

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA

AMERICAN COUNCIL OF THE BLIND, :  
*et al.*, :  
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 Plaintiffs, :  
 :  
 v. : Civil Action No. 02-0864 (JR)  
 :  
 Henry M. Paulson, Jr., Secretary :  
 of the Treasury :  
 :  
 Defendant. :

**MEMORANDUM ORDER**

American Council of the Blind is a national advocacy group for the visually impaired. In this suit, the Council and a number of blind and visually impaired individuals allege that the Department of Treasury violates section 504 of the Rehabilitation Act, 29 U.S.C. § 794, by its repeated and continuing failures to design and issue paper currency that is readily distinguishable to blind and visually impaired people. The Council's amended complaint seeks a declaratory judgment to that effect and an order mandating the creation and implementation of a corrective action plan. I denied earlier defense motions for summary judgment [#8] and to dismiss [#15], 311 F. Supp. 2d. 86 (D.D.C. 2004). After a period of discovery, the Secretary has renewed his motion to dismiss or for summary judgment [#33], and plaintiffs have moved for summary judgment [#35].<sup>1</sup>

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<sup>1</sup>The Secretary's motion asks me to dismiss or strike two of the plaintiffs' prayers for relief: the inclusion of specific features in a redesign of the currency, and a redesign of the \$1 bill. Plaintiffs amended

## **Background**

Some 937,000 Americans are legally blind, meaning that the visual acuity of the better-seeing eye, when corrected, is no better than 20/200. An additional 2,361,000 Americans are considered "low vision" - the better-seeing eye, when corrected, is no better than 20/40. National Eye Institute Statistics, [#35-46, at 2]. Individuals with low vision are unable, among other things, to read the regular print on a newspaper. National Academy of Sciences, Currency Features for Visually Impaired People, [#35-5, at 14] ("NAS Study").

Most people with low vision, and all blind people, are incapable of looking at American currency and distinguishing one denomination from another. In order to know whether the bill in her hand is worth five dollars or fifty, a blind person must ask someone else for help or use a machine that can identify the denomination and speak it out loud. Plaintiff Patrick Sheehan, who has no right eye vision and left eye vision of 20/450, is capable of distinguishing between banknotes in ideal lighting conditions. Usually, however, he identifies bills using a closed circuit television system that magnifies them. Plaintiff Otis Stephens is legally blind, as is Melanie Brunson, the Council's

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their complaint after the government's motion and no longer seek such relief. Those aspects of the government's motion are accordingly moot.

Rule 30(b)(6) designee. They rely on sighted people to identify paper money for them.

Visually impaired Americans have developed a variety of methods for keeping track of the value of their paper money after their bills have been properly identified for them. Ms. Brunson folds her currency into different shapes: she keeps \$1 bills straight; she folds \$5 bills in half left-to-right, \$10 bills in half top-to-bottom, and \$20 bills in quarters. Dep. of Melanie Brunson, [#33-2, at 32]. Other blind individuals keep different denominations in separate parts or pockets of their wallets or purses.

There is no authoritative data on the frequency with which the visually impaired use paper money. Dr. Stephens estimates that, over a two-month period, he makes approximately 145 purchases, of which roughly half are made using paper currency. Dep. of Otis Stephens, [#33-3, at 107]. Mr. Sheehen uses currency with similar frequency. Dep. of Patrick Sheehen, [#33-4, at 96]. Ms. Brunson, however, makes purchases using currency only about ten times a month. Dep. of Melanie Brunson at 60. When they do make purchases, Dr. Stephens and Ms. Brunson usually select bills that they have folded and ask the cashier for verbal confirmation of the denomination before paying. When receiving change after a transaction, Dr. Stephens asks the cashier to verbally identify each bill, so that he can fold it

properly. Dep. of Otis Stephens at 85. Similarly, Ms. Brunson asks cashiers to "separate the bills for me and give me the bills one at a time so that I can fold them." Dep. of Melanie Brunson at 54.

Unable to identify the value of paper money without help from others, blind and low vision individuals are always at risk of being cheated. The frequency of such acts against blind and low vision individuals is impossible to measure, because victims may not know that they have been deceived unless someone tells them. Ms. Brunson, Dr. Stephens, and Mr. Sheehan could recall only a few instances when they learned that they had been defrauded.<sup>2</sup> It is reasonable to assume, however, that deliberate fraud or accidental shortchanging may go unnoticed for some time, and that some instances may never be noticed.

#### **Currency in Other Countries**

Of the more than 180 countries that issue paper currency,<sup>3</sup> only the United States prints bills that are identical in size and color in all their denominations. NAS Study at 9, 101. More than 100 of the other issuers vary their bills in size

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<sup>2</sup>For example, Ms. Brunson recalled one occasion in which a store clerk informed her she was being given a \$20 bill. She later learned, when attempting to make another purchase, that this bill was actually worth only \$5. Dep. of Melanie Brunson at 56-57.

<sup>3</sup>Not all issuers of currency are independent sovereign countries. For example, Northern Ireland, England, and Scotland all issue banknotes that are exchangeable throughout the United Kingdom. NAS Study at 104.

according to denomination, and every other issuer includes at least some features that help the visually impaired. See generally, NAS Study at 101-12.

The Euro varies in size based on denomination: the greater the value of the note, the greater the length. The €5, €10, €20, €50, and €100 notes also vary in height. Euro Vision, Understanding Euro Notes and Coins, a Guide for People with Poor Vision, [#35-26, at 5]. Euros also possess tactile features: each bill includes a large, raised numeral designed to be perceptible to touch, at least when the banknotes are new, id. at 4, and a foil feature that can be identified by touch; the foil feature on the smaller notes - €5, €10, €20 - is of a different shape and in a different location than those on the larger ones. Id. at 6.

The Swiss Franc contains intaglio digits and a perforated numeral that can be identified by touch. Copy of Swiss Bank Note, [#35-41]. Japan, in a new design for the Yen, has incorporated a tactile feature in the ¥10,000, ¥5,000 and ¥1,000 notes, different for each note, that has a rougher texture than the rest of the bill. Security Features of the New Bank of Japan Notes, [#35-40].

The Canadian Dollar also contains tactile features. On the upper right corner on the face of each bill is a series of raised symbols separated by a smooth surface, which differ

according to denomination. The \$5 note has one raised symbol, the \$10 note has two such symbols, and so forth. The Bank of Canada also provides (free to blind and low vision individuals) an electronic hand-held note reader. Bank of Canada, Accessibility Features, [#35-28].

Australia's dollars differ in color and size. English Pound notes vary in color and size and contain tactile symbols. Chinese currency differs in color and possesses a tactile symbol, as does the currency in Argentina and Israel. Saudi Arabia's currency varies in color and size. NAS Study at 106-112.

### **U.S. Currency**

The Secretary's statutory responsibility for the design and production of U.S. currency, 12 U.S.C § 418, has been delegated to the Bureau of Engraving and Printing (BEP). The BEP is not financed by appropriations from Congress, but by a revolving fund that is replenished by the sale of its products - currency and postage stamps - to other federal entities. In 2004, the BEP earned revenues of \$525 million on the sale of 8.8 billion currency notes to the Federal Reserve and 6.1 billion postage stamps to the U.S. Postal Service. Bureau of Engraving and Printing, Chief Financial Officer Performance and Accountability Report (2004), [#35-42, at iii].

Most production of new currency is to replace worn out bills. Decl. of Thomas Ferguson, (August 28, 2002) [#8-2, at

¶ 15]. The Federal Reserve withdraws tens of millions of bank notes from circulation each day: if a banknote is deemed unfit for recirculation, or if its denomination or authenticity cannot be verified, it is destroyed. The useful life of bills varies by denomination. The average life for the \$1 bill is twenty-one months, whereas the \$100 note lasts some eighty-nine months. Frequently Asked Questions, Federal Reserve Board, [#35-44]. Approximately half of all BEP production is of \$1 bills. Dec. of Thomas Ferguson [#8-2, at ¶ 5].

On several occasions, the House of Representatives has expressed interest in changing U.S. currency to accommodate the visually impaired. Congressman Pete Stark introduced bills in 1979, 1981, and 1983 that would have required currency to be "printed in a manner which enables an individual who is blind to determine the denomination of each such note." H.R. 6027, 96th Cong. (1979); H.R. 3656, 97th Cong. (1981); H.R. 2666, 98th Cong. (1983). In 1991, Congressman Joseph P. Kolter introduced a bill that would have required the Federal Reserve System to "develop a design for Federal Reserve notes in the denominations of \$5, \$10, \$20, \$50, and \$100, and a method for producing such notes, that includes the designation of the denomination in braille on the face of the notes." H.R. 2160, 102nd Cong. (1991). In 1997, finding that "electronic means of bill identification will always be more fallible than purely tactile means," the House of

Representatives "strongly encourage[d] the Secretary of the Treasury and the Bureau of Engraving and Printing to incorporate cost-effective, tactile features into the design changes, thereby including the blind and visually impaired community in independent currency usage." H.R. Res. 122, 105th Cong. (1997).

In 1983, at the request of Congressman Edward R. Roybal, chairman of the House Select Committee on Aging, the BEP conducted a formal study of this issue. A Study of Mechanisms for the Denomination of Currency by the Blind or Visually Impaired, (Aug. 24, 1983), [#35-4] ("1983 Study"). That study found that "the most widely useful currency design change would be to produce [notes] in a different size for each denomination," but that "the effects of such a change on broad and diverse segments of the population would be monumental." Id. at 6.<sup>4</sup> The study also found that "almost as broad a segment of the sight impaired population would benefit from use of an electronic device to audibly denominate bank notes as from sized currency," and that given the greater cost of sizing currency, electronic currency readers should be developed to assist the visually impaired. Id. at 16.

Electronic note readers are available, but many models are considered slow, unreliable and expensive. NAS Study at 25.

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<sup>4</sup>This finding of "monumental" effect, repeated verbatim at 17, is unquantified and unexplained.

The government asserts that one such device, the Note Teller 2, is effective. The Note Teller 2 is approximately six inches long, three inches wide and one inch high, weighing approximately seven ounces. Decl. of Julia Wilson [#33-6, at ¶ 2]. Users insert bills into the machine and after approximately two seconds, a human voice, says either a number - "one," "five," "ten," etc., or "cannot read." Id. at ¶ 4. The Note Teller 2 retails for \$270. Id. at ¶ 8. In May 2004, the BEP solicited proposals for the development of a pocket-size currency reader that could be mass produced at a target retail price of \$35 or less. In September 2004, BEP awarded \$50,000 to Mnemonics, Inc. to develop these currency readers. Def.'s Resp. to Interrog. 13. Mnemonics has committed to begin marketing the device within three years after BEP accepts the prototype. A prototype was due from Mnemonics on September 30, 2005. Supp. Decl. of Thomas Ferguson, (Aug. 30, 2005) [#33-7, at ¶ 15]. The record does not reveal whether this prototype was delivered by the deadline or whether it has been accepted by the BEP.

In 1995, the National Academy of Sciences issued a comprehensive report entitled "Currency Features for Visually Impaired People." One of the study's findings was:

An important aspect of a person's full participation in today's society is being able to conveniently and confidentially exchange currency in everyday transactions, as when using public transportation or making purchases. U.S. citizens with low vision experience a uniquely difficult task in that U.S.

banknotes are remarkably uniform in size, color, and general design. The banknotes provide no basis for denominating by blind persons.

NAS Study at 1. The study recommended three features that could be incorporated into U.S. banknotes without significant further research: (1) changing the size of banknotes to correspond with denomination; (2) increasing the size and contrast of a banknote's numerals; and (3) varying banknote color according to denomination. Id. at 4. The report further recommended that the BEP undertake "high priority" research to determine "optimum dimensions, optical contrast, location, colors, physical size" to implement these changes. Id. at 65.

Major changes were made to U.S. currency in 1996 and 2004 - for the first time since 1929. Coming as they did after the House bills and the BEP and NAS studies, the 1996 redesign and the 2004 redesign presented "an opportunity to introduce features into the design that will make U.S. banknotes more readily usable by visually disabled people." NAS Study at 2.

The 1996 redesign did add two features intended to accommodate the visually impaired: a single larger numeral, placed on one side of the banknote at slightly less than twenty percent of the height of the banknote, to "facilitate recognition by persons with low vision," and an infrared feature, to "facilitate the development of a new hand-held currency reader for the blind." Supp. Decl. of Thomas Ferguson, (Aug. 30, 2005)

[#33-7, at ¶ 4]. The changes fell well short of the NAS recommendations, however; the NAS report had recommended a denomination numeral forty to sixty percent of banknote height, printed on both sides, with either white ink on a black background or black ink on a white background. NAS Study at 46. As far as the BEP was concerned, the primary purpose of the redesigns was to make American currency less susceptible to counterfeiting. Mot. Hr'g Tr. (May 4, 2006) at 25.<sup>5</sup>

The 1996 redesign cost the BEP approximately \$34 million, of which \$26 million was devoted to funding a public education campaign.<sup>6</sup> The redesign further increased annual costs by \$31 million. Supp. Dec. of Thomas Ferguson (Aug. 30, 2005) [#33-7, at ¶ 5]. The total initial cost for the 2004 redesign was \$113,037,205. This included approximately \$38 million for the purchase of six new presses and \$50 million for a

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<sup>5</sup>The 1996 redesign introduced several new security features, including watermark portraits, an embedded security thread, micro-printed words, and color shifting ink. Supp. Decl. Of Thomas Ferguson, (Aug. 30, 2005) [#33-7, at ¶ 4]. The 2004 redesign added small yellow denomination numerals on the back of each note, a more complex design and additional background colors to the \$10, \$20, \$50, and \$100 bills. Id. at ¶ 6.

<sup>6</sup>The total costs of the 1996 redesign also included \$1.5 million for research, consultation and design, \$4.5 million on engraving and manufacturing new printing plants, \$1.1 million on inspection equipment, \$200,000 for in-house contracts and \$90,000 on site preparation.

public education campaign.<sup>7</sup> In addition, the 2004 redesign required over \$25 million in increased annual costs. *Id.* at ¶ 7.

### **Jurisdiction**

In its renewed motion to dismiss, the government interposes a sovereign immunity defense for the first time, invoking Lane v. Pena, 518 U.S. 187 (1996), in which the Supreme Court found that the United States had not waived sovereign immunity in a suit alleging a violation of § 504(a) of the Rehabilitation Act. That is the code section upon which these plaintiffs rely. It provides, in relevant part:

No otherwise qualified individual with a disability in the United States, as defined in section 706 (20) of this title, shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity<sup>8</sup> receiving Federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service.

29 U.S.C. § 794. Lane brought suit after he was discharged from the U.S. Merchant Marine Academy for having diabetes. The district court granted summary judgment and ordered him reinstated as a cadet, but it refused to award compensatory

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<sup>7</sup>The total cost of the 2004 redesign also included \$6.1 million for site preparation, \$13.1 million for research, consultation and design, and \$5 million to manufacture new printing plates.

<sup>8</sup>It appears to be undisputed, despite the awkward "fit" of the language, that the design, production and issuance of currency is a "program or activity" under the Rehabilitation Act. See Def.'s Renewed Mot. [#33, at 7, n.5]; Mem. Op. [#19, at 4, n.1].

damages, finding that the government had not waived sovereign immunity for damages claims. Lane appealed, arguing that sovereign immunity had been waived by § 505(a)(2) of the Act, which provides: "The remedies, procedures, and rights set forth in title VI of the Civil Rights Act of 1964 shall be available to any person aggrieved by any act or failure to act by any recipient of Federal assistance or Federal provider of such assistance." He argued that, because § 505(a)(2) incorporates "the remedies, procedures and rights" of Title VI, and because Title VI allows suits for monetary damages, the United States had waived its sovereign immunity. The Supreme Court disagreed, finding that § 505(a)(2) contained an "unequivocally expressed" waiver of sovereign immunity only for violations by "any recipient of Federal assistance or Federal provider of such assistance." Section 505(a)(2) does not waive sovereign immunity, the Court found, for the much broader group of violations occurring "under any program or activity" authorized in § 504(a).

The present case, like Lane, is based on the "program or activity" language of the Rehabilitation Act, but the government's reliance on Lane misses the mark. These plaintiffs seek only injunctive relief. Injunctive relief was awarded by the district court in Lane, was not challenged by the government, and was not disturbed by the Supreme Court. Lane v. Pena, 518

U.S. 187, 190 (1996). The Court's reasoning in Lane indeed supports the view that injunctive relief is available against the sovereign under this provision. To explain its holding that sovereign immunity was not waived in § 505(a)(2) of the Rehabilitation Act, the Court contrasted that provision with § 505(b), which contains a "clear waiver" of sovereign immunity for claims of attorney's fees. As plaintiffs point out, there would be no purpose in crafting a provision allowing attorney fees unless the statute contemplates awards of declaratory and injunctive relief.

### **Analysis**

In Southeastern Cmty. Coll. v. Davis, 442 U.S. 397 (1979), and Alexander v. Choate, 469 U.S. 287 (1985), the Supreme Court identified two countervailing concerns that are to inform a court's interpretation of § 504 of the Rehabilitation Act: "(1) effectuation of the statute's objectives of assisting the handicapped; and (2) the need to impose reasonable boundaries in accomplishing this purpose." Three Rivers Center for Independent Living v. Housing Authority of City, 382 F.3d 412, 427 (3d Cir. 2004) (citing Choate, 469 U.S. at 299). The Court struck a balance between these two considerations by requiring that individuals have "meaningful access" to the benefits of programs or activities provided by grantees of federal assistance. Choate, 469 U.S. at 300. Plaintiffs are not entitled, however,

to perfect access, or to remedies "specially tailored" for their circumstances. Id. at 303. Even where plaintiffs do not have meaningful access, moreover, the Rehabilitation Act entitles them only to such accommodations as are "reasonable." Id. at 301. Accommodations are not reasonable if they would entail either "undue financial and administrative burdens" or a "fundamental alteration in the nature of a program." Davis, 442 U.S. at 410, 412. The cross-motions for summary judgment in this case address the two core issues that the Davis and Choate cases present, namely, (1) whether blind and visually impaired plaintiffs have "meaningful access" to U.S. currency, and (2) if not, whether the acts necessary to achieve meaningful access would impose an "undue burden" on the government.

### **Meaningful Access**

The question of what is "meaningful access" in a specific case is ultimately one of law, but the legal precedents available to the parties and to the court are unhelpful because they are so few, and so fact-bound. In Jones v. City of Monroe, 341 F.3d 474 (6th Cir. 2003), a municipal parking lot provided free all-day parking, but the lot was two blocks from plaintiff's office. Plaintiff, who had multiple sclerosis and used a wheelchair, sued under the Rehabilitation Act for a free parking space adjacent to her office building. The Sixth Circuit rejected her claim that she had been denied meaningful access to

the benefits of free parking. Reasoning that "equal results from the provision of the benefit. . . are not guaranteed," id. at 479 (quoting Choate, 469 U.S. at 305), the court found that the plaintiff had "access to the service offered by Monroe - free downtown parking in specific locations. She does not have a right to free downtown parking that allows her access to her destination of choice." City of Monroe, 341 F.3d at 479. In United States v. Board of Trustees for University of Alabama, 908 F.2d 740 (11th Cir. 1990), federal regulations requiring the provision of sign-language interpreters for the hearing impaired were upheld, because, "in the case of a deaf student . . . all access to the benefit of some courses is eliminated when no sign-language interpreter is present." Id. at 748. Citing Davis, the Eleventh Circuit found that "if the provision of interpreters when necessary would not impose an undue financial burden on UAB, then it would be a reasonable accommodation. . . ." Id.

Plaintiffs in the instant case align themselves with the deaf students in Board of Trustees, arguing that they have "no access" to currency because they have no way to distinguish one bill from another without a scanning device or help from a sighted person. "No access" overstates the case, to be sure - the visually impaired have developed an impressive array of coping mechanisms, and they do make use of paper money - but plaintiffs do not need to prove "no access" to prevail. Like

deaf students who can have real access to a lecture only with an interpreter or a realtime transcript, blind or visually impaired people cannot make effective use of American currency without help. There was a time when disabled people had no choice but to ask for help - to rely on the "kindness of strangers." It was thought to be their lot. Blind people had to ask strangers to push elevator buttons for them. People in wheelchairs needed Boy Scouts to help them over curbs and up stairs. We have evolved, however, and Congress has made our evolution official, by enacting the Rehabilitation Act, whose stated purpose is "to empower individuals with disabilities to maximize employment, economic self-sufficiency, independence, and inclusion and integration into society." 29 U.S.C. § 701(b) (emphasis added). It can no longer be successfully argued that a blind person has "meaningful access" to currency if she cannot accurately identify paper money without assistance.

**Undue Burden**

Plaintiffs who do not have meaningful access are entitled only to "reasonable accommodations." Choate, 469 U.S. at 301. Accommodations are not reasonable if they would entail either "undue financial and administrative burdens" or a "fundamental alteration in the nature of a program." Davis, 442 U.S. at 410, 412.

The government submits that the burden-shifting approach outlined in U.S. Airways, Inc. v. Barnett, 535 U.S. 391 (2002), should be applied where plaintiffs seek an accommodation under the Rehabilitation Act. Under Barnett, plaintiffs must first show that a requested accommodation would be "reasonable on its face." The burden then shifts to defendant to show "special (typically case-specific) circumstances that demonstrate undue hardship in the particular circumstances." Id. at 401-02. Plaintiffs rightly point out the lack of authority for applying this method outside Barnett's employment-discrimination context, but it is as good as any method of shifting the balance.

Plaintiffs have proposed several possible changes to U.S. currency: dimensions varied by denomination, embossed dots, foil, micro-perforations, and raised intaglio printing.<sup>9</sup> The fact that each of these features is currently used in other currencies suggests that, at least on the face of things, such accommodations are reasonable, but the government denies it, pointing to a "host of factors" that it says distinguish U.S. currency from other paper money. Def.'s Mem. Opp'n. [#43, at 10]. None of these factors demonstrates undue hardship, however.

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<sup>9</sup>The parties have also debated design changes that would accommodate plaintiffs who have low vision, but who are not blind. These include: increasing the size of the numeral, altering background colors, and adding geometric patterns. While such changes would no doubt be a welcome improvement for many people, any solution that accommodates some, but not all, individuals with impaired vision is, at best, a half-measure.

First, the government suggests that any changes to the currency could interfere with the BEP's statutory mandate to guard against counterfeiting, *id.*, and warns that the increasing sophistication of counterfeiting efforts would "significantly complicate any effort to add a tactile feature to U.S. currency." Decl. of Thomas Ferguson in Resp. to Pls.' Mot. for Summ. J, (October 25, 2005) [#43-2, at ¶ 3]. This suggestion is unsupported argument, and it is utterly unpersuasive. The government offers no reason to think that the addition of a tactile feature would render U.S. currency more vulnerable to counterfeiting, and indeed the use of foil and raised print on the Euro is considered a security feature, as is the micro-perforated number on a Swiss banknote. See The Euro, Our Money, [#60-2], European Central Bank - Security Features, [#60-3], and Swiss National Bank - Security Features, [#60-4].

The government also contends that any "drastic or sudden" changes to the currency could undermine international recognition and acceptance of U.S. currency "as a common medium of exchange throughout the world." Decl. of Thomas Ferguson in Resp. to Pls.' Mot. for Summ. J, (October 25, 2005) [#43-2, at ¶ 2]. This contention is not only unsupported, but, on its face, is fairly absurd. If the government has any evidence that U.S. currency is accepted throughout the world because it is a

"greenback," rather than because of the strength of the American economy, it has not placed that evidence in the record.

Lastly, the government asserts, more plausibly, that each of the proposed changes might decrease the life span of American currency, requiring more frequent replacement. Increasing the size of currency, for example, might cause people to fold bills more frequently, "thus increasing the wear on those denominations. . . and increasing expenditures to replace worn currency." Id. at ¶ 5.<sup>10</sup> Such costs "cannot be determined." Def.'s Resp. To Interrogs. 5, 6 [#35-11].<sup>11</sup> In 2001, the Canadian Bank Note Company (CBNC) conducted preliminary tests on ten U.S. banknotes to determine the feasibility of adding tactile features such as those used in Canadian currency. The parties disagree about whether those tests were persuasive, compare Decl. of H.H. Holton [#35-45, at ¶¶ 8-9], with Decl. of Thomas Ferguson in Resp. to Pls.' Mot. for Summ. J. (Oct. 25, 2005) [#43-2, at

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<sup>10</sup>The record contains little information about the effect of currency changes on third parties, and what information there is is inconclusive. The National Automatic Merchandising Association (NAMA), as amicus curiae, argues that changes to U.S. currency impact the \$30 billion vending machine industry. A small survey of NAMA members (eight respondents) reveals mixed levels of concern about the economic impact of the proposed changes, however. The surveyed firms agreed that changing the width of bills would be the most costly alteration. Some firms estimated major costs associated with any change, whereas other respondents, particularly those that conduct business outside the U.S., stated that changes would not be difficult to implement. See Mem. of Nat'l Automatic Merchandising Ass'n [#39].

<sup>11</sup>Government counsel's oral estimate of cost increase that would result from a reduction in the useful life of each bill, Mot. Hr'g Tr. (May 4, 2006) at 26-27, is unsupported in the record.

¶ 10], but they appear to agree that a test of ten notes is not statistically significant. Id. The BEP has chosen not to pursue further testing, because the results of the initial test were “sufficiently disappointing that pursuing inclusion of the proposed feature on U.S. currency was not considered worthwhile,” and because security considerations for transferring 1,000 bank notes to a foreign location “make the preliminary testing of only small quantities more practical.” Decl. of Thomas Ferguson in Resp. to Pls.’ Mot. for Summ. J. (Oct. 25, 2005) [#43-2, at ¶¶ 9-10]. Neither explanation is compelling. The Federal Reserve distributes a “large” amount of currency to foreign banks each year, see Federal Reserve Board, Currency and Coin Services, [#60-14], and the results of a statistically insignificant test, no matter how disappointing, should not serve as the basis for a decision not to conduct a statistically significant one. Lacking any statistically significant evidence from the government, I cannot find that a hypothetical reduction in the life span of bank notes constitutes an undue burden.

Moreover, the government has tacitly conceded at least the feasibility of each proposed feature, except raised intaglio printing, by providing cost estimates.<sup>12</sup> Production of bills of

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<sup>12</sup>Defendant’s initial cost estimates in this matter were startling, and ultimately misleading. Defendant first asserted that the changes sought by plaintiffs would require an initial investment of \$26 to \$101 million dollars more than its total budget for 2001, and an annual increase in expenses of sixty-five to seventy-nine percent. See Def.’s Mem. Opp’n. [#43, at 24];

different sizes, the most expensive option, would require an initial investment of \$178 million for new printing presses, inspection and verification machines, numbering machines, and processing equipment, and \$37-50 million for new printing plates for each new bill. See Def.'s Resp. to Pls.' Second Req. for Produc. of Documents [#43-3]. In addition to these initial costs, the BEP foresees increased annual costs of approximately \$30 million to acquire additional paper and ink and \$22 million to meet increased labor needs. Id. An embossed feature on each bill, such as a raised numeral, would have initial capital costs of \$45.5 million and additional annual costs of approximately \$16 million. Supp. Decl. of Thomas Ferguson (Aug. 30, 2005), [#33-7, at ¶ 9]. Perforating (punching a hole in) each note would require initial costs of \$75 million, with additional annual costs of approximately \$9 million. Id. at ¶ 10. A foil feature would require an initial expenditure of \$51.5 million with annual costs of approximately \$15 million. Id. at ¶ 14. In addition, the government notes, any change would require worldwide public education to ensure public acceptance of the new bills, which

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Def.'s Reply [#61, at 16]. This estimate appears to have been calculated to include all of the changes proposed by plaintiffs, however. Just one such tactile feature would suffice. See Pls.' Surreply [#67, at 15].

would cost between \$70 to \$90 million. Decl. of Thomas Ferguson (Aug. 28, 2002) [#33-5, at ¶ 48].<sup>13</sup>

These cost estimates are the heart of the government's undue burden argument. The government asserts that any of the accommodations proposed by plaintiffs would force it to undertake the kind of "undue financial and administrative burdens" precluded by Supreme Court precedent.

Any change to the design of U.S. currency would undoubtedly require a substantial investment of labor, time, and money devoted to, among other things, research, consultation, planning, the creation of new plates, the purchase, installation, and operation of new equipment, and increased maintenance and production costs. Yet the government's own estimate of such costs would represent only a small fraction of BEP's annual expenditures. Over the past ten years - and two redesigns - the BEP has spent \$4.2 billion on currency production, an average of \$420 million per year. Def.'s Resp. to Interrog. 1 [#35-11]. Over the same ten year period, the addition of an embossed numeral - at an initial cost of \$45.5 million and annual costs of

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<sup>13</sup>All cost estimates were provided by the government. See Def.'s Resp. to Pls.' Second Req. for Produc. of Documents; Supp. Decl. of Thomas Ferguson (Aug. 30, 2005). These figures may be inflated, however, due to the government's inclusion of the cost of modifying the one dollar bill. See Decl. of Thomas Ferguson in Resp. to Pls.' Mot. for Summ. J. (Oct. 25, 2005) [#43-2, at ¶ 11]. Plaintiffs do not seek changes to the one dollar bill, which by BEP estimates accounts for roughly half of all currency printed each year.

\$16 million - would have increased BEP spending by approximately \$205.5 million, or less than five percent. If additional savings could be gained by incorporating the new feature into a larger redesign, such as those that took place in 1996 or 2004, the total burden of adding such a feature would be even smaller.

### **Further Proceedings**

Plaintiffs have demonstrated that they lack meaningful access to U.S. currency. They have put forth several potential accommodations that are reasonable on their face. The government has not sustained its burden of showing that any of them would be unduly burdensome to implement. I find, accordingly, that the Treasury Department's failure to design and issue paper currency that is readily distinguishable to blind and visually impaired individuals violates § 504 of the Rehabilitation Act, and I will grant plaintiffs' prayer for a declaratory judgment.

Plaintiffs also seek three forms of injunctive relief: (1) a permanent injunction prohibiting defendant from continuing to manufacture banknotes in the present manner; (2) a permanent injunction requiring that banknotes be designed to incorporate features that will make them accessible to people with blindness and other vision impairments; and in conjunction therewith an order that defendant provide for court approval a detailed corrective action plan as to the features which it will incorporate into the design of U.S. banknotes to accomplish such

purpose; and (3) a permanent injunction mandating that defendant diligently pursue the development of an inexpensive portable electronic device which is capable of both accurate and rapid denomination of banknotes.

This Court has neither the expertise, nor, I believe, the power, to choose among the feasible alternatives, approve any specific design change, or otherwise to dictate to the Secretary of the Treasury how he can come into compliance with the law. The Clerk will be directed to set a status conference for the purpose of discussing remedy and scheduling any further proceedings, unless within ten days of the issuance of this memorandum order the government applies for leave to file an interlocutory appeal. (This memorandum order involves a controlling question of law as to which there is substantial ground for difference of opinion, and an immediate appeal from this order may materially advance the ultimate termination of this litigation. See 28 U.S.C. § 1292(b).)

\* \* \* \* \*

For the foregoing reasons, it is

**ORDERED** that defendant's renewed motion to dismiss or for summary judgment [#33] is **denied**; it is

**FURTHER ORDERED** that plaintiffs' motion for summary judgment [#35] is **granted in part**, and that it is ADJUDGED AND DECLARED that the Treasury Department's failure to design,

produce and issue paper currency that is readily distinguishable to blind and visually impaired individuals violates § 504 of the Rehabilitation Act. And it is

**FURTHER ORDERED** that the clerk set a status conference for a date and time convenient to the parties approximately 30 days after the date of this memorandum order.

JAMES ROBERTSON  
United States District Judge