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THE LIMITS OF COMPUTER CONVERSION: *UNITED STATES V. COLLINS*

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Preventing the unauthorized use of computer systems is one of society's newest legal needs;[1] the doctrine of conversion provides one of its oldest remedies. Derived from the common law action of trover, conversion occurs when a defendant substantially interferes with an owner's property rights so as to justify the defendant paying the owner the property's full value.[2] In *United States v. Collins*,[3] the Court of Appeals for the District of Columbia considered how the remedy of conversion could punish and deter unauthorized computer use. The court's decision affirming Collins's conviction for converting government property in violation of 18 U.S.C. § 641 illustrates that conversion is doctrinally ill-equipped to punish computer system abuse because most abuses will fail to provide a definable res to convert.

Peter Collins was employed by the Defense Intelligence Agency ("DIA") of the federal government as a civilian technical analyst.[4] In 1985, Collins earned access to a classified computer system used by the DIA to distribute military intelligence to DIA analysts.[5] Among its other features, the DIA computer system included a word processing program that Collins could access for employment purposes via a password issued to him by the agency.[6]

In addition to working for the DIA, Collins was an active ballroom dancer. In late 1985, Collins created a newsletter for the local chapter of the U.S. Amateur Ballroom Dance Association, which he titled the *Richmond Dance News*.[7] Collins produced and edited the newsletter using the DIA computer system, and allegedly used DIA photocopiers to make copies of the newsletter for distribution to the chapter members.[8] Collins continued to publish and edit the newsletter on government computers each month for two years. In 1987, he created a ballroom

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1. *See generally* Michael C. Gemignani, *What Is Computer Crime, and Why Should We Care?*, 10 ARK. LITTLE ROCK L.J. 55 (1987); Michael P. Dierks, *Computer Network Abuse*, 6 HARV. J.L. & TECH. 307 (1993).
2. *See* RESTATEMENT (SECOND) OF TORTS § 222A (1965).
3. 56 F.3d 1416 (D.C. Cir. 1995).
4. *Id.* at 1418.
5. *Id.*
6. *Id.*
7. *Id.*
8. *Id.*

dance competition calendar on the DIA computer system to supplement the *Richmond Dance News*. By 1991, the calendar had expanded to a length of seventeen pages.[9]

When the DIA discovered Collins's activity in 1991, investigators found hundreds of ballroom dance documents on the DIA computer system.[10] The government also uncovered evidence that Collins, in pursuit of his dancing hobby, had made at least 56,500 copies using government photocopiers.[11] Collins was subsequently charged with converting government property worth more than $100, in violation of § 641.[12] At trial, the prosecution submitted evidence to support the theory that Collins had converted the government's computer time and storage capacity, as well as its office supplies to make photocopies. Following a guilty verdict, Collins moved for a judgment of acquittal.[13] This motion was denied de facto by the entry of a judgment of conviction by District Court Judge William B. Bryant.[14]

The Court of Appeals for the D.C. Circuit affirmed in a per curiam opinion.[15] The court considered only two issues raised by Collins: first, whether § 641 criminalizes the conversion of intangible property; and second, whether the government met the evidentiary burden required to sustain the conviction.

The court first considered Collins's argument that § 641 did not prohibit the conversion of intangible property. While noting that common law conversion only concerned tangible property, the court concluded that § 641 encompassed intangible property as well. The court relied on two bases for this finding, one textual and the other structural. First, the court argued that the plain meaning of "thing of value" in § 641 included intangible property. As "thing of value" was the broadest phrase that Congress could have chosen, the court concluded that it could not reasonably limit the application of the statute to only tangible things of value.[16]

The court's second basis for finding that § 641 addresses intangibles was the U.S. Supreme Court's opinion in *Morissette v. United States*.[17]

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9. *Id.*
10. *Id.*
11. *Id.*
12. Section 641 states that "whoever...knowingly converts to his use...any...thing of value of the United States or of any department or agency thereof...shall be fined under this title or imprisoned not more than ten years." 18 U.S.C. § 641 (1988).
13. *Collins*, 56 F.3d at 1420.
14. *Id.* at 1416.
15. The case was heard before Judge Buckley, Judge Ginsburg, and Judge Sentelle. Judge Sentelle filed a dissenting opinion.
16. *Collins*, 56 F.3d at 1419
17. 342 U.S. 246 (1952).

In *Morissette*, the Supreme Court analyzed the legislative history of § 641 to determine whether a man who salvaged and resold spent bomb casings from a government bombing range could be prosecuted for conversion under § 641. According to the circuit court's interpretation of the *Morissette* decision, § 641 was designed to provide "a broad prohibition against the misappropriation of government property, regardless of common law technicalities."[18] The court concluded, therefore, that the scope of § 641 is best interpreted to include the misappropriation of intangible property.[19]

The court next considered whether the prosecution had met its evidentiary burden in proving that Collins had knowingly converted government property. Deferring substantially to the guilty verdict, the court asked whether substantial evidence existed to support the verdict to the extent that a reasonable jury could have found the defendant guilty beyond a reasonable doubt.[20]

Turning first to the computer use and storage capacity, the court concluded that the government had failed to meet its evidentiary burden. Because Collins's use of the government computer system did not exercise control over property in a way that seriously interfered with the rights of the DIA, the court held that there could not have been a conversion under § 641. Collins made substantial use of the DIA computer, reaping benefits for himself, but he had not deprived the government of its property in so substantial a way as to owe the government the full value of the property converted — a hallmark of conversion.[21] Because Collins's acts did not prevent other employees from performing their duties on the computer system, the court ruled that his use of the computer lacked the serious interference with property rights required to prove a conversion charge.[22]

Turning next to the conversion of tangible office supplies, the court found that the government did meet its evidentiary burden in showing that Collins had converted government paper and toner in making

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18. *Collins*, 56 F.3d at 1419.

19. *Id.* The court also noted that every circuit that has examined § 641 except the Ninth Circuit has interpreted § 641 to include intangible property, and that the Ninth Circuit's holding is questioned within the circuit itself. *Id.* at 1420.

20. *Id.* at 1420. *See* United States v. Musser, 873 F.2d 1513, 1519 (D.C. Cir.), *cert. denied*, 493 U.S. 983 (1989); United States v. Singleton, 702 F.2d 1159, 1163 (D.C. Cir. 1983).

21. *See* RESTATEMENT (SECOND) OF TORTS § 222A (1965).

22. The court analogized the case to United States v. Wilson, 636 F.2d 225 (8th Cir. 1980). In *Wilson*, a government employee charged with violating § 641 for converting secretarial time was acquitted because the secretary he enlisted to do his personal work had little or no government work assigned during the period in question. The fact that the government was never deprived of the use of its secretary saved Wilson from being convicted of conversion under § 641.

thousands of photocopies.[23] Co-workers had frequently seen Collins copying dance-related materials and leaving the photocopy room with them.[24] Furthermore, the government introduced Collins's letters to the treasurer of the Richmond chapter of the ballroom dance association saying that the paper and printing associated with the newsletter were free because he was able to get them "donated."[25] Because the original guilty verdict could have rested solely upon the copier usage, the court affirmed Collins's conviction.[26]

Writing in dissent, Judge Sentelle argued that § 641 did not "contemplate[] a prohibition on the conversion of intangible property."[27] Judge Sentelle noted that conversion was not historically applied to purely intangible property such as computer time, and reasoned that Congress, in enacting § 641, could have intended to exclude intangibles. In the face of such ambiguity, Judge Sentelle would have applied the rule of lenity[28] and construed the statute in the appellant's favor. As a result, he concluded that the charge of whether appellant converted computer time and storage was improperly sent to the jury and that the conviction should therefore be reversed.[29]

The per curiam opinion's view that § 641 criminalizes the conversion of intangible property is the better interpretation of § 641. Judge Sentelle is correct that conversion has not often been used to address the misappropriation of intangibles; however, this does not mean that conversion was not intended to include intangible misappropriation were the proper situation to arise.[30] In essence, Judge Sentelle has mistakenly used conversion's predominance in the tangible realm as the basis for a rule that it cannot exist in the intangible realm.

The reason conversion has not often been applied to intangibles is not because it cannot be, however, but because its doctrinal contours fit most naturally in a material world. Conversion historically provided a tort remedy to an owner whose material property was taken from him and used by another; the remedy is the payment by the taker to the owner

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23. *Collins*, 56 F.3d at 1421.

24. *Id.*

25. *Id.*

26. *Id.* (citing Griffin v. United States, 502 U.S. 46, 58-59 (1991)).

27. *Id.* at 1422 (Sentelle, J., dissenting).

28. The rule of lenity provides that "ambiguity concerning the ambit of criminal statutes should be resolved in favor of lenity." Rewis v. United States, 401 U.S. 808, 812 (1971).

29. *Collins*, 56 F.3d at 1422 (Sentelle, J., dissenting) (citing Yates v. United States, 354 U.S. 298, 312 (1957)).

30. For examples of conversion applied to intangible property, *see, e.g.*, United States v. Croft, 750 F.2d 1354, 1361 (7th Cir. 1984) (conversion of services rendered); United States v. May, 625 F.2d 186, 191-92 (8th Cir. 1980) (conversion of flight time).

of the value of the misappropriated property.[31] This regime works elegantly in the tangible sphere because the existence of a tangible and definable res converted allows the cause of action in tort to simultaneously restore both parties to their former state by restoring the value of the res.

For example, when Collins used the government's photocopiers, he denied the government the paper and toner that belonged to it by appropriating those supplies for his own use. The res taken is clear: the paper and toner. Had the government pursued a tort action against Collins, it could have been compensated for the value of these tangible goods taken.[32] The fact that there was a clearly defined res converted, upon which a valuation could be taken, was central to the ease with which the court found that Collins had converted the government's tangible paper and toner.

In the intangible realm of cyberspace, however, the frequent impossibility of defining a res is a barrier to applying conversion to prevent the unauthorized use of computer systems. When the facts happen to supply a distinctly defined res, then the doctrine works admirably. In the computer realm, however, this only occurs when the computer usage is commercially available to some portion of the general public at a cost.[33] The federal government encounters such a situation when it sells time on government supercomputers to scientific researchers who need billions of numerical operations performed. Because the government can sell supercomputer time on the free market, misappropriation of supercomputer time by an unauthorized user will deprive the government of precisely the same computer time that could have been sold to another client. In this situation, the conversion of intangible property is sensible because the government has a defined amount of property that has been converted to the use of another. Just as in the treatment of the paper and toner, the value of the property misappropriated by the user equals that lost by the owner, assuming that the property has a defined market value.

When the computer usage is not available for commercial sale, however, attempts to find a conversion are blocked by an inability to define a res. In such cases, conversion is ill-suited as a method for prevention or correction of the wrong. Because many computer systems

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31. See RESTATEMENT (SECOND) OF TORTS § 225 (1965).

32. Even in the criminal sphere, the valuation of the converted goods is important because § 641 imposes different statutory maximum punishments depending on whether the property is valued at more than one hundred dollars. 18 U.S.C. § 641 (1988).

33. *See* Gary J. Valeriano, *Pitfalls in Insurance Coverage for "Computer Crimes,"* 59 DEF. COUNS. J. 511, 513 (1992).

fit into this category, conversion is an ineffective tool to punish and deter unauthorized computer usage.

The difficulty defining a res in the case of non-commercial computer usage is illustrated by examining each of the possible ways the D.C. Circuit in *Collins* could have defined the intangible res allegedly converted. The res lost by the government is clearly not the computer hardware itself: use of a computer system does not deprive the owner of the computer hardware in any way. More subtly, the res is not the market value of the computer time or storage, assuming that a market price for such a service could be calculated.[34] The value of the time and storage measures the benefit to the defendant, not the loss to the owner that is the core of conversion.[35] If the system is not commercial, then the use of the system neither places a cost on the owner nor deprives the owner of potential revenues. As a result, the defendant's gain does not deprive the owner of any res upon which to base a charge of conversion.[36]

Finally, the res is not the damage to the owner that arises as a consequence of the unauthorized use. For example, imagine that an unauthorized user accesses a computer system and operates a program so enormous that the system overloads and crashes. While the government might sustain considerable damage from the crash in lost information and computing time, this is a consequential damage that cannot provide a suitable res for the doctrine of conversion to address.[37] The lost information and time has not been converted to the use of the defendant, even though it was the defendant's unauthorized action that caused the harm. As a result, even those unauthorized computer uses that

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34. For a discussion on the need for a broad market in intangible property for conversion of intangibles to be sensible, see David G. Duggan, *Conversion of Intangible Property Rights: An Economic Approach*, 81 ILL. B.J. 36 (1993).

35. Notably, valuing the benefit to the defendant would lead to unjust enrichment; Collins's use would benefit the government by allowing it to reap a windfall for computer potential that the government would not itself harness.

36. *Cf.* State v. McGraw, 480 N.E.2d 552 (Ind. 1985). The defendant in McGraw had accessed a city government computer system and was charged under a state theft statute that closely resembles § 641. The Supreme Court of Indiana found that McGraw had not deprived the State of any property despite McGraw's obvious benefit and therefore acquitted McGraw of theft. The fact that McGraw could benefit without converting the city's property was lost on Justice Pivarnik, who argued in dissent that McGraw's use "was taking that which was property of the City and converting it to his own use, thereby depriving the City of its use and value." *Id.* at 555 (Pivarnik, J., dissenting).

37. *See, e.g.*, Duggan *supra* note 34, at 38-39. Conversion damages restore to the owner only the value of that property taken by the defendant. The damages suffered by the owner as a consequence of the missing property are not compensated by conversion; therefore, the value of the consequential damages cannot provide a res converted. *See* RESTATEMENT (SECOND) OF TORTS § 220 (1965).

inflict harm substantial enough to bring a lawsuit will fail to provide a suitable res for an action of conversion.

A particularly interesting case occurs when unauthorized computer use prevents another employee from using the system by taking the last available terminal. In this situation, a res exists but fails to support an action of conversion to punish the harm. The res converted is the use of the terminal, which is simultaneously gained by the unauthorized user just as it is lost by the authorized user. However, the value of the res here is essentially zero, because mere access to a computer terminal is not valuable per se. What is valuable is the work performed as a consequence of the access, work which is not part of the res. Because the tort of conversion does not restore consequential damages to the property owner, a party bringing an action for conversion for use of its computer system in this situation would fair poorly in court. If a tort action were brought, the result would be a judgment for the plaintiff for nominal damages reflecting the valuelessness of the denied use of the system. If the computer system were owned by the federal government, a criminal action brought under § 641 would fail because the denied access itself is not a "thing of value."[38]

The failure to define a res in many intangible applications is the barrier to applying conversion throughout the intangible realm that the judges grappled with in *Collins*. Because no res can be defined in the great majority of cases, § 641 is an ill-suited tool to try to deter unauthorized use of federal government computer systems.[39]

Conversion's inability to serve as a useful doctrinal tool to deter unauthorized computer use has led to a number of federal and state statutory measures to meet this important need. The Computer Fraud and Abuse Act punishes a broad range of computer crimes.[40] These crimes include the unauthorized access and procurement of classified national defense data by computer,[41] intentional access to federal

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38. The D.C. Circuit seemed to miss this subtlety in *Collins*, because the court based its conclusion that no computer time was converted on the fact that no DIA employees had been deprived of computer use as a result of Collins's ballroom dancing activities. *See Collins*, 56 F.3d at 1420.

39. A problem of intent also arises with trying to use § 641 to prevent unauthorized computer usage. A conviction under § 641 requires proof of criminal intent to wrongfully deprive another of possession of property. *See* Morissette v. United States, 342 U.S. 246, 276 (1952). While the court in *Collins* ignored the § 641 intent requirement, lack of criminal intent was central to the holding of United States v. Wilson, 636 F.2d 225 (8th Cir. 1980), relied upon by the court as a close analogy to *Collins*. Showing that a computer user has intent to deprive the computer owner of property seems a daunting task, especially in light of the almost universal practice employees have of using their office computers for occasional personal work.

40. 18 U.S.C. § 1030 (1995).

41. 18 U.S.C. § 1030(a)(1) (1995).

government computers by those who are not allowed access to federal government computers of that department or agency,[42] and tampering with a computer system used in interstate commerce.[43] In addition, § 1343 of the Mail Fraud chapter of the U.S. Code punishes fraudulent theft of computer services procured over phone lines.[44] A number of state remedies also exist.[45]

Of those statutes presently in effect, the most promising framework is provided by Washington state's computer trespass statute.[46] The statute criminalizes unauthorized entries into computer systems by analogizing computer system access to a trespass.[47] The doctrine of trespass is well-suited to prevent unauthorized computer use; it protects owners' proprietary right to their property without requiring that actual damages be incurred. Further, trespass can compensate system owners in tort because damages include the consequences of the trespass even if no harm was intended.[48]

It is trespass, not conversion, that provides the common law framework best suited to prevent computer system abuse. Because unauthorized computer usage most closely resembles a trespass[49] — a trespass onto cyberspace — modifications of the traditional trespass doctrines to include trespasses in cyberspace can be expected to provide a particularly effective way to prevent unauthorized computer usage in the future.

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42. 18 U.S.C. § 1030(a)(3) (1995). The statute punishes those who "intentionally, without authorization to access any computer of a department or agency of the United States, accesses such a computer of that department or agency that is exclusively for the use of the Government of the United States." *Id.* Note that Collins could not be charged under this sub-section because he was granted access to the DIA computer system for employment purposes. *See Collins*, 56 F.3d at 1418.

43. 18 U.S.C. § 1030(a)(5) (1995).

44. 18 U.S.C. § 1343 (1988). *See also* David J. Loundy, *E-Law: Legal Issues Affecting Computer Information Systems and Systems Operator Liability*, 3 ALB. L.J. SCI. & TECH. 79, 107 (1993).

45. *See* Anne W. Branscomb, *Rogue Computer Programs and Computer Rogues: Tailoring the Punishment to Fit the Crime*, 16 RUTGERS COMPUTER & TECH. L.J. 1, 30-31, 61 (1990).

46. WASH. REV. CODE, tit. 9A, ch. 52, § 110 (1988).

47. *See* State v. Olson, 735 P.2d 1362, 1364 (Wash. Ct. App. 1987).

48. *See, e.g.*, Cleveland Park Club v. Perry, 165 A.2d 485 (D.C. 1960).

49. *See, e.g.*, State v. McGraw, 480 N.E.2d 552, 554 (Ind. 1985) (arguing that unauthorized computer use "is in the nature of a trespass").