

United States Court of Appeals For the First Circuit

No. 06-2213

UNITED STATES,

Appellee,

v.

DARREN F. WILDER,

Defendant, Appellant.

APPEAL FROM THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF MASSACHUSETTS

[Hon. George A. O'Toole, Jr., U.S. District Judge]

Before

Lynch, Circuit Judge,

Campbell and Stahl, Senior Circuit Judges.

Judith H. Mizner, Assistant Federal Public Defender, was on brief for appellant.

Dana Gershengorn, Assistant United States Attorney, with whom Michael J. Sullivan, United States Attorney, and Kayla Bakshi, Trial Attorney, United States Department of Justice, were on brief for appellee.

May 12, 2008

CAMPBELL, Senior Circuit Judge. Appellant-defendant

Darren Wilder appeals from his conviction after a jury trial for possession, transmission and receipt of child pornography, in violation of 18 U.S.C. §§ 2252(a)(1), (2) and (b)(1) and § 2252(a)(4)(B) in the United States District Court for the District of Massachusetts. He challenges his conviction on five grounds: (1) that the warrant permitting seizure of materials from his home was issued without probable cause; (2) that the evidence at trial was insufficient to establish knowing receipt of child pornography as required by 18 U.S.C. § 2252(a)(2); (3) that the evidence was insufficient to establish the knowing possession required by 18 U.S.C. § 2252(a)(4)(B); (4) that the evidence was insufficient to support a finding that the images alleged to evidence the transportation and receipt of child pornography in Counts One and Two depicted real children; and (5) that the evidence was insufficient to support a finding that the images listed in Count One of the indictment depicted a minor engaging in sexually explicit conduct. We affirm the conviction.

Background and Facts

A three-count superceding indictment charged Wilder with knowingly transporting pornography involving minors, in violation of 18 U.S.C. § 2252(a)(1) (Count One); knowingly receiving and attempting to receive pornography involving minors, in violation of 18 U.S.C. §§ 2252(a)(2) and (b)(1) (Count Two); and knowingly

possessing pornography involving minors, in violation of 18 U.S.C. § 2252(a)(4)(B) (Count Three). The district court denied Wilder's motion to suppress the evidence that was obtained pursuant to the search warrant, ruling that the affidavit that had accompanied the warrant application provided probable cause to issue the warrant. After a week-long trial, the jury convicted Wilder on all three counts in the indictment. The district court sentenced him to fifteen years in prison, followed by five years' supervised release.

The following facts are not in dispute. In 2002-03, federal agents investigating online child pornography found a pay-for-membership website called "Lust Gallery: A Secret Lolitas Archive." A preview page through which users visited the website showed naked female children who were identified on the page as being under fourteen years old. Some of the children were shown in the act of urinating. The page also noted that "everyone understands there are reasons not to reveal everything right here." An undercover investigator, John Johnson, joined the Lust Gallery website. After entering contact and credit card information, he received a confirmation email and a password from the site. The charge on his credit card bill for the membership was from a company called "Iserve." Johnson entered the site and saw several photo galleries, each of which held 80-100 images of nude women in different poses. Another investigator accessed the site and

observed thousands of pictures of children in sexually explicit activity or states of undress.

During their investigation, the agents identified Wilder as being among the subscribers to Lust Gallery. In March 2003, Wilder bought a one-month subscription to the site for \$57.90. His credit card bills also showed entries from a company called "Iserve." Wilder had a previous conviction for possession of child pornography and was still on supervised release when investigators uncovered his subscription to Lust Gallery. When his house was searched in connection with the earlier offense, investigators had found fourteen computer disks containing child pornography.

The agents obtained and on January 15, 2004 executed a warrant to search Wilder's home in Dracut, Massachusetts. Wilder was not at home when agents arrived, but agent Colleen Forgetta called him, and he returned to the house. After being advised of the search warrant, Wilder agreed to speak with agents. He told the agents, inter alia, that he "liked teenage girls" and that he was "enticed by certain websites." When he was asked if had subscribed to any child pornography websites, he said he had and that he thought the name of the site was Lust Gallery. Asked whether he thought agents would discover child pornography on his computer, he responded, "Well, you're here so you must think there is."

Wilder initially told agents he had only an office computer in his house. He later admitted, though, that he kept a second computer in the basement. Agents took both computers and a number of handwritten notes from Wilder's residence. One of these notes contained an email address which was the same address used by Wilder to subscribe to Lust Gallery. Other notes contained, inter alia, a list, marked "downloaded," of 24 file names, including "pedo raygold,10yofuck+cum in pussy," "childlover_little_collection videos 0154," "pthc open-f09," and "raygold 12yo daughter gets fucked," and the names of websites related to child pornography, including "www.lolita-photo.com," "www.youngxlolita," "pre-12 host," "lolitabuffet.com/index.html," "alt.binaries.pictures.erotica.young," and "www.preteendigest.net." Government witnesses testified that "pthc" was an abbreviation for "pre-teen hard core," that "pedo" was short for "pedophile," and that "r@ygold" referred to a "set of videos of child pornography out on the Internet." Another note listed the site, "www.evidence-eliminator.com/product."

All the files and programs on Wilder's office computer were examined, and agents used software tools to discover what files the computer user had deleted. The investigation revealed a posting that had appeared on a newsgroup called "alt.sex.young."¹ The posting was from the email address springbegins@hotmail.com and

¹A newsgroup is similar to a virtual bulletin board on the Internet which is arranged by topic and on which a user can post messages and images.

stated, "I have many pics of my 12 yr old daughter in the shower and dressing. I am looking for more of the same. Send me your private pics and I'll send mine." Wilder had responded to the posting with an email titled "trade pics." The posting contained four explicit photos of child pornography and the statement, "Now it's your turn." Investigators found six images of child pornography showing a very young child located in the newsgroup folder on the computer, nine images of child pornography which had been downloaded from different websites, and several other child pornography images, some of which were current and some of which had been deleted. Several were images that had been posted on the Lust Gallery website.² About 14,000 images had been downloaded from the newsgroup "Youth and Beauty" and thousands from one called "Hussy." Some child pornography images from "Hussy" were charged in the indictment.

Investigators also found a number of child pornography video files, some of which had the same titles as those written on the handwritten list found in Wilder's home. At least one video, called "pedo r@ygold - 10-year-old fuck and cum in pussy1.mpg" had been accessed from a CD-ROM in a drive of the computer. Also on

²The government's expert testified that the images which had been on the Lust Gallery website were downloaded to the computer in December 2003, suggesting that Wilder had not downloaded them from the site as part of his subscription but rather that they had come from another source, perhaps a newsgroup.

the computer was an email from Wilder to the support section of a site to which he wrote,

Why is it each time I try and access your site I keep getting put over to other adult sites with content I do not wish to see. I joined to see Anya and her friends. I have seen no videos and am quite disappointed. I want to make sure I will not be rebilled. I have a platinum member for 60 days. Why is your site so hard to navigate and why do you have so many links to adult content sites?

Investigators found on Wilder's computer an image called "luda+anya092.jpg" showing three nude prepubescent children engaged in sexually explicit conduct. The websites saved on Wilder's computer as "favorites" included "Lolita Buffet free youngest girls on the net galleries.url" and other sites with analogous names.

Discussion

I. Probable Cause to Issue the Search Warrant

Wilder argues that the district court erred in denying his motion to suppress the evidence found at his home because the 42-page affidavit submitted to the magistrate judge in support of the search warrant application did not provide probable cause. We disagree and conclude that the district court did not err in denying the motion to suppress. We apply a mixed standard of review to the district court's denial of a motion to suppress, reviewing findings of fact for clear error and its conclusions of law, including whether a particular set of facts constitutes probable cause, de novo. United States v. Dickerson, 514 F.3d 60,

65-66 (1st Cir. 2008) (citing United States v. Woodbury, 511 F.3d 93, 95 (1st Cir. 2007)).

The affidavit summarized the investigation that had resulted in the identification of Wilder, explaining that the investigators had found information identifying individuals who had purchased memberships to websites known to contain child pornography. Investigators learned that Wilder had purchased a one-month subscription to Lust Gallery in March 2003. The affidavit contained information about the content of the website, describing in detail six images showing one or more prepubescent females with their genital areas exposed. The affidavit also detailed the appearance of the website's "preview page," which suggested that child pornography would be available on the site. The description of the preview page included the fact that thumbnail images featuring unclothed minors were displayed across the width of the page. Some images focused on the minor's genitalia. The top of the preview page read, "LUST GALLERY - a Secret Lolitas Archive." The affidavit quoted text on the preview page which stated,

All models inside are 14 or younger, every image shows at least 2 or 3 girls, every gallery is at least 50 images.....Created by real young model lovers for real young model lovers. Lust Gallery is truly an elite product. We guarantee you complete satisfaction for a truly unforgettable experience.

The affidavit also stated that Wilder had been convicted for possession of child pornography and described the earlier

investigation leading to that conviction. Using a computer, Wilder had arranged through a website to buy a video of child pornography. The tape had been advertised on the site as child pornography involving a 12-year-old girl. Police officers searched Wilder's residence with a warrant when the tape arrived. The search revealed fourteen computer disks containing child pornography. During that investigation, Wilder admitted that he had collected child pornography from the Internet over several years. The affidavit concluded with a discussion of characteristics of individuals "involved in the receipt and collection of child pornography," stating that such collectors retained their materials in many different media and for a lengthy period of time for viewing. The affidavit described Wilder as a collector, given his history and his recent purchase of the Lust Gallery membership.

At the hearing on the motion to suppress, the district court concluded that the affidavit demonstrated probable cause to support the issuance of the warrant. It wrote in a May 6, 2005 memorandum and order that it was "fairly inferable" from Wilder's previous acquisition and retention of child pornography that he would still desire to acquire it, and that his subscription to Lust Gallery indicated this was indeed the case. The district court also found that the magistrate could have reasonably inferred from Wilder's past connection to child pornography and the affidavit's information about the habits of child pornography collectors that

he would have used his subscription not just to view child pornography but also to download and retain it. The court noted that Wilder had admitted in connection with his previous offense that he had downloaded the images that had been found on fourteen computer disks. In response to Wilder's argument that the evidence against him was "stale," because the prior conviction was some years earlier (2000) and the Lust Gallery subscription had expired, the court ruled that the affidavit gave a basis sufficient for the conclusion that Wilder was trying to obtain and preserve child pornography images and that they would accordingly be discovered at his residence, stating that "the inference that a search in January 2004 would yield evidence of images from Wilder's March 2003 access to the lust-gallery website was, in the circumstances, a fair one."

We affirm the district court's analysis. Probable cause for the issuance of a warrant based on an affidavit "exists where information in the affidavit reveals 'a fair probability that contraband or evidence of a crime will be found in a particular place. Probability is the touchstone' of this inquiry." United States v. Baldyga, 233 F.3d 674, 683 (1st Cir. 2000) (quoting United States v. Khounsavanh, 113 F.3d 279, 283 (1st Cir. 1997)). "The standard of probable cause requires a probability, not a prima facie showing, of criminal activity." United States v. Burke, 999 F.2d 596, 599 (1st Cir. 1993). The magistrate judge's assessment

"should be paid great deference." Illinois v. Gates, 462 U.S. 213, 236 (1983) (quotation omitted).

Wilder argues the affidavit did not provide a basis for believing that he was actually downloading and preserving child pornography. He contends the affidavit showed only that he had subscribed to a website which included, among other types of material, child pornography, and that such a subscription did not provide "fair probability" that child pornography had been accessed and might be found kept at his home.

But it was a fair inference from his subscription to the Lust Gallery website, as described in the affidavit, that downloading and preservation in his home of images of child pornography might very well follow. The entrance page of the website, as described, was plainly designed and written to attract persons interested in viewing child pornography. As the district court observed, "The affidavit establishes that before subscribing, a viewer is tantalized by the advertisement of the availability of child pornography through the subscription. That other material, not child pornography, may also be available is not important. First, other material is not featured in the way that child pornography is. The preview page said, in essence, if you subscribe, we'll provide you with images of child pornography." The affidavit went on to state, moreover, that Wilder had been convicted of, and was still on supervised release for, possessing

child pornography. The affidavit noted that at the time of the earlier conviction, he had admitted to collecting child pornography for several years and had obtained the images associated with that previous conviction over the Internet. Hence the reasonable inference that someone subscribing to the Lust Gallery site would have an interest in, and would likely download, child pornography images was reinforced by the further evidence that defendant had previously engaged in precisely such behavior.

Wilder fails in his attempts to distinguish relevant precedent. In United States v. Gourde, 440 F.3d 1065, 1071 (9th Cir. 2007), cert. denied, 127 S. Ct. 578 (2006), the Ninth Circuit held that defendant's subscription to a child pornography website was sufficient to establish probable cause to search his residence. The court held that the "reasonable inference that Gourde had received or downloaded images easily meets the 'fair probability' test." Id. Given especially the content of the Lust Gallery preview page, as described in the affidavit, we see little merit in Wilder's attempted distinguishing of that case on the grounds that the site in Gourde was admitted by its owner to be a child pornography site and Gourde's membership in the site continued until it was shut down by authorities. See also United States v. Wagers, 452 F.3d 534, 539 (6th Cir.), cert. denied, 127 S. Ct. 596 (2006) (probable cause existed where defendant previously had been convicted for child pornography and had subscriptions to three

websites containing child pornography, even if the websites may not have contained only illegal images). Wilder cites various cases as supporting his probable cause challenge, but we find all of them factually distinguishable.

Finally, Wilder relies on Collazo-Leon v. United States Bureau of Prisons, 51 F.3d 315, 318 (1st Cir. 1995), which was not a case about probable cause, for the proposition that previous criminal activity alone should not lead to an assumption of future criminal activity. But we need not address that point since the instant case involved evidence not only that Wilder had a prior child pornography conviction but also that he had since joined a website featuring the dissemination of such pornography. See United States v. Taylor, 985 F.2d 3, 6 (1st Cir. 1993) ("An affiant's knowledge of the target's prior criminal activity or record clearly is material to the probable cause determination.").

Here, given Wilder's history, including a prior conviction for possession of child pornography for which he was still on supervised release and his recent paid subscription to the Lust Gallery, the entry page of which vividly indicated that child pornography was a featured product, the district court did not err in holding there was probable cause for the magistrate judge to issue a warrant to search Wilder's residence for illegal child pornography materials.

II. Sufficiency of the Evidence Regarding Knowing Receipt

Wilder argues that the jury did not have sufficient evidence to conclude beyond a reasonable doubt that he had knowingly received child pornography, as required to convict him of a violation of 18 U.S.C. § 2252(a)(2).³ We review a sufficiency claim de novo, "affirm[ing] the conviction if, after assaying all the evidence in the light most amiable to the government, and taking all reasonable inferences in its favor, a rational factfinder could find, beyond a reasonable doubt, that the prosecution successfully proved the elements of the crime." United States v. Connolly, 341 F.3d 16, 22 (1st Cir. 2003) (quoting United States v. Boulerice, 325 F.3d 75, 79 (1st Cir. 2003)) (internal quotation marks omitted). "[I]t is not the appellate

³The statute states, in relevant part:

Any person who . . . knowingly receives, or distributes, any visual depiction that has been mailed, or has been shipped or transported in interstate or foreign commerce, or which contains materials which have been mailed or so shipped and transported, by any means including by a computer, or knowingly reproduces any visual depiction for distribution in interstate or foreign commerce or through the mails, if--

(A) the producing of such visual depiction involves the use of a minor engaging in sexually explicit conduct; and

(B) such visual depiction is of such conduct; . . . shall be punished as provided in subsection (b) of this section [discussing penalties].

18 U.S.C. § 2252(a)(2).

court's function to weigh the evidence or make credibility judgments. Rather, it is for the jury to choose between varying interpretations of the evidence." United States v. Ortiz, 966 F.2d 707, 711 (1st Cir. 1992) (citation omitted). Therefore, we "ought not to disturb, on the ground of insufficient evidence, a jury verdict that is supported by a plausible rendition of the record." Id.

Wilder moved for a judgment of acquittal at the close of the government's evidence and renewed it at the close of all evidence. He argued at trial that the evidence could lead to one of two equally plausible conclusions: that Wilder had used his computer to access child pornography, or that when he saw the material on his computer, he deleted it. On appeal, Wilder contends that the foregoing was tantamount to his urging the district court that there was insufficient evidence of knowing receipt for the jury to convict and thus that he has preserved the sufficiency claim for appellate review. We need not determine whether the claim was preserved. Even assuming arguendo that it was, our de novo examination convinces us that, in any event, there was sufficient evidence for the jury to convict Wilder of the charged offense.

The government's evidence relating to knowing receipt included evidence that Wilder used Internet newsgroups to collect child pornography. Expert testimony supported the conclusion that

Wilder downloaded child pornography, viewed it, and deleted it, only to repeat the process again and again. The government's computer expert, Lam Nguyen, testified that the computer user had set his newsgroup software to download child pornography. He caused the newsgroup software to go repeatedly to a newsgroup, "hussy," and download child pornography. Nguyen described the evidence which showed that the computer user regularly entered the folder of "hussy" downloads to access the images. Some of the images of child pornography that were viewed were not deleted.

Nguyen also testified to having found an email sent to a pay-to-view website on Wilder's computer, quoted supra, in which Wilder expressed consternation at being transferred to adult content sites when, he said, he joined the site, "to see Anya and her friends Why is your site so hard to navigate and why do you have so many links to adult content sites?" The government introduced a photo of "Anya" into evidence that showed three pre-pubescent girls engaged in sexually explicit conduct and which Nguyen testified he had printed off from Wilder's computer.⁴ The

⁴On appeal, Wilder notes that there was no evidence introduced expressly linking the "Anya" image to the email. As for the image itself, there was a conflict in testimony between the government's expert and the defense expert regarding the discovery of the "Anya" photo. Government expert Nguyen testified that he found the photo on the defendant's hard drive, while defense expert Eric Cole testified that he was unable to find the photo on the copy of the hard drive he reviewed. A conflict in evidence is for the trier of fact, in this case the jury, to resolve. United States v. Escobar-de Jesus, 187 F.3d 148, 172 (1st Cir. 1999).

jury also saw evidence of the websites "bookmarked" on Wilder's computer, which included "Lolita Buffet free youngest girls on the net galleries.url," "Youngest Girls Everyday," "Youngest 69," and "Sexy Teen Club." Wilder argues that both government and defense experts testified that the list could have been created without conscious saving of individual websites by the user because the bookmarking of one site would have prompted the automatic bookmarking of the others. Evidence was introduced of a piece of paper noting one of the websites, lolitabuffet.com, included on the list of favorites. The government also presented evidence of a piece of paper seized from Wilder's home on which was written "members.i-lola.info" and a numbers and letter combination which the government's expert testified was "typically how a username and password looks." The jury could have inferred from this evidence that Wilder had joined or intended to join a Lolita site.⁵ The jury was also entitled to consider the evidence related to Count One that Wilder had responded to a posting seeking photos of young girls by sending four images of child pornography and writing, "Now its your turn." While this evidence was not introduced specifically as bearing on Count Two also, the jury was entitled to considered it relative to both counts.

⁵Wilder notes that there was no testimony that the computer contained evidence of the joining of any of the listed Lolita sites.

Wilder points to United States v. Myers, 355 F.3d 1040, 1042 (7th Cir. 2004), for the principle that a defendant who "seeks out only adult pornography, but without his knowledge is sent a mix of adult and child pornography" cannot be convicted for knowing receipt. That case is inapposite, as there was ample evidence here that Wilder was looking for, and received, child pornography.

III. Sufficiency of the Evidence Regarding Knowing Possession

Wilder challenges the sufficiency of the evidence that he knowingly possessed child pornography, a required element for conviction under 18 U.S.C. § 2252(a)(4)(B).⁶ The government asserts, as it did in connection with the previously described knowing receipt charge, that the defendant did not adequately preserve this argument, but, as there, we find the evidence more

⁶The statute states, in relevant part:

Any person who . . . knowingly possesses one or more books, magazines, periodicals, films, video tapes or other matter which contain any visual depiction that has been mailed, or has been shipped or transported in interstate or foreign commerce, or which was produced using materials which have been mailed or so shipped or transported, by any means including a computer, if--

(i) the producing of such visual depiction involves the use of a minor engaging in sexually explicit conduct; and

(ii) such visual depiction is of such conduct; shall be punished as provided in subsection (b) of this section [discussing penalties].

18 U.S.C. § 2252(a)(4)(B).

than sufficient, hence need not determine whether the argument was sufficiently preserved.

The indictment in Count Three alleged that Wilder knowingly possessed nine listed images and three movies containing child pornography. Nguyen testified that each of the images had been saved individually from a website. He stated, "There's really no other way to save files like this I'm confident that this is information stored--saved from a web site." He further noted on redirect that the nine images had been saved on one date and then accessed again on a later date. On cross-examination, Nguyen also testified that those images could have been posted to a newsgroup and then downloaded onto the computer from the newsgroup. The defense's expert testified that the saved images could have come from the web, a newsgroup, or an email. On cross-examination, however, the defense's expert acknowledged that the file names of the images suggested they were saved through Internet Explorer or Microsoft Outlook and were not listed in the log of automatic downloads from the newsgroup, suggesting they had been individually saved by a user. From the opinion testimony of the two experts, the jury was entitled reasonably to infer that the images had been knowingly accessed, saved, and viewed by Wilder.

The three video files included in the count had been downloaded from a website which advertised a variety of videos. There was evidence suggesting that Wilder knew their contents,

including a handwritten piece of paper found in Wilder's home which listed almost all the video files on display in the website advertisement. This list was headed "Downloaded" and contained notations of check marks, circles, and the note next to one file name, "same as above but longer version." Almost all the videos on the list were recovered or partially recovered from Wilder's computer. Nguyen testified that one of the videos, "pedo r@ygold 10 yo fuck and cum in pussy" had been viewed on the computer from a CD, though that CD was never found in Wilder's house. Nguyen testified that evidence on Wilder's computer showed that Wilder accessed that video file through a CD-ROM. From that testimony, the jury could also have inferred that Wilder deleted his child pornography from his computer and stored it on removable media. Wilder contests this point in his reply brief by arguing that Nguyen's analysis was based on the assumption that a reference to an "E" drive was a reference to a CD-ROM drive, an assumption that was not supported in any further detail. But the jury was free to accept Nguyen's expert testimony as to what had happened.

Wilder argues that the images at issue were downloaded from a newsgroup and arrived with their content unknown and likewise that the movies could not be viewed until after being downloaded. He relies on United States v. Samad, 754 F.2d 1091, 1096 n.11 (4th Cir. 1984), in which the Fourth Circuit held that a defendant could be held responsible for the contents of a drug

package only if he opened it and, upon seeing that drugs were inside, "appropriated it for his own use." Wilder argues that he would have been unaware of the contents of the newsgroup downloads, but he does not address the distinction between the two cases--namely that here, the government introduced testimony that the images had been individually saved and that the videos had been downloaded, at least one had been saved on a CD, and he had made a list of video names that corresponded to files found on his computer. From this and other evidence, the jury could reasonably have inferred that Wilder sought out child pornography and that it was in his possession knowingly.

IV. Sufficiency of the Evidence as to Whether Children Depicted Were Real

Wilder argues that the evidence was insufficient for the jury to find beyond a reasonable doubt that the photographs on which the convictions were based depicted real children. At trial, the government introduced, besides the photographs, the testimony of Dr. Celeste Wilson, a pediatric physician at Boston's Children's Hospital. She testified that based on her examination of the images at issue, keeping in mind factors such as facial features and physical characteristics of sexual development, she believed the children depicted were real and under the age of 18. When asked by the defense, Dr. Wilson admitted she did not have experience with computer technology. Wilson argues on appeal that the expert testimony was insufficient because it did not

specifically exclude the possibility that the children in the images had been computer-generated, and the government "presents no meaningful criteria for the jury to use in making an independent determination that the image . . . is of a real child." Wilder did not introduce any evidence during his defense that the children were in fact computer-generated.

The difficulty with Wilder's contention is that this court has previously determined that the government is not required to produce a technologically expert witness in order to prove that an image contains real children. United States v. Rodriguez-Pacheco, 475 F.3d 434, 439 (1st Cir. 2007) (noting that this circuit has "rejected a per se rule that the government must produce expert testimony in addition to the images themselves, in order to prove beyond a reasonable doubt that the images depicted are of real children"). Wilder acknowledges our holding in Rodriguez-Pacheco but contends nonetheless that "[i]f virtual images cannot be readily distinguished from real images, and an expert can testify only that images are consistent with those of a real child, a lay jury cannot reasonably find beyond a reasonable doubt[] that the images are of real children." We held to the contrary, however, in Rodriguez-Pacheco, saying that "[t]he question of whether or not a particular image is of a virtual child or a real child is an issue of fact, to be determined by the trier of fact." Id. at 438.

Wilder attempts to distinguish Rodriguez-Pacheco on the grounds that in that case, the government's expert provided criteria to distinguish between real children and computer-generated children. But as noted, Rodriguez-Pacheco held that the government need not provide expert testimony. Id. at 439. The panel is bound by stare decisis in our circuit, except, of course, if the Supreme Court or our circuit en banc rules otherwise. Id. at 441.⁷

The question is one of the sufficiency of the evidence. Here, the jury had before it the images themselves as well as the testimony of the medical expert that the anatomical detail in the images was "extraordinary" and was medically consistent with the images being of real children. Dr. Wilson focused on the facial features, physical characteristics of sexual development (including absence of breast development and sparsity of pubic hair), proportions of the body, anatomy and musculature of the positioned body, and indications of genital development of children of a particular age. The only evidence from defendant was the doctor's statement that she had no experience with computer photo imagery. We cannot reverse a jury verdict on these facts merely because the doctor's expertise did not extend to distinguishing, as a photography expert, between a virtual image and a real image. A

⁷All circuits to have addressed this issue have reached a similar result. See United States v. Salcido, 506 F.3d 729, 733-34 (9th Cir. 2007) (per curiam) (collecting cases).

rational jury could on this record find the government had met its burden of proof beyond a reasonable doubt. The anatomical detail testified to by the doctor was extraordinary. See Rodriguez-Pacheco, 475 F.3d at 445.

V. Whether Images Listed in Count One Depicted a Minor Engaged in Sexually Explicit Conduct

Wilder argues that we should find that the evidence presented to the jury was insufficient to establish that the four images listed in Count One depicted a minor engaged in sexually explicit conduct. Wilder's argument in his initial brief is so undeveloped as to prompt a consideration of waiver, but the argument fails even if we treat the issue as having been preserved. As previously noted, we review a sufficiency claim de novo and determine whether a rational jury could have found beyond a reasonable doubt that the evidence met the legal standard. United States v. Capozzi, 486 F.3d 711, 725 (1st Cir. 2007).

Under United States v. Frabizio, 459 F.3d 80 (1st Cir. 2006), this court held that it was "up to the jury to determine whether the images . . . constitute visual depictions of 'sexually explicit conduct.'" Id. at 85 (emphasis in original). The question for our determination on appellate review -- to be sure, a sensitive one which we will examine with care given the First Amendment implications -- is whether a reasonable jury could have reached the conclusion that the images were of sexually explicit conduct. Certainly a jury could have done so on the facts here.

Id. at 86; see also United States v. Hilton, 257 F.3d 50, 57 (1st Cir. 2001); United States v. Amirault, 173 F.3d 28, 32 (1st Cir. 1999). The focal point of each image is the child's genital area, and each child is placed on either a bed or a couch. Three of the images show a child with her legs spread apart. In one image, the child is holding a sexual device in the shape of a male penis in a sexually suggestive way; in another, she is shown inserting the device into her vaginal area. In each image, the child is largely unclothed, and the clothing she is wearing is limited to black thigh-high stockings, a white garter, and a white lacy hat. Her chest and genital area are unclothed. In each image, the child is posed in a way that suggests a willingness to engage in sexual activity. The jury was plainly entitled to find that each of the four images in Count One depicted a minor engaged in sexually explicit conduct.

Affirmed.

-Concurring Opinion follows-

STAHL, Senior Circuit Judge, concurring in the judgment.

I agree with the majority's result, which is required by precedent, and much of its reasoning. I write separately to express my dissatisfaction with our current evidentiary standard, as set forth in United States v. Rodriguez-Pacheco, 475 F.3d 434 (1st Cir. 2007), and applied in this case, for determining whether the government has sufficiently proven that the photographs on which the defendant's conviction was based depicted real children.

I.

The federal prohibition against child pornography cannot extend to images that do not depict an actual child without running afoul of the First Amendment. Ashcroft v. Free Speech Coalition, 535 U.S. 234 (2002). Thus, "in order to establish guilt," the government "must prove beyond a reasonable doubt" that the images providing the basis for a child pornography prosecution depict real, as opposed to virtual, children. Rodriguez-Pacheco, 475 F.3d at 439. The Supreme Court has warned that this burden cannot be lightly shifted onto the defendant:

[t]he Government raises serious constitutional difficulties by seeking to impose on the defendant the burden of proving his speech is not unlawful. . . . [T]he evidentiary burden is not trivial. Where the defendant is not the producer of the work, he may have no way of establishing the identity, or even the existence, of the actors. If the evidentiary issue is a serious problem for the Government, as it asserts, it will be at least as difficult for the innocent possessor.

Free Speech Coalition, 535 U.S. at 255-56.

This circuit, following in the footsteps of a number of other circuits, has refused to interpret Free Speech Coalition as "lay[ing] down 'the absolute requirement that, absent direct evidence of identity, expert testimony is required to prove that the prohibited images are of real, not virtual, children.'" Rodriguez-Pacheco, 475 F.3d at 441 (quoting United States v. Kimler, 335 F.3d 1132, 1142 (10th Cir. 2003)); see also United States v. Irving, 452 F.3d 110, 121 (2d Cir. 2006)⁸; United States v. Slanina, 359 F.3d 356, 357 (5th Cir. 2004) (per curiam); United

⁸The Irving prosecution was brought on the basis of video files, not still photographs. The Irving court clearly restricted its holding to "cases involving video images or MPEGs," reasoning that "it does not appear that video technology is so far advanced that a jury is incapable of determining whether a real child was used to make a video." 452 F.3d at 121-22. This logic certainly does not hold true with respect to photographs, as discussed below. Indeed, it is far from clear that the Second Circuit's understanding of video images truly reflects the current state of that technology. Movie studios, at least, do possess video technology so far advanced that they can conjure up a realistic replica of practically any image desired. The movie Wag the Dog (New Line Cinema 1997), for example, satirically depicts the extremely convincing fabrication of an entire war out of whole cloth by a conniving Washington spin-doctor seeking to distract the electorate from a Presidential sex scandal. The recent HBO mini-series John Adams (HBO Films 2008) featured feats of make-up and other special effects that produced a depiction of 18th century America unparalleled in its authenticity. See HBO Films: John Adams, <http://www.hbo.com/films/johnadams> (follow "Making John Adams" hyperlink) (last visited Apr. 25, 2008) (describing how visual effects were used to create entirely digitized sets and characters, indistinguishable from the real thing). Whether such technology is readily available to the average child pornographer is a question of fact that a court is not competent to answer on its own.

States v. Deaton, 328 F.3d 454, 455 (8th Cir. 2003) (per curiam). Nevertheless, we have emphasized that "[t]he burden of proof remains on the government to prove the pornographic image is of a real child." Rodriguez-Pacheco, 475 F.3d at 444; United States v. Hilton, 386 F.3d 13, 18 (1st Cir. 2004) ("It bears repeating that the government is not released from its burden of proof by a defendant's failure to argue, or by an absence of evidence otherwise suggesting, the artificiality of the children portrayed. That the children in the images are real amounts to an element of the crime which the government must prove, the burden of which should not be displaced to the defendant as an affirmative defense.").

Thus, while we currently recognize no per se rule requiring the government to present expert testimony as to the reality of the children in the images, the government still must present sufficient evidence to enable a jury to find beyond a reasonable doubt that the children are real. The Rodriguez-Pacheco court looked to United States v. Nolan, 818 F.2d 1015 (1st Cir. 1987), for the proposition that a factfinder can, unaided, distinguish photographs of actual children from virtual images. The court in Nolan held that "the test for a factfinder's power to judge evidence without expert help is ... whether the subject is within the range of normal experience and knowledge." Id. at 1018. Nolan was decided over twenty years ago, however, and the rapid

progress of digital imaging technology has rendered it obsolete even on its own terms. Technological advances in recent years have been such that an untrained eye simply cannot easily distinguish a photograph of a real person from a virtual image by merely eyeballing the photographs in question. Indeed,

determining whether an image is real or virtually created is not only no longer within the "range of normal experience and knowledge" of the average person, but it may also very well be difficult for even experts [to say] whether the pictures were made by using real children or by using computer imaging. . . . The scientific evidence available today is overwhelmingly contrary to that which existed in Nolan's day. . . . There is simply no question that today it is possible to create virtual images of humans that are indistinguishable from the real thing.

Rodriguez-Pacheco, 475 F.3d at 462 (Torruella, J., dissenting) (internal quotation marks, citations omitted).⁹ The situation is further complicated by the advent of technology that enables the digital manipulation of images of actual people--for example, by airbrushing away wrinkles, trimming extra pounds, or even mixing and matching body parts from different individuals. See, e.g., Switched.com, Worst Airbrushed Celebs of 2007...So Far, <http://www.switched.com/2007/08/30/worst-airbrushed-celebs-of-200>

⁹See, e.g., CG Society: Society of Digital Artists, <http://forums.cgsociety.org/showthread.php?f=121&t=399499> (last visited Apr. 25, 2008). That link, cited by defendant in his brief on appeal, shows a completely digital rendering of a Korean actress. It is not a photograph of the actual actress, but to a layperson might certainly appear to be so.

7-so-far/ (last visited Apr. 25, 2008) (comparing digitally retouched and unretouched photographs of various celebrities).

I do not question that many, and perhaps most, of the images traded daily by child pornographers depict actual children. The government cannot prove its case by the law of averages, however, but must prove it with reference to the particular images that form the basis of the child pornography prosecution at hand. Thus, the Rodriguez-Pacheco court gains little support by coopting the Supreme Court's reasoning that "[i]f virtual images were identical to illegal child pornography, the illegal images would be driven from the market by the indistinguishable substitutes. Few pornographers would risk prosecution by abusing real children if fictional, computerized images would suffice." Rodriguez-Pacheco, 475 F.3d at 443 (quoting Free Speech Coalition, 535 U.S. at 254).

The logic of adopting this rather odd assumption about the dynamics of the child pornography market as a rationale for concluding that the child in any given picture is unlikely to be virtual rather than real is questionable at best. For starters, the assumption itself is arguably premised on a fallacy. It seems inappropriate to cast the pedophile, an individual seeking to satiate a twisted sexual urge, as a rational economic actor. It is more sensible to imagine that a large part of the depraved thrill engendered by the creation of these images is in the abuse of a live subject, which the pornography creator can then document in

order to relive the experience and share it with like-minded individuals. Also, while some child pornographers may be sufficiently technologically adept to create realistic "virtual" children, others may not be and so would have to rely on taking pictures of the real thing, resulting in the production of a mix of real and virtual images. If the real and the virtual are more or less indistinguishable, once both are released into the marketplace the real images would not be displaced by virtual substitutes simply because most consumers of such images would not be able to differentiate the two. And finally, whether the child pornography market as a whole is composed of images of mostly virtual or mostly real children does not change the government's burden to prove that the images forming the basis of any specific child pornography prosecution depict real children, in order for a conviction to be sustained.

To meet its burden the government therefore should be obliged to introduce, and indeed in many cases has introduced, evidence that provides some reasonable basis for determining that the children depicted in the images are real. See, e.g., United States v. Hoey, 508 F.3d 687, 689 (1st Cir. 2007) (noting that pornographic images found on defendant's computer were submitted to National Center for Missing and Exploited Children, which identified children in 131 images as real children); Rodriguez-Pacheco, 475 F.3d at 437-38 (summarizing testimony of government

pediatric expert who testified as to children's age as well as FBI technological expert who testified as to whether children were real or virtual); United States v. Salcido, 506 F.3d 729, 734-35 (9th Cir. 2007) (holding that "[the court] need not decide whether the jury may determine the reality of persons depicted in images based solely on the images themselves" because government presented additional evidence, including testimony of detective who had interviewed one of the children depicted, "from which the jury could conclude that the images depicted actual children").

II.

In the case presently before us, the only evidence introduced at trial to aid the jury in determining whether the children depicted were virtual or real, apart from the images themselves, was the testimony of Dr. Celeste Wilson, a pediatric physician. Dr. Wilson testified that the anatomical detail in the images was "extraordinary" and consistent with that of real children. The doctor admitted, however, that she had no specialized technological expertise and could not testify as to whether the images could have been digitally created.

The majority reasons that

[w]e cannot reverse a jury verdict on these facts merely because the doctor's expertise did not extend to distinguishing, as a photography expert, between a virtual image and a real image. A rational jury could on this record find the government had met its burden of proof beyond a reasonable doubt.

The anatomical detail testified to by the doctor was extraordinary.

See slip. op. at 23-24. Dr. Wilson's testimony, however, is helpful in determining that an image is anatomically consistent with that of a child as opposed to an adult, but is of limited utility to the jury in determining whether the child in question is virtual or real. See Hilton, 386 F.3d at 18-19 (finding medical expert's testimony that images depicted children rather than adults insufficient to support inference that children depicted were real and not virtual). The Hilton court noted:

someone manufacturing images to look like children will try-and with sufficient technology will manage-to produce images that would be amenable to expert analysis . . . Whatever parameters of body proportion, growth and development serve as signs of age . . . those parameters will be mimicked by the virtual pornographer-whether by design or as a byproduct of the goal of realism.

Id. at 19. Notwithstanding the fact that the defendant did not produce any evidence himself as to the nature of the images, the burden remains squarely on the shoulders of the government to prove that the children depicted are real.

Unlike the sentencing judge in Rodriguez-Pacheco, we are not tasked here with weighing the preponderance of the evidence to uphold a sentencing enhancement, but the sufficiency of the evidence to uphold a conviction. And the district court in Rodriguez-Pacheco at least had before it the testimony of the FBI technological expert, who provided specific criteria upon which the

court could base its conclusion that the child in the disputed image was a real child. Without providing the jury in this case with some sturdier dock to which it can moor its conclusion that the images depicted actual children, it is difficult to see how the government can have proved this point beyond a reasonable doubt.

III.

Despite the foregoing, I concur in the judgment because I recognize that the rule in this circuit, as it currently stands, enables the factfinder to distinguish, unaided, between real and virtual children. Until the law catches up with technology, we are bound by stare decisis to this rule, and under this rule the government presented sufficient evidence to meet its burden.