	0	0	0	1	1	1	0	0	0
any(iLineup==consts.fChoice)	0	0	0	0	0	0	1	1	1

Figure 7.2 Mapping between experimental conditions (shaded part at the top) and program parameters in our simulation (bottom part). PP = perpetrator-present lineup; PA = perpetrator-absent lineup. See text for details.

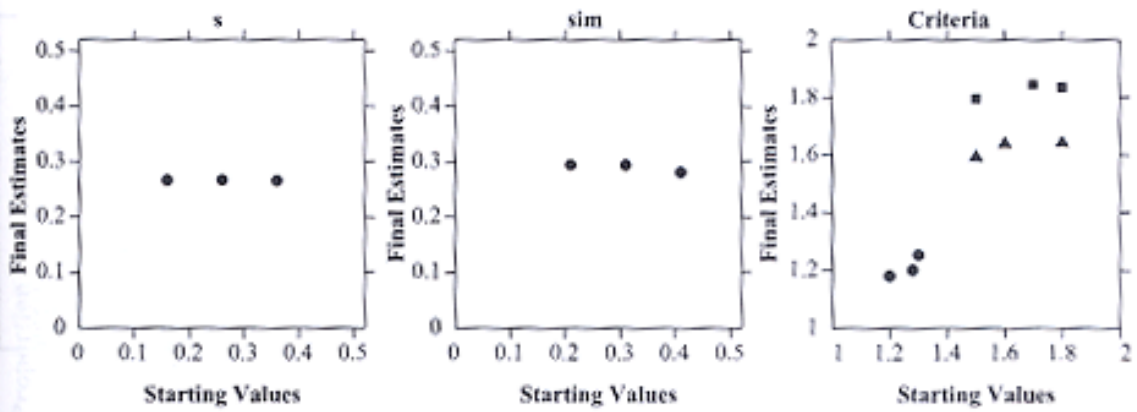

Figure 7.3 Final parameter estimates as a function of their starting values for three fits of the WITNESS model to the data of Clare and Lewandowsky (2004). From left to right, the panels show the values of s, sim, and the recognition criteria, respectively. In the rightmost panel, circles, squares, and triangles refer to $C_{rec}(C)$, $C_{rec}(H)$, and $C_{rec}(F)$, respectively.

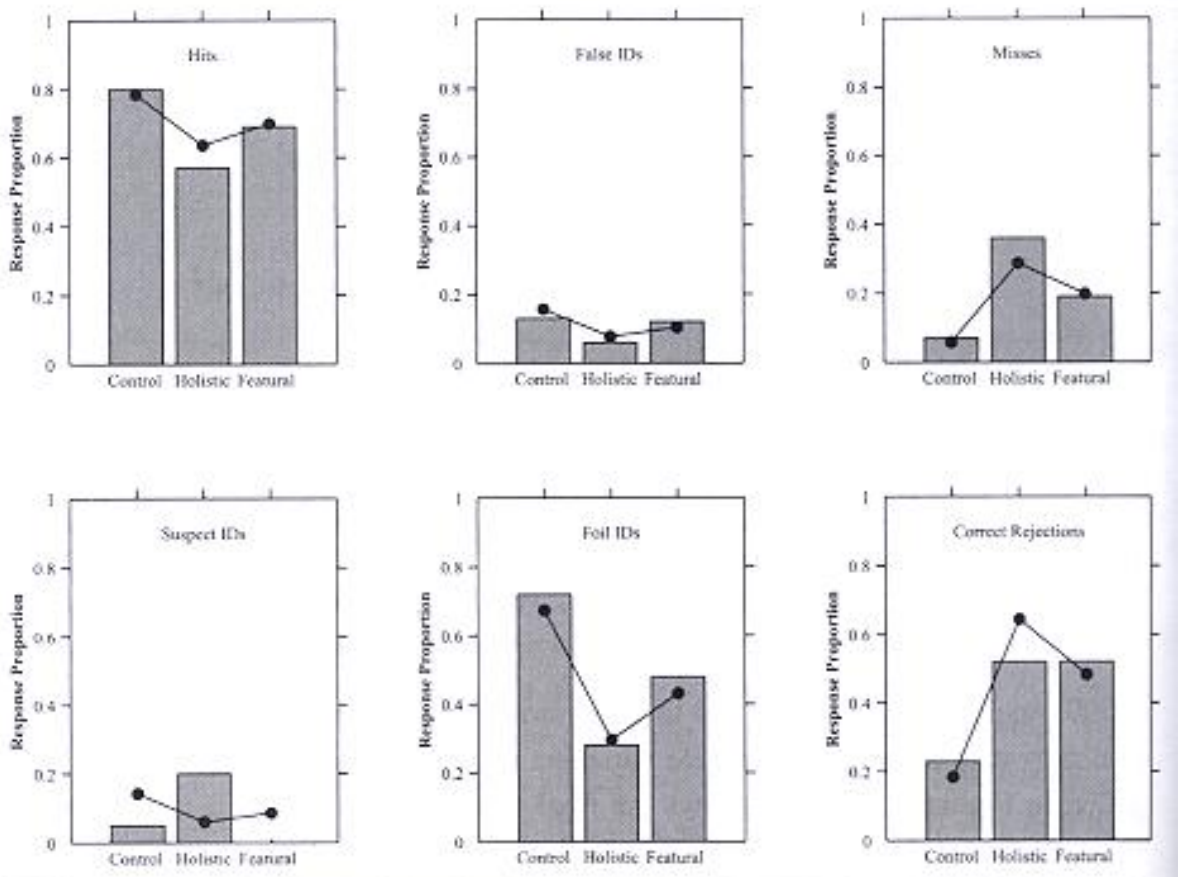

Figure 7.4 Data (bars) and predictions of the criterion explanation within WITNESS (points and lines) for Experiment 1 (optional-choice lineups) of Clare and Lewandowsky (2004). The top row of panels represents the perpetrator-present lineup and the bottom row the perpetrator-absent lineup. Data from Clare, J., & Lewandowsky, S. (2004). Verbalizing facial memory: Criterion effects in verbal overshadowing. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 30*, 739–755. Published by the American Psychological Association; adapted with permission.

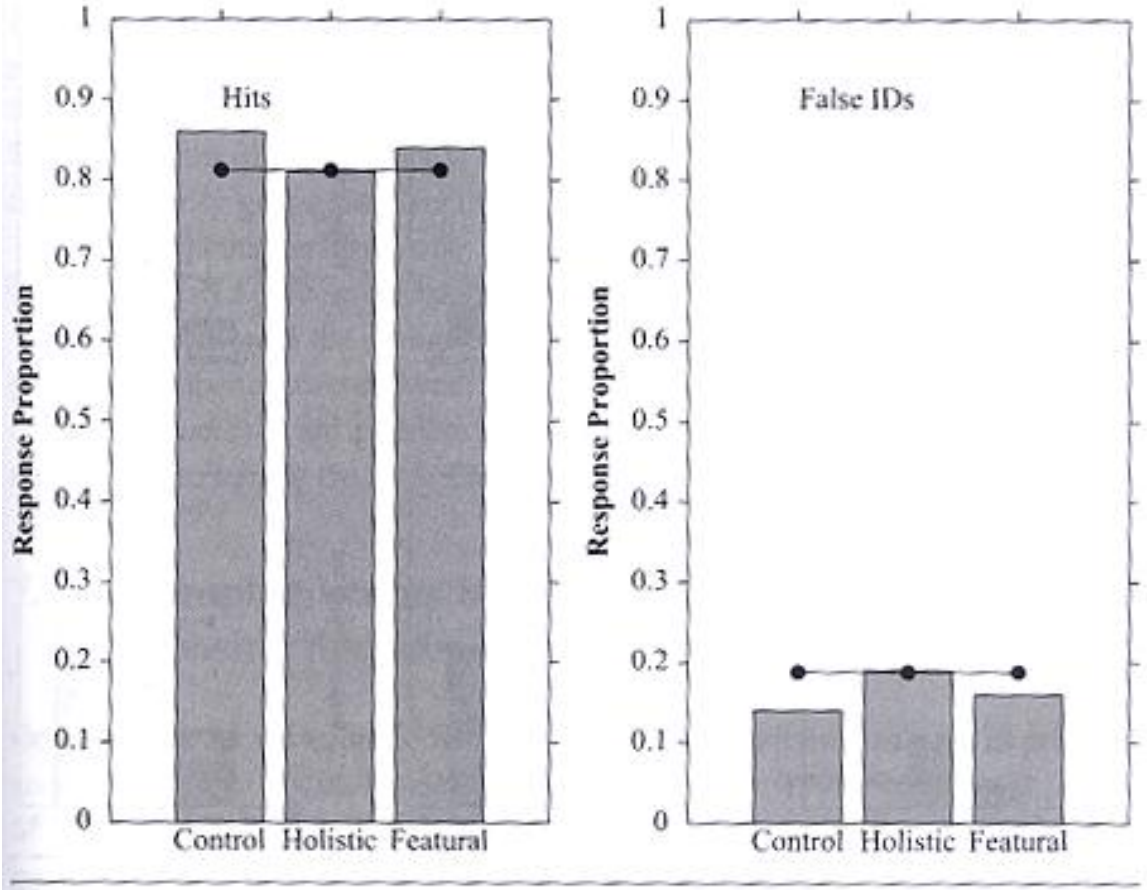

Figure 7.5 Data (bars) and predictions of the criterion explanation within WITNESS (points and lines) for Experiment 2 (forced-choice lineup) of Clare and Lewandowsky (2004). Data from Clare, J., & Lewandowsky, S. (2004). Verbalizing facial memory: Criterion effects in verbal overshadowing. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 30*, 739–755. Published by the American Psychological Association; adapted with permission.

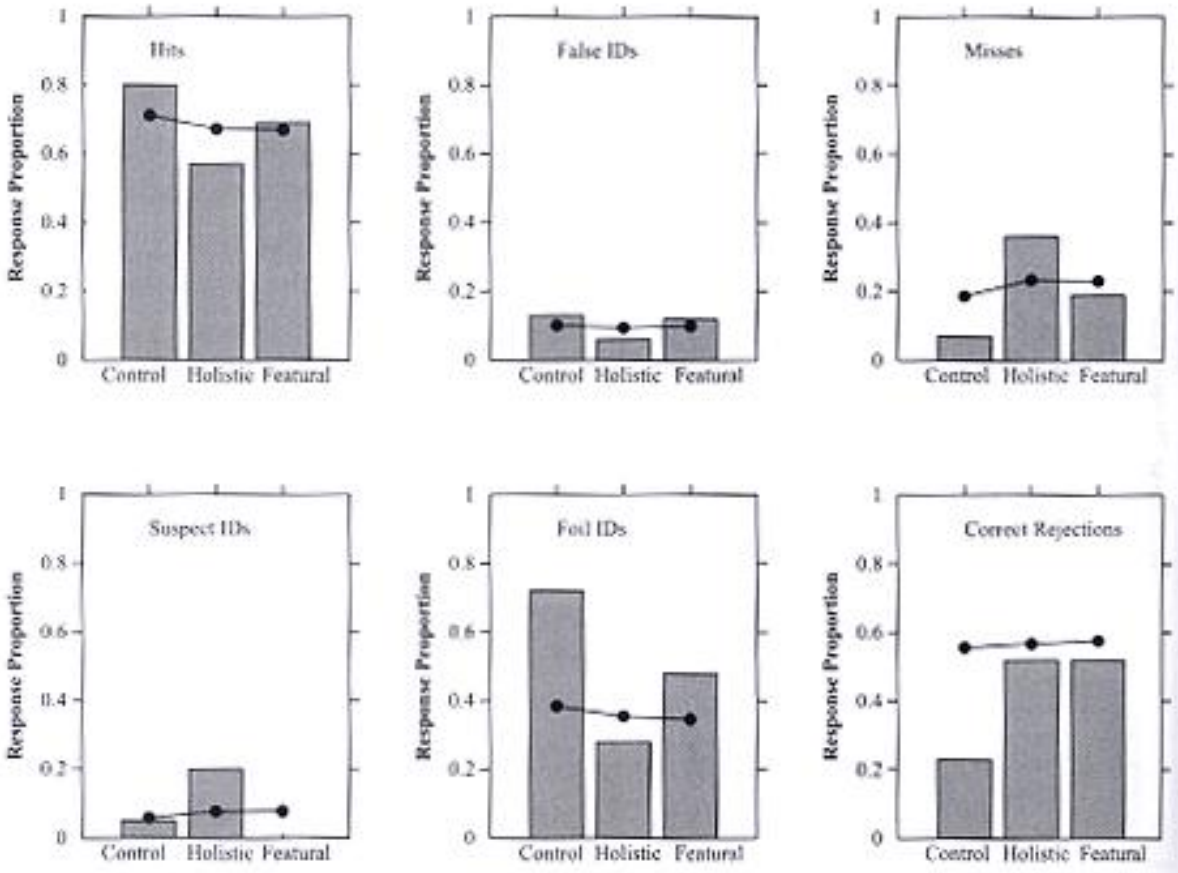

Figure 7.6 Data (bars) and predictions of the memory explanation within WITNESS (points and lines) for Experiment 1 (optional-choice lineups) of Clare and Lewandowsky (2004). The top row of panels represents the perpetrator-present lineup and the bottom row the perpetrator-absent lineup. Data from Clare, J., & Lewandowsky, S. (2004). Verbalizing facial memory: Criterion effects in verbal overshadowing. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 30*, 739–755. Published by the American Psychological Association; adapted with permission.