



## WHY DOES THE FACE OF JESUS APPEAR ON TOAST?

\$3.5 million

China

National Institutes of Health

“Individuals often report seeing a face in the clouds, Jesus in toast, or the Virgin Mary in a tortilla,” acknowledges a published study supported by the National Institutes of Health (NIH).

From divine images on food to seeing a face on Mars, the likenesses of faces appearing on inanimate objects have been “well-documented” for centuries.<sup>93</sup> There is a Twitter account, <https://twitter.com/FacesPics>, dedicated to such appearances and a lucrative market on eBay. A pierogi with the likeness of Jesus sold for \$1,775,<sup>94</sup> while a toasted cheese sandwich with the resemblance of the Virgin Mary went for \$28,000.<sup>95</sup>

This phenomenon when a face is perceived within a pattern is known as “face pareidolia.”<sup>96</sup>

An NIH-sponsored study entitled “Seeing Jesus in toast: Neural and behavioral correlates of face pareidolia” scanned the brains of those who experience these sightings.<sup>97,98</sup> The project—funded in part from two separate NIH grants totaling nearly \$3.5 million—seeks to identify the parts of the brain activated when face pareidolia occurs.<sup>99</sup>

To do this, 20 right handed men with normal vision were shown pure-noise images that were nothing more than “random assortments of dots and blobs” while an MRI scanned their brain activity.<sup>100</sup> The subjects “were led to believe that 50 percent of them contained either faces or letters” and “reported seeing faces or letters illusorily 34 percent and 38 percent of the time, respectively.”<sup>101</sup>

The brain scans revealed “the right fusiform face area (rFFA) showed a specific response when participants ‘saw’ faces as opposed to letters in the pure-noise images.” This suggests “that the right FFA plays a specific role not only in processing of real faces but also in illusory face perception,” the authors write, and as a result “even the slightest suggestion of a face can result in the interpretation of a face.”<sup>102</sup>

“Our findings are highly consistent with those of several recent studies,” the researchers note. A similar response in the brain was detected, for example, when houses are mistaken as a face.<sup>103</sup>

They say “people can be led to see different images — such as faces or words or letters — depending on what they expect to see, which in turn activates specific parts of the brain that process such images. Seeing ‘Jesus in toast’ reflects our brain’s normal functioning and the active role that the frontal cortex plays in visual perception. Instead of the phrase ‘seeing is believing,’ the results suggest that ‘believing is seeing.’”<sup>104</sup>

Face pareidolia “isn’t due to a brain anomaly or imagination but is caused by the combined work of the frontal cortex which helps generate expectations and sends signals to the posterior visual cortex to enhance the interpretation stimuli from the outside world.”<sup>105</sup>

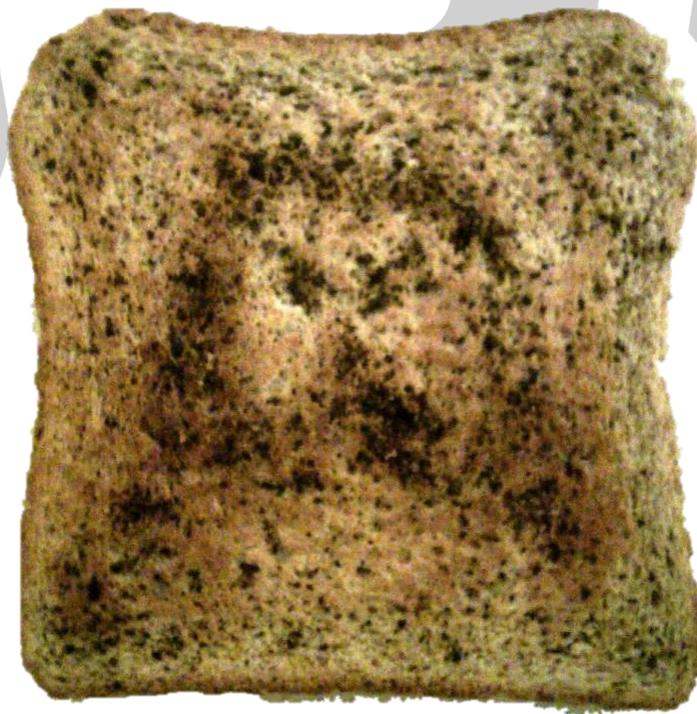
“I saw several reports in the media of people seeing Jesus, or the Virgin Mary, or Elvis. And people tended to laugh at these kinds of people,” says Kang Lee, the lead author of the study.<sup>106</sup> He confesses when he was a child, he too saw faces in his bed sheets “all the time,” jesting “if I was religious, I probably would have seen Jesus.”<sup>107</sup>

“Most people think you have to be mentally abnormal to see these types of images, so individuals reporting this phenomenon are often ridiculed,” according to Lee. “But our findings suggest that it’s common for people to see non-existent features because human brains are uniquely wired to recognize faces, so that even when there’s only a slight suggestion of facial features the brain automatically interprets it as a face.”<sup>108</sup>

Lee says “I think probably this is first time we are actually telling people: ‘This is OK for you to see Jesus on toast.’”<sup>109</sup>

“Face pareidolia suggests that our visual system is highly tuned to perceive faces, likely due to the social importance of faces and our exquisite ability to process them,” the researchers speculate.<sup>110</sup>

Regardless of such assurances, taxpayers are still likely to see little face value in this project.



*If you see the face of Jesus in a piece of toast, you may be experiencing “face pareidolia,” which is perfectly normal according to research funded by NIH.*