Supplemental Online Material

Study I: Mid and High Level Visual Processing

Visual Episodic Memory Test

On each trial, a picture (e.g., tool, animal, kitchen appliance, medical equipment, food) was centrally presented for 3 seconds, and AC and controls were told to press the spacebar when the image being presented was a "repeat" (i.e., had been presented beforehand), and to not make a response if the image was novel. There were a total of 40 repeated images, and the number of trials between repeat images varied from 3 to 16 trials. Participants were given feedback after every response. For instance, if a repeated image was correctly identified (i.e., a hit), a central fixation cross turned green, and if the participant incorrectly identified an image as a repeat (i.e., a false alarm), the fixation cross turned red. There was no feedback for misses or correct rejections (i.e., non-responses).

In an immediate follow-up test, two images were presented on every trial, one image to the left, and one to the right of fixation. Of the two images presented, one was from the Picture Repeat Test while the other was a foil. The foil was one of three types: a novel foil (e.g., the correct object was a calculator, and the foil was a ball), an exemplar foil (e.g., the correct object was a black calculator and the foil was a white calculator), or a state foil (e.g., the correct object was a calculator in an upright position while the foil was a calculator in a downward position). AC and controls were asked to identify, by key-press, which image they had previously seen.

On the Picture Repeat Task, AC identified every repeated picture (40/40, 100%). However, he also had a large number of false alarms as compared to controls (30/175, 17%; d' = 3). Nevertheless, AC's intact performance on the follow up Picture Identity Task (36/40, 90%, $t < 1$) suggests that his ability to encode semantic information from visually presented stimuli was

not significantly different than controls. The discrepancy in accuracy between the two tasks suggests that AC may have misunderstood the directions of the first task. However, the results from the follow up task suggest that he did not have difficulty with tasks stressing visual episodic memory was.

Study II: Conceptual Knowledge of Objects

Semantic Attribute Questionnaire

Two independent rounds of norming were carried out before AC took the Semantic Attribute Questionnaire. In the first round of norming twelve undergraduate participants were given 440 questions probing central attributes of the 40 objects (220 true and false questions, respectively). True questions were removed if the proportion of correct answers across participants fell below .80 for an individual question; this resulted in 31 questions being removed (~15%) from the true condition (the same criterion was applied to false answers; however, none of the false answers fell below 80%) leaving 189 true questions and their corresponding false questions. In the second round of norming, twelve independent undergraduate participants were given the 189 true questions, and were asked to rate how confident they were that the question was true (e.g., 1 = not confident, 5 = very confident). One item was removed after the second round of norming (due to a low confidence level across subjects). The 188 true items that went through rounds 1 and 2, and their false counterparts (n=188), were then given to AC to judge.

Additional Tasks Completed by AC not discussed in the Article

Number and Letter Identification

Materials and Methods. The number identification test was adapted from the Psycholinguistic Assessment of Language Processing in Aphasia (PALPA) battery (Kay, Lesser, & Coltheart, 1992) for presentation on a computer screen. Numbers were black on a white

background (Arial Font, size 20, black). AC was asked to verbally identify each centrally presented number. Numbers varied from one to three digits. In the second part, AC was asked to name the letters of the alphabet in their lower and upper case form (Arial Font, size 12, black).

Results. AC was successful at naming each digit in all three conditions (30/30). However, AC had difficulty reading letters; out of 26 letters, he successfully named 22. His average response time for each letter was 1346 ms.

Overlapping Figures

Materials and Methods. To test for a possible simultagnosia, AC was asked to make decisions about overlapping figures. On each trial AC was presented with a composite image consisting of two overlapping figures (e.g., a square and triangle, overlapping). Below the composite image, to the left and to the right, were two shapes, one of which composed the composite image (e.g., a square and a diamond might be presented as choices). The task was to decide which of the two images below the target was present in the target.

Results. AC's performance on this task was within the range of controls: (11/12, $t(5) = -0.19$, $p = 0.35$).

Word Reading

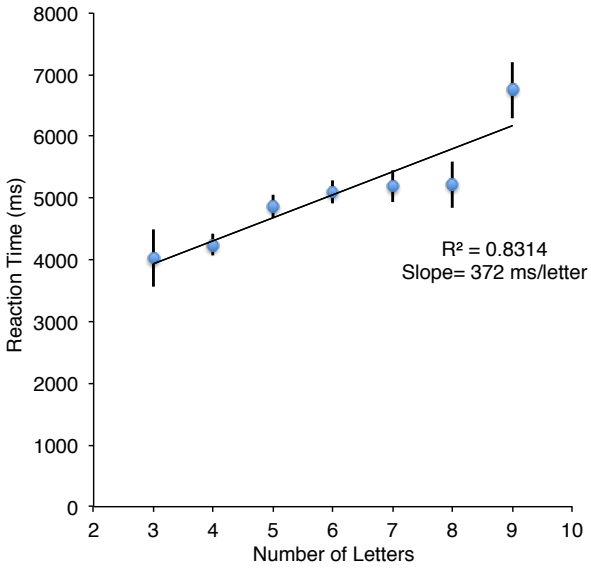
For the following word reading tasks, AC was instructed to name a visually presented word. Words were presented on the screen for ten seconds or until a response (whichever came first). All tasks were adapted from the Psycholinguistic Assessment of Language Processing in Aphasia battery (PALPA) for presentation on a computer screen. The background color was always black and had a white square foreground. The word stimulus was presented in the center of the white square (Arial, font size 12, bold, black).

Task 1: Nonword Reading.

PALPA Test 36: Methods and Materials. AC was asked to name 24 words each of four different lengths: three-, four-, five-, and six-letter monosyllabic nonwords.

Results. AC's performance across all four conditions was not significantly different from controls in terms of accuracy. However, his response times were significantly different for all four conditions. Figure S1 shows number of letters (on the x-axis) plotted against response times (on the y-axis). The data plotted in the graph anticipate the additional word reading tests described below (and combine all available data). As the number of letters increases, AC's reading time increases (slope = 372 ms/letter). Because of this pronounced reading impairment, characteristic of pure alexia, we took care to present words to AC in both written and spoken form in tasks not directed toward assessing reading ability per se (e.g., picture-word matching).

Figure S1.



Task 2: Spelling-Sound Regularity and Reading.

PALPA Test 35: Materials and Methods. To investigate AC's ability to read words with varying spelling-sound regularities, he was asked to read transparent (regular) and opaque (exceptionally) spelled words.

Results. For transparent words, AC's performance was within control range (27/30, $t(5) = -1.3$, $p = 0.25$) however, for opaque words AC was impaired: (17/30, $t(5) = -5$, $p < 0.01$).

Task 3: Grammatical Class Reading

PALPA Test 32: *Materials and Methods*. Twenty words from four grammatical classes (adjectives, functors, nouns, and verbs) were presented in a random order for AC to read aloud.

Results. For the categories of nouns and verbs, AC's performance was within the range of controls (17/20, $t(5) = -1.5$, $p = 0.2$; 18/20, $t(5) = -1.9$, $p = 0.12$), respectively. AC was impaired relative to controls for reading adjectives and functors (17/20, $t(5) = -3.94$, $p < 0.05$; 15/20, $t(5) = -5.32$, $p < 0.01$), respectively.

Task 4: Grammatical Class matched for Imageability.

PALPA Test 33: Materials and Methods. Twenty nouns and twenty functors were visually presented for AC to read; all words were equally imageable.

Results. AC was impaired for both nouns and functors (13/20, $t(5) = -4.6$, $p < 0.05$; 12/20, $t(5) = -8.3$, $p < 0.001$), respectively.

Task 5: Imageability & Frequency.

PALPA Test 31: *Materials and Methods*. Words belonging to one of four categories were visually presented for AC to read: high imageability/low frequency, high imageability/high frequency, low imageability/low frequency, and low imageability/high frequency. This task was conducted to test for interactions between imageability and lexical frequency.

Results. AC's displayed mild impairments in this task. His performance was not different from controls (19/20, $t(5) = -1.9$, $p = 0.12$) for high imageability and low frequency words. However, AC was impaired for all other combinations (high imageability/high frequency, low imageability/high frequency, and low imageability/low frequency words; respectively: 19/20, $t(5) = -4.63$, $p < 0.01$; 16/20, $t(5) = -4.17$, $p < 0.01$; 14/20, $t(5) = 13.42$, $p < 0.001$). The statistical significance of the patient's performance relative to controls is largely determined by

the tight variance of control performance; for instance, the same level of performance, 19/20 or 95% is significantly different from controls in one condition but not another.

In general, across all of the reading tests, the pattern emerges that AC has difficulty reading low imageability words. As we did not persue his reading impairments further, we did not seek to unpack this possible dissociation.

Conceptual Knowledge of Objects

Knowledge of object function.

On every trial AC and control participants were presented with pictures of tools in a triangular format (i.e., a triad) and were asked to decide which two of three items shared functional properties. Triads were organized such that the top (target) image shared functional properties with one of the lower items, and participants indicated the correct match by pressing the left or right arrow key. While AC was not within control range, his performance was not different than control participants (73%, 11/15; 12-14 p = 0.09), suggesting possibly a mild impairment, although the N on this test is too low to draw definite conclusions.

Colored Snodgrass and Vanderwart Picture Naming.

AC was asked to name 108 correctly colored items from the Snodgrass and Vanderwart battery (54 animals; 12 fruits; 12 vegetables; 11 vehicles; 19 tools). He correctly named only 68 out of 108 pictures (63%). A category analysis revealed lower performance for living items as compared to non-living (overall living: 44/78, 56%; overall nonliving: 28/30, 93%; animals: 27/54; fruit: 6/12; vegetables: 8/12; vehicles: 11/11; tools: 16/19; control data not collected). When comparing his naming accuracy across three sessions with black and white line drawings to his accuracy with the corresponding colored line drawings, a Chi Square analysis revealed that AC's performance was not significantly improved with color stimuli (N = 80; χ^2 (1) < 1); see

Figure 6 for an item-specific analysis comparing naming of black and white pictures to colored pictures.

Auditory Processing

Task 1: Animal Sound Discrimination

Materials and Methods. On each trial two visually presented animal names were paired with an animal sound (e.g., cow mooing, dog barking) for AC to discriminate. AC was asked to match the correct animal name with the sound that was presented.

Results. When matching animals' sounds to their names, AC actually scored higher than controls (14/15, $t(5) = 0.4$, $p = 0.71$). A follow-up Animal Sound Identification task (administered a week later) was given to AC to probe his knowledge of animal sounds without any choices provided. He scored 93%, failing to name only one animal.

Task 2: Environmental Sound Discrimination

Materials and Methods. On each trial a sound was presented with two names; AC was asked to match the correct name with the presented sound. The sounds were human noises (e.g., yawning; N = 6), tool noises (e.g., chainsaw; N = 4), and natural sounds (e.g., ocean, rain; N = 5); on each trial the foils were semantically related to the correct answer choice.

Results. AC was at ceiling on this task (15/15).

Olfactory Processing

Materials and Methods. The University of Pennsylvania Smell Identification Test (UPSIT), a standardized test of olfaction, was administered to assess AC's olfactory processing. The "scratch and sniff test" consisted of 40 different smells (4 booklets with 10 smells each). AC scratched the strip with a pencil tip and sniffed the strip immediately. He was given 4 possible multiple-choice options from which to pick the correct odorant.

Results. His responses were analyzed and compared to data from sex and age-matched normal population studies. AC correctly identified 37/40 smells, which is within 'normal' range (range = 33-40) and anosmia was ruled out.

Conceptual Knowledge of Actions

Task 1: Pantomime Discrimination

Materials and Methods. Eighteen videos of an experimenter performing transitive actions were centrally presented with two words denoting objects to the left and to the right below the video. On every trial AC was asked to match which object best matched the action being pantomimed in the video (for original materials, see Garcea, Dombovy, and Mahon, 2013).

Results. AC's performance on this action recognition task was within control range indicating that his ability to recognize and discriminate between actions was preserved (16/18, $t(5) = -0.12$, $p = 0.9$)

Task 2: Pantomime Imitation.

Materials and Methods. On each trial the experimenter performed a transitive or intransitive gesture and AC was asked to imitate the gesture. The pantomimes were blocked by type (e.g., transitive: hammering; intransitive: saluting; meaningless), and AC was given 10 seconds to imitate each action. The session was recorded with a video camera and later analyzed for accuracy. Scoring was based on criteria developed for apraxia (see Power et. al., 2010; see Garcea et al., 2013 for further elaboration of scoring criteria). Possible error types included content-related, spatial, temporal, and "other."

Results. AC was successful at imitating both transitive and intransitive gestures with 100% accuracy.

Task 3: Pantomime from Verbal Command.

Materials and Methods. AC was asked to pantomime transitive gestures from verbal command within ten seconds. An example of the instructions given was "Show me how to use a hammer."

Results. AC produced the correct gesture for all named items, except for three: He made two content related errors and one spatial error (see table S4 for statistics).

Task 4: Tactile Recognition and Object Use.

Materials and Methods. While keeping his eyes closed, AC was asked to identify tools from tactile exploration. An object was placed in front of him on a soft surface to muffle sounds and he used his hands to feel the object (the left hand was used for half of the trials and the right hand for the other half). AC was then asked to describe the function of the object in his hand, and to show how to appropriately use that object.

*Results***.** AC successfully completed this part of the action knowledge battery. He correctly identified, pantomimed, and described the function of each of the 15 tools with which he was presented; his performance was within the range of controls.

Task 5: Declarative Knowledge of Tools.

Materials and Methods. Multiple-choice questions about properties of tools were auditorily presented to AC and control participants (for origin of this design see Moreaud, Charnallet, & Pallat, 1998). The four types of questions examined precise use (e.g., is a hammer used to nail, separate, or cut objects?), functional use (e.g., is a hammer used to do office jobs, cook, or build?), motor knowledge (e.g., to use a hammer, must you pull, lean, or swing it?), and contextual use (e.g., do teachers, doctors, or carpenters use a hammer?).

Results. AC's performance was at the level of controls demonstrating his intact declarative knowledge of tools. He successfully completed 15/15 functional, 15/15 contextual, 14/15 precise use and 14/15 manipulation questions (control range: 13-15).

Picture- Word Matching (Tools, Animals, Faces, Places)

Materials and Methods. Gray-scaled photographs of tools, animals, famous faces, and famous places were presented with a word below them; on each trial AC and controls were asked to decide if the picture and the word matched. Words were read out loud to AC in addition to being presented visually.

Results. AC was unimpaired on this test (93/96, $t(5) = 0.19$, $p > .05$).

Famous Face Decision and Famous Place Decision

Materials and Methods. Two images were presented simultaneously on each trial: one was a famous place with a paired, visually similar but non-famous, place. In the second task, a famous face was paired with a look-alike, but not a famous, face. Location of the famous stimulus was counterbalanced. In both tasks, AC was instructed to select the image that was famous.

Results. AC successfully completed 75/90 famous face discrimination trials and 18/20 famous place discrimination trials. For both tasks, his performance was not significantly different from controls (Faces: $t(5) = 0.79$, $p = 0.46$; Places: $t(5) = -1.6$, $p = 0.3$).

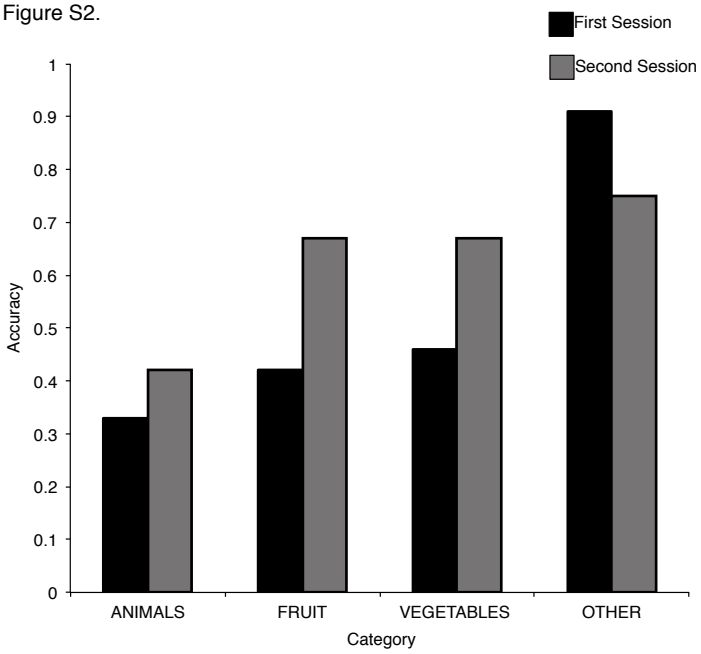
Coloring line drawings

Materials and Methods. AC was presented with 48 black and white line drawings, with 12 items in each category. The four categories were animals, fruit, vegetables, and "other" taken from the Snodgrass corpus. The other category consisted of natural items such as a tree or a non-living item such as a violin. AC was given markers (consisting of 10 basic colors) and had 10

seconds to pick out a correct marker and then color the line drawing. Additionally, he was asked to name the line drawing. When scoring the accuracy of the colored drawings, a score of "0" was given for obviously incorrect color choices.

Results. AC completed this coloring task twice – the sessions were approximately two months apart. AC's coloring was poor for both sessions; slight improvement is visible from session 1 to session 2. In general, AC colored items from the "other" category more accurately while his performance was lowest for items from the animal category. See Figure S3 for scanned examples of line drawings that AC colored.

Figure S2.



Supplemental Tables

Table S2. Semantic Attribute Questionnaire: RSDT analyses comparing AC's object-color knowledge to other types of knowledge

			Control Sample				AC's score		Correl.	Significance test	
KNOWLEDGE TYPE A	**KNOWLEDGE TYPE B**	N	% (A)	% (B)	SD (A)	SD (B)	% (A)	% (B)		*t*	*p*
Encyclopedic	Color	12	0.96	0.97	0.05	0.05	0.92	0.81	0.65	3.31	0.007
Function	Color	12	0.97	0.97	0.03	0.05	0.95	0.81	0.78	4.23	0.001
Smell	Color	12	0.92	0.97	0.18	0.05	1	0.81	0.48	3.78	0.003
Sound	Color	12	0.96	0.97	0.05	0.05	1	0.81	0.59	4.52	<0.001
Tactile	Color	12	0.95	0.97	0.04	0.05	0.95	0.81	0.33	3.07	0.01
Taste	Color	12	0.93	0.97	0.1	0.05	0.94	0.81	0.15	2.83	0.016
Taxonomic	Color	12	0.96	0.97	0.06	0.05	0.95	0.81	0.84	5.5	<0.001
Form	Color	12	0.96	0.97	0.04	0.05	0.94	0.81	0.7	3.87	0.003
Motion	Color	12	0.96	0.97	0.06	0.05	0.96	0.81	0.23	2.89	0.015

Table S3. Semantic Attribute Questionnaire (SAQ) - Knowledge type (Collapsing across categories)

	Control sample			AC's score	Significance test		Test date
KNOWLEDGE TYPE	N	%	SD	%	*t*	*p*	
Encyclopedic	12	0.96	0.05	0.92	-0.77	0.46	08/11
Function	12	0.97	0.03	0.95	-0.64	0.53	08/11
Smell	12	0.92	0.19	1	0.41	0.69	08/11
Sound	12	0.96	0.05	1	0.77	0.46	08/11
Tactile	12	0.95	0.04	0.95	0	1	08/11
Taste	12	0.93	0.11	0.94	0.09	0.93	08/11
Taxonomic	12	0.96	0.06	0.95	-0.16	0.88	08/11
Color	12	0.97	0.05	0.81	-3.07	0.01	08/11
Form and Surface	12	0.96	0.05	0.94	-0.38	0.71	08/11
Motion	12	0.96	0.05	0.96	0	1	08/11

Table S4. Semantic Attribute Questionnaire (SAQ) – Category X Knowledge Type Accuracy for AC

	Control sample			AC's score	Significance test		Test date
ANIMALS	N	%	SD	%	*t*	*p*	
Encyclopedic	12	0.95	0.09	0.95	0	1	08/11
Function	12	0.95	0.1	1	0.48	0.64	08/11
Smell	12	0.92	0.19	1	0.41	0.69	08/11
Sound	12	0.98	0.07	1	0.28	0.79	08/11
Tactile	12	0.92	.29	1	0.27	0.8	08/11
Taxonomic	12	0.95	0.07	0.9	-0.69	0.51	08/11
Color	12	0.95	0.05	0.94	-0.19	0.85	08/11
Form and Surface	12	0.92	0.05	0.8	-2.31	0.04	08/11
Motion	12	0.98	0.07	1	0.28	0.79	08/11
FRUIT							
Encyclopedic	12	0.94	0.06	0.89	-0.8	0.44	08/11
Function	12	0.98	0.03	1	0.64	0.53	08/11
Tactile	12	0.93	0.07	0.93	0	1	08/11
Taste	12	0.93	0.11	0.94	0.09	0.93	08/11
Taxonomic	12	0.96	0.07	0.94	-0.28	0.79	08/11
Color	12	0.97	0.04	0.72	-6.01	<0.001	08/11
Form and Surface	12	0.94	0.1	1	0.58	0.58	08/11
TOOLS							
Encyclopedic	12	0.99	0.03	0.9	-2.88	0.01	08/11
Function	12	0.98	0.04	0.9	-1.92	0.08	08/11
Sound	12	0.92	0.19	1	0.41	0.69	08/11
Tactile	12	0.98	0.06	1	0.32	0.75	08/11
Taxonomic	12	0.98	0.05	1	0.38	0.71	08/11
Color	12	0.92	0.19	0.5	-2.12	0.06	08/11
Form and Surface	12	0.98	0.04	0.95	-0.72	0.49	08/11
VEHICLES							
Encyclopedic	12	0.96	0.07	0.94	-0.28	0.79	08/11
Function	12	0.96	0.04	0.95	-0.24	0.81	08/11
Sound	12	0.96	0.08	1	0.48	0.64	08/11
Tactile	12	0.96	0.15	1	0.26	0.8	08/11
Taxonomic	12	0.96	0.06	1	0.64	0.53	08/11
Color	12	0.97	0.08	0.83	-1.68	0.12	08/11
Form and Surface	12	0.98	0.08	1	0.24	0.81	08/11
Motion	12	0.98	0.03	0.94	-1.28	0.23	08/11

Table S5. RSDT Values for Categorizing and Defining Objects

			Control sample				AC's score		Correl.	Significance	
ANIMALS		N	% (A)	% (B)	SD (A)	SD (B)	% (A)	% (B)		*t*	*p*
A	**B**										
Color	Number of legs	3	0.9	0.94	0.07	0.02	0.6	0.87	-0.45	0.4	0.71
Color	Climate	3	0.9	0.95	0.07	0.06	0.6	0.97	0.53	3.42	0.02
Color	Dangerous /Friendly	3	0.9	0.94	0.07	0.03	0.6	1	0.85	6.61	0.001
Color	Size	3	0.9	0.97	0.07	0.03	0.6	0.91	0.03	1.34	0.24
Color	Food	3	0.9	0.9	0.07	0.07	0.6	0.97	0.65	4.23	.008
Color	Motion	3	0.9	0.98	0.07	0.01	0.6	0.95	0.06	0.77	0.48
FRUIT		N	% (A)	% (B)	SD (A)	SD (B)	% (A)	% (B)		*t*	*p*
A	**B**										
Color	Where Grown	3	0.98	0.94	0.03	0.07	0.71	1	0.2	5.48	0.003
Color	Taste	3	0.98	0.95	0.03	0.08	0.71	1	0.88	8.83	<0.001
Color	Function	3	0.98	0.94	0.03	0.09	0.71	0.98	0.99	17.1	<0.001
Color	Texture	3	0.98	1	0.03	0.01	0.71	0.93	0.99	7.03	0.001
Color	Size	3	0.98	1	0.03	0.01	0.71	0.89	0.99	7.03	0.001
Color	Shape	3	0.98	0.94	0.03	0.1	0.71	0.96	-0.2	4.75	0.005
Color	Seeds/pits	3	0.98	0.93	0.03	0.08	0.71	0.89	-0.39	3.88	0.01
VEG.		N	% (A)	% (B)	SD (A)	SD (B)	% (A)	% (B)	Correl.	*t*	*p*
A	**B**										
Color	Where Grown	3	0.96	0.97	0.07	0.04	0.74	0.92	-0.29	1	0.36
Color	Taste	3	0.96	0.85	0.07	0.22	0.74	1	0.88	4.77	0.005
Color	Function	3	0.96	0.92	0.07	0.12	0.74	0.94	0.88	4.28	0.008
Color	Texture	3	0.96	0.99	0.07	0.01	0.74	1	0.3	2.69	0.04
Color	Size	3	0.96	0.94	0.07	0.06	0.74	0.83	0.72	1.33	0.24
Color	Shape	3	0.96	0.98	0.07	0.03	0.74	0.94	-0.29	0.96	0.38
Color	Seeds/pits	3	0.96	0.99	0.07	0.01	0.74	1	-0.29	2.18	0.08
TOOLS		N	% (A)	% (B)	SD (A)	SD (B)	% (A)	% (B)	Correl.	*t*	*p*
A	**B**										
Color	Function	3	0.89	0.99	0.02	0.02	0.96	0.98	-0.3	1.84	0.12
Color	Shape	3	0.89	0.99	0.02	0.01	0.96	0.96	-0.83	2.84	0.04
Color	Size	3	0.89	0.98	0.02	0.02	0.96	0.87	0.22	4.89	0.005
VEHICLES		N	% (A)	% (B)	SD (A)	SD (B)	% (A)	% (B)	Correl.	*t*	*p*
A	**B**										
Color	Function	3	0.89	0.99	0.02	0.01	0.46	1	0.23	9.99	<0.001

Color	Size	3	0.89	0.98	0.02	0.03	0.46	1	-0.11	9.79	<0.001
Color	Shape	3	0.89	0.97	0.02	0.05	0.46	1	-0.06	9.76	<0.001
Color	Mode of transport	3	0.89	0.99	0.02	0.01	0.46	1	-0.11	9.89	<0.001

Table S6. Other Tests of Cognitive Ability

	Control Participants			AC	
	N	%	SD	%	*t*-test
Number Identification	30	0.99	0.04	1	0.23
Letter Identification	26	_	_	0.85	_
Overlapping Figures	12	0.92	0.05	0.92	0.19

Table S7: Word Reading

	Control Participants			AC	
	N	%	SD	%	*t*-test
Nonword Reading	24	0.86	0.19	0.75	-0.54
Spelling-Sound Regularity: Transparent	30	0.97	0.05	0.9	-1.3
Spelling-Sound Regularity: Opaque	30	0.95	0.07	0.57	-5.0
Grammatical Class: Nouns	20	0.96	0.07	0.85	-1.5
Grammatical Class: Verbs	20	0.98	0.04	0.9	-1.9
Grammatical Class: Adjectives	20	0.97	0.04	0.85	-3.94
Grammatical Class: Functors	20	0.97	0.04	0.75	-5.32
Grammatical Class & Imageability: Nouns	20	0.96	0.08	0.65	-4.6
Grammatical Class & Imageability: Functors	20	0.96	0.04	0.6	-8.3

Table S8: Auditory Processing

	Control Participants			AC	
	N	%	SD	%	*t*-test
Animal Sound Discrim.	15	0.92	0.07	0.93	0.4
Environmental Sound Discrim.	15	0.94	0.05	1	_

Table S9: Conceptual Knowledge of Actions Battery

	Controls			AC	
	N	%	SD	%	*t*-test
Pantomime Discrimination	18	0.9	0.08	0.89	-0.12
Pantomime Imitation: Transitive	15	0.99	0.01	1	0.93
Pantomime Imitation: Intransitive	15	1	_	1	_
Pantomime from Verbal Command: Transitive	15	0.98	0.02	0.98	_
Tactile Recognition & Object Use	15	0.99	0.02	1	0.46
Declarative Knowledge of Tools	15	0.96	0.06	0.97	0.15

Table S10: Other Naming and Picture-Word Matching Tasks

	Controls			AC	
	N	%	SD	%	*t*-test
Picture-Word Matching (Tools, Animals, Faces, Places)	96	0.96	0.05	0.97	0.19
Famous Face Decision	90	0.77	0.07	0.83	0.79
Famous Place Decision	20	0.94	0.04	0.9	-1.6

Table S11. Conceptual Knowledge of Objects

	Control sample		AC's score		Significance test		Test date
	N	%	SD	%	*t*	*p*	
OBJECT SIZE JUDGMENTS	6	0.93	0.02	0.96	1.39	0.22	09/11
OBJECT FUNCTION JUDGMENTS	6	0.89	0.07	0.73	-2.12	0.09	09/11

Table S12. Colored Snodgrass and Vanderwart Picture Naming

	Control sample			AC's score	Significance test		Test date
	N	%	SD	%	*t*	*p*	
Colored Snodgrass and Vanderwart Picture Naming							
Animals	_	_	_	0.5	_	_	08/11
Fruit	_	_	_	0.5	_	_	08/11
Vegetables	_	_	_	0.67	_	_	08/11
Tools	_	_	_	0.84	_	_	08/11
Vehicles	_	_	_	1	_	_	08/11