

Supplementary Table S1. Behavior during spoken recall.

Subject	# Scenes Recalled (out of 50)	Total Time (minutes)	Total # Words	# Scenes Out of Order
01	27	13.0	1705	1
02	24	22.0	1903	4
03	32	17.7	2478	2
04	33	10.8	1681	8
05	32	11.6	1501	0
06	39	21.7	1843	4
07	30	16.4	1136	14
08	39	24.6	3221	5
09	28	16.9	1680	5
10	40	20.8	2592	3
11	34	12.7	2019	6
12	38	29.5	4138	3
13	47	43.9	5962	13
14	38	30.6	3576	10
15	27	20.2	2029	3
16	37	21.2	2770	11
17	39	35.0	4939	9
Mean	34.4 (6.0)	21.7 (8.9)	2657.2 (1323.6)	5.9 (4.2)

Supplementary Table S2. Examples of four different participants' descriptions of two movie scenes.

<p>Scene 13 Duration of original scene: 2 min 11 s</p>	<p>S06: So then later, at some point in the show, there is a press conference with the Police Chief. The press is asking about the deaths. The chief says they are suicides but feels that they are some how connected. Everyone receives a text that says wrong. The police chief goes on to talk about the deaths.</p>
	<p>S08: So we switch to this press conference where the chief of police, or the head of the police station, is answering these questions regarding the fact that these suicides have happened and there are these mass texts that are going on. During this press conference he is talking about the fact that all these suicides are connected in some way because of the similarity of the fact that they have all taken this medicine and they all are in places that they don't normally belong. And these text messages start occurring during the press conference as he's explaining the case that simply say "wrong" to all of the reporters. And he gets a text message that says he knows where to find him and its signed SH, so from Sherlock Holmes.</p>
	<p>S15: Yeah so then there's a scene with a detective and he's giving a press conference to some reporters, and its the detective and a woman who he's with. And during the press conference the reporters are asking him questions and as he's answering them, periodically there are texts that pop up and the say "Wrong!" and the reporters are all kind of taken aback. And people giving the press conference instruct the reporters to ignore the texts, but as the press conference goes along, it happens three different times and the third time the head inspector gets a text and its an invitation from SH to have him come seek his help with apparent suicides. During the press conference the reporters are asking if the suicides are actually, or like how they could be being investigated by homicide detectives? The detective doesn't really know much but he's just saying that they think they're all linked because all the people kill themselves the same way and they're all in odd locations when they do it, and there's no suicide notes.</p>
	<p>S17: So then we get the press conference, and the guy's saying that he thinks that these suicides are linked, and then a reporter says but how could suicides be linked? that doesn't make any sense. And then the head detect-, the head of the, sergeant or whatever says something like, I don't know but we're investigating it. Then everyone in the room gets a text saying Wrong, and everyone's kind of confused about it, and he said, the woman beside him said If you just got a text please ignore it. And then everyone's asking more questions, and then the sergeant says something that apparently Sherlock Holmes thinks is wrong, because they all get a text saying it's wrong again.</p>
<p>Scene 36 Duration of original scene: 1 min 55 s</p>	<p>S06: Watson he walks home and he hears a pay phone ring when a third one rings he answers. The voice says look at security cameras across the street and then asks him to get in the car.</p>
	<p>S08: So he's walking down this main road and the phone booth next to him rings. And then he continues walking, kind of ignoring that, and another phone rings in a business as he's walking by. And then it stops as someone else comes to answer it. And then he keeps walking, there's a third one that's on his left, and its ringing. So he goes into the phone booth, he answers, and this voice on the phone directs him to see the fact that there are these multiple security cameras that have been kind of tracking where he is. And it tells him to get into this car, to come where he's going.</p>
	<p>S15: So Dr. Watson is on his way back and he's passing telephone booths and first one rings, he ignores it, second one rings, he ignores it, third one rings, and he finally answers, there's a voice on the other end that tells him to look at security cameras in the area and each one gets averted. And then a car pull up and he says get in, I don't need to threaten you, you already know.</p>
	<p>S17: So then we see, right, kinda like across the street from the building where that lady was found dead, there was this red telephone booth. And it was ringing. Which is weird, and then Watson looks at it and hears it ringing but chooses not to answer it. So then he just ends up walking, we see him walking like on a sidewalk, busy sidewalk, and he's looking in a shop window. And there's a telephone ringing again. And then a store clerk is about to answer it but then doesn't. So then he has like a confused face on. And then he keeps walking and then on the third ringing at yet another phone booth, he is again confused and so okay well I'm just gonna answer it. So he goes in and answers it, and this man, whose voice we haven't heard yet, says, Do you see the camera to your left? And so then he kinda, he says Who is this? and the guys says Do you see this camera. So he looks up, and, the camera, so then we see from the camera's view, we're looking at Sherlock in the telephone booth. And then the camera pans over to the street. And then the person on the phone says, Do you see the camera across the street? And then we see the camera moving across the street. We see the camera on Watson's right. And the guy asks Do you see the camera. And so Watson notices all these cameras. And we get a shot of, in each corner of the screen, a view of the street where Watson is. So then the guy says, ok there's gonna be a car, it's gonna pick you up, do you understand the situation you're in? So get in the car, it's gonna pick you up. So then Watson understands the situation he's in and he gets in the car.</p>

Supplementary Table S3. *Overlap between default mode network (DMN) and movie/recall maps.* We defined the DMN for each individual using the posterior medial cortex ROI as a seed for functional connectivity during the first scan of the movie (23 minutes), thresholded at $R > 0.4$; a group-level DMN map was then created by averaging across participants. See also Figure S1.

	Overlap with DMN (Jaccard index)	Percent of map that falls within the DMN
Within-subject movie-recall map (Fig. 2B)	0.3038	39.7%
Between-subject movie-recall map (Fig. 2E)	0.2794	34.4%
Between-subject recall-recall map (Fig. 3B)	0.2689	50.7%
Recall-recall > movie-recall map (Fig. 6B)	0.0926	26.3%