STATE OF MINNESOTA
IN COURT OF APPEALS
A13-2233

State of Minnesota,
Respondent,

vs.

Brittny Nicole Ziegler,
Appellant.

Filed November 3, 2014
Affirmed
Larkin, Judge

Olmsted County District Court
File No. 55-CR-12-1066

Lori Swanson, Attorney General, St. Paul, Minnesota; and

Mark A. Ostrem, Olmsted County Attorney, James P. Spencer, Assistant County Attorney, Rochester, Minnesota (for respondent)

Bethany L. O'Neill, Assistant State Public Defender, St. Paul, Minnesota (for appellant)

Considered and decided by Smith, Presiding Judge; Larkin, Judge; and Bjorkman, Judge.

S Y L L A B U S

Machine-generated data that do not contain the statements of human witnesses are not testimonial statements that implicate a defendant's right to confrontation under the Sixth Amendment.

O P I N I O N

LARKIN, Judge

Appellant challenges her convictions of criminal vehicular operation and reckless driving. She argues that the admission of data collected from a sensing and diagnostic module in her vehicle violated her right to confrontation under the Sixth Amendment of the United States Constitution. Because the data are not testimonial statements within the meaning of the Confrontation Clause, we affirm.

FACTS

Appellant Brittny Nicole Ziegler was driving eastbound on Highway 14, a two-lane road in Olmsted County. A Ford Focus passed Ziegler's vehicle and then passed another vehicle in front of her. Ziegler believed that the Ford nearly hit an oncoming vehicle and became upset with its driver. Ziegler decided to teach the Ford's driver "a little bit of a lesson." Ziegler accelerated, tailgated the Ford, and then pulled into the westbound lane to pass it. As she passed the Ford, Ziegler "flicked [the driver] off." In response, the driver of the Ford sped up to prevent Ziegler from passing and then slowed down when Ziegler slowed down, preventing Ziegler from reentering the eastbound lane. Ziegler finally accelerated enough to pull in front of the Ford. But when she returned to the eastbound lane the cars collided and rolled into the ditch. Both of the vehicles' occupants were injured. Respondent State of Minnesota charged Ziegler with three counts of criminal vehicular operation and one count of reckless driving.

The case was tried to a jury. At trial, the state called several witnesses, including Sergeant Mark Inglett, a crash reconstructionist with the Minnesota State Patrol.

Sergeant Inglett testified that he reconstructed the accident in this case relying, in part, on data collected from a sensing and diagnostic module (SDM) in Ziegler's vehicle. Sergeant Inglett testified that an SDM is a type of "event data recorder" that collects and records information such as vehicle speed, engine speed, and brake-switch activation. Sergeant Inglett explained that the SDM is idle until it senses a change in velocity or an impact, at which point it records data from other devices in the vehicle.

Sergeant Inglett testified that another trooper, Sergeant Langford, plugged a device that runs crash-data-retrieval software into Ziegler's vehicle to copy or "image" the SDM data. The software generated a report that contained data regarding Ziegler's vehicle speed and brake-switch activation, at one-second intervals. Sergeant Inglett testified that the software generated the report containing the SDM data without input from Sergeant Langford and that Sergeant Langford had no way to manipulate the report. Sergeant Langford provided the report to Sergeant Inglett in a portable document format.

Sergeant Langford did not testify at trial. Sergeant Inglett testified that he was not present when Sergeant Langford downloaded the data and that he did not know if Sergeant Langford followed the standard protocol when downloading the data. Sergeant Inglett also testified that he was not present when the software generated the report and that he could not independently verify whether the SDM was working properly on the day of the accident. Ziegler objected to Sergeant Inglett's testimony regarding the vehicle-speed and brake-switch-activation data on the grounds of "authenticity, foundation, reliability and hearsay." Ziegler also argued that Sergeant Inglett's testimony regarding the SDM data violated her right to confrontation under *Crawford v.*

Washington, 541 U.S. 36, 124 S. Ct. 1354 (2004). The district court overruled Ziegler's objection and allowed Sergeant Inglett to testify "about the data that he relied on in reaching his conclusions."

Based on the data that he received from the SDM, Sergeant Inglett testified that Ziegler's car was traveling at 71 miles per hour five seconds before the crash. Sergeant Inglett further testified that Ziegler's car was traveling at 47 miles per hour four seconds before the crash, six miles per hour three seconds before the crash, three miles per hour two seconds before the crash, and nine miles per hour one second before the crash. Sergeant Inglett also testified that Ziegler's brake switch was activated eight seconds before the crash, seven seconds before the crash, six seconds before the crash, four seconds before the crash, three seconds before the crash, and two seconds before the crash. But the brake switch was deactivated five seconds before the crash and one second before the crash.

Sergeant Inglett concluded that "when [Ziegler] completed her pass [of the Ford], she also applied the brakes and then that reduced speed," leaving the driver of the Ford "no choice but to go out onto the shoulder or rear-end [Ziegler's] vehicle." Sergeant Inglett testified that the driver of the Ford drove onto the shoulder and then overcorrected, which led to the collision.

The jury found Ziegler guilty as charged. Ziegler moved the district court for a new trial and to vacate the verdict. Ziegler argued that the district court erred by allowing admission of the SDM data through Sergeant Inglett's testimony because the data were not authenticated, were not supported by foundation, were admitted without a

Frye-Mack hearing, and because the data were hearsay statements. Ziegler also argued that the testimony regarding the SDM data violated her rights under the Confrontation Clause and *Crawford*. The district court denied Ziegler's motion. The district court adjudicated Ziegler guilty, stayed imposition of her sentence, and placed her on probation. This appeal follows.

ISSUE

Are machine-generated data that do not contain the statements of human witnesses testimonial statements that implicate a defendant's right to confrontation under the Sixth Amendment?

ANALYSIS

The Sixth Amendment guarantees a criminal defendant the right "to be confronted with the witnesses against him." U.S. Const. amend. VI. The Confrontation Clause bars "admission of testimonial statements of a witness who did not appear at trial unless [the witness] was unavailable to testify, and the defendant had had a prior opportunity for cross-examination." *Crawford*, 541 U.S. at 53-54, 124 S. Ct. at 1365. "Whether the admission of evidence violates a criminal defendant's Confrontation Clause rights is a question of law that [appellate courts] review de novo." *Hawes v. State*, 826 N.W.2d 775, 786 (Minn. 2013).

Ziegler's sole argument on appeal is that the district court "violated [her] Sixth Amendment right to confrontation by admitting the SDM data through the testimony of Sergeant Inglett." Ziegler contends that the SDM data are testimonial statements,

recognizing that this is an issue of first impression for Minnesota appellate courts. Our analysis of that issue begins with *Crawford*.

In *Crawford*, the Supreme Court explained that "the principal evil at which the Confrontation Clause was directed was the civil-law mode of criminal procedure," in which "[j]ustices of the peace or other officials examined suspects and witnesses before trial." 541 U.S. at 50, 43, 124 S. Ct. at 1363, 1359. "These examinations were sometimes read in court in lieu of live testimony, a practice that occasioned frequent demands by the prisoner to have his 'accusers,' *i.e.* the witnesses against him, brought before him face to face." *Id*. at 43, 124 S. Ct. at 1359 (quotation omitted). The Supreme Court stated that "[t]he text of the Confrontation Clause reflects this focus. It applies to 'witnesses' against the accused—in other words, those who bear testimony." *Id*. at 51, 124 S. Ct. at 1364 (quotations omitted). Thus, the history and purpose of the Confrontation Clause show that it provides a right to confront human beings who can be brought into court and subjected to the "crucible of cross-examination." *Id*. at 61, 124 S. Ct. at 1370.

Crawford describes the class of testimonial statements that are subject to the Confrontation Clause as follows:

> Various formulations of this core class of testimonial statements exist: *ex parte* in-court testimony or its functional equivalent—that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially; extrajudicial statements contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions; statements that were made under circumstances

> which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.

Id. at 51-52, 124 S. Ct. at 1364 (citations and quotations omitted). We observe that these examples all involve statements made by human beings.

The United States Supreme Court has applied *Crawford* in cases in which evidence regarding the results of forensic testing or analysis was introduced at trial without testimony from the person who performed the testing or analysis. For example, in *Melendez-Diaz v. Massachusetts*, the Supreme Court concluded that "three 'certificates of analysis' showing the results of forensic analysis performed on seized substances" were testimonial statements and that the analysts who tested the substances were "witnesses" for Sixth Amendment purposes. 557 U.S. 305, 308, 310-11, 129 S. Ct. 2527, 2531, 2532 (2009). And in *Bullcoming v. New Mexico*, the Supreme Court concluded that a forensic laboratory report certifying the defendant's blood-alcohol concentration was testimonial and that when the state elected to introduce the report, the analyst who performed the testing "became a witness [the defendant] had the right to confront." 131 S. Ct. 2705, 2709, 2716-17 (2011).

Minnesota appellate courts have similarly held that reports prepared by individuals regarding forensic analysis or testing are testimonial statements within the meaning of the Sixth Amendment. In *State v. Caulfield*, the Minnesota Supreme Court concluded that a report prepared by a Bureau of Criminal Apprehension (BCA) lab analyst that identified a substance seized from the defendant as cocaine "was testimonial evidence under *Crawford*," when the state offered the report in lieu of calling the analyst as a witness at

trial. 722 N.W.2d 304, 306-07, 309-10 (Minn. 2006). Similarly, in *State v. Weaver*, this court held that a laboratory technician's report regarding the results of carbon-monoxide testing was testimonial, when the state offered testimony from another person regarding the contents of the report instead of calling the lab tech as a witness at trial. 733 N.W.2d 793, 799-800 (Minn. App. 2007), *review denied* (Minn. Sept. 18, 2007).

Melendez-Diaz, *Bullcoming*, *Caulfield*, and *Weaver* do not determine the issue presented in this case because in those cases, the objectionable evidence was not limited to machine-generated data; it included out-of-court statements made by people regarding the data. The Supreme Court in *Bullcoming* noted that:

> [The analyst's] certification, however, reported *more* than a machine-generated number.
>
> [He] certified that he received [the defendant's] blood sample intact with the seal unbroken, that he checked to make sure that the forensic report number and the sample number corresponded, and that he performed on [the] sample a particular test, adhering to a precise protocol. . . . These representations, relating to past events and human actions not revealed in raw, machine-produced data, are meet for cross-examination.

131 S. Ct. at 2714 (citations and quotation omitted) (emphasis added). Justice Sotomayor wrote separately, partly "to emphasize the limited reach of the Court's opinion." *Id*. at 2719 (Sotomayor, J., concurring). Justice Sotomayor noted that "this is not a case in which the State introduced only machine-generated results, such as a printout from a gas chromatograph. . . . Thus, we do not decide whether . . . a State could introduce (assuming an adequate chain of custody foundation) raw data generated by a machine in conjunction with the testimony of an expert witness." *Id*. at 2722.

Although the United States Supreme Court has not specifically addressed whether machine-generated data are testimonial statements, several federal circuit courts have addressed the issue and concluded that such data are not testimonial statements within the meaning of the Confrontation Clause. The most factually similar case to this case is *United States v. Lamons*, which involved "raw billing data" that had been "recorded onto [a telephone company's] data reels" and transferred to a compact disc by means of a fully automated process. 532 F.3d 1251, 1264 (11th Cir. 2008). A person used software to decrypt the data and print it in spreadsheet form. *Id*. at 1262. At trial, both the compact disc and spreadsheet were received as evidence. *Id*. at 1261. On appeal, the defendant argued that the compact disc and spreadsheet "amounted to testimonial hearsay not properly admissible under *Crawford*." *Id*.

The Eleventh Circuit considered whether the evidence qualified as "the kind of statements that fall within the scope of the Confrontation Clause." *Id.* at 1262-63. The circuit court reasoned that "[i]n light of the constitutional text and the historical focus of the Confrontation Clause, we are persuaded that the witnesses with whom the Confrontation Clause is concerned are *human* witnesses, and that the evidence challenged in this appeal does not contain the statements of human witnesses." *Id*. at 1263. The circuit court also reasoned that under the definition of "statement" in the federal hearsay rule, "the statements in question are the statements of machines, not statements of persons." *Id*. The circuit court concluded that "machine-generated statements" are exempt "from the purview of the Confrontation Clause." *Id*. at 1264.

The Eleventh Circuit based its decision in *Lamons* on two federal circuit court decisions, *United States v. Moon*, 512 F.3d 359 (7th Cir. 2008), and *United States v. Washington*, 498 F.3d 225 (4th Cir. 2007). 532 F.3d at 1263. In *Moon*, the Seventh Circuit explained that "the Confrontation Clause does not forbid the use of raw data produced by scientific instruments, though the interpretation *of* those data may be testimonial." 512 F.3d at 362. The circuit court noted that a chemist's report admitted into evidence had "two kinds of information: the readings taken from the instruments, and [the chemist's] conclusion that these readings mean that the tested substance was cocaine" and that only "[t]he latter is testimonial as the Supreme Court used that word in *Crawford*." *Id*. at 361. In *Washington*, the Fourth Circuit concluded that "printed data" generated from chromatograph machines operated by lab technicians were not "statements *of the lab technicians* who operated the machines" and thus "not out-of-court statements made by declarants that are subject to the Confrontation Clause." 498 F.3d at 229-30.

Like the circuit courts, we agree that machine-generated "statements" are exempt from the purview of the Confrontation Clause because the Confrontation Clause is concerned with the statements of human witnesses. Unlike the circuit courts, we find it unnecessary to rely on the definition of a statement under the hearsay rules because the constitutional text and the historical focus of the Confrontation Clause, as described in *Crawford*, clearly establish that the Confrontation Clause is concerned with human witnesses. We therefore follow the approach of the Eleventh Circuit and consider

whether "the evidence challenged in this appeal . . . contain[s] the statements of human witnesses." *Lamons*, 532 F.3d at 1263.

In addressing that issue, the Eleventh Circuit reasoned that:

> [T]he relevant point is that no human intervened at the time the raw billing data was "stated" by the machine—that is, recorded onto [the telephone company's] data reels. The process by which the data was extracted from the reels and placed onto compact CDs . . . was similarly fully automated. Finally, [the person] did not alter the underlying data on [the CD] when she created a printout of calls made to [a specific] telephone number . . . ; she merely utilized [software] in pre-programmed fashion to read the encrypted data on [the CD] and to format the data so as to indicate the relevant portion.

Id. at 1264. The circuit court noted that "[t]hese are not, for example, 'computer data compilations' of records manually inputted into a computer by human declarants." *Id*. at 1264 n.24.

In its posttrial order regarding Ziegler's Confrontation Clause argument, the district court explained that:

> An SDM module records event data which can be downloaded with a cable and the correct software. The data cannot be manipulated while it is being gathered and cannot be overwritten once it is recorded. Unlike[] the results of blood alcohol testing, DNA tests or tests of alleged controlled substances, the SDM data is not drawn out of some other piece of evidence by the application of certain tools and procedures by a scientist or technician with certain qualifications. It is simply read from the device by downloading it to a computer. The data is then passed on to someone else who reads and interprets it. In this case that person was Sgt. Inglett who was in court and subject to cross examination.

Ziegler does not challenge the district court's findings on appeal. Thus, the record shows that just as in *Lamons*, no human intervened during the collection and recording of the SDM data. And, although a person used software and a device to extract and print the data from the SDM, that person did not and could not alter or manipulate the data.

Nonetheless, Ziegler attempts to portray the SDM data as the statements of human witnesses. Specifically, she asserts that the SDM data are testimonial statements of the people who wrote the computer program that operates the SDM. We disagree. On this point, the reasoning of the Eleventh Circuit is persuasive: "To be sure, there can be no statements which are wholly machine-generated in the strictest sense; all machines were designed and built by humans. But certain statements involve so little intervention by humans in their generation as to leave no doubt that they are wholly machine-generated for all practical purposes."[1] *Id*. at 1263 n.23.

Like the circuit court in *Lamons*, we recognize that the evidence in this case occupies "the far end of the spectrum." *Id*. at 1264 n.25. *Lamons* notes that an example of evidence at the other end of the spectrum is a judicial opinion, because it is a "wholly human-generated statement, despite the fact that a machine—a word processor on a computer—aided its production." *Id*. The *Lamons* court also noted, and we agree, that

[1] Moreover, *Crawford* clearly described a testimonial statement as an ex parte statement of a person that implicates another person in a crime. *See* 541 U.S. at 50-52, 124 S. Ct. at 1363-64 (stating that "the principal evil at which the Confrontation Clause was directed was . . . [the] use of *ex parte* examinations as evidence against the accused," and describing testimonial statements as "*ex parte* in-court testimony or its functional equivalent"). The people who wrote the computer program that operates the SDM did not make a statement implicating Ziegler in the underlying offense; they simply wrote computer code.

"[t]he characterization of statements toward the middle of the spectrum, which includes a statement that may have been generated through the contemporaneous lens of human interpretation and analysis, poses a more difficult problem." *Id.* But we easily conclude that the SDM data in this case occupy the wholly machine-generated end of the spectrum. The machine-generated SDM data in this case do not contain the statements of human witnesses.

Lastly, we address Ziegler's argument that because the data evidence was an important part of the case against her, it should not have been admitted unless its reliability was meaningfully tested through cross-examination. Specifically, she contends that she had a right to cross-examine Sergeant Langford regarding his retrieval of the data from the SDM even though the state did not offer any statement by that officer at trial.[2] Ziegler's argument conflates evidentiary requirements based on authenticity and foundation with the constitutional right of confrontation.[3] The United States Supreme Court recognized this distinction in *Melendez-Diaz*, explaining:

> [W]e do not hold, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution's case. While . . . it is the obligation of the prosecution to establish the chain of custody, this does not mean that everyone who laid hands on the evidence must be called. . . . It is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence; but what

[2] At oral argument, Ziegler's attorney indicated that she was not aware of any report or statement made by Sergeant Langford regarding his involvement in the investigation.

[3] Ziegler does not challenge the district court's rulings regarding authenticity and foundation in this appeal.

> testimony *is* introduced must (if the defendant objects) be introduced live.

557 U.S. at 311 n.1, 129 S. Ct. at 2532 n.1 (citations and quotation omitted).

The circuit-court opinions cited above also recognize the distinction between objections based on authenticity and those based on the Confrontation Clause. "To say that a wholly machine-generated statement is unreliable is to speak of mechanical error, not mendacity. The best way to advance the truth-seeking process with respect to such statements is not through cross-examination of the machine operator, but through the process of authentication as provided for in [the federal rules of evidence]." *Lamons*, 532 F.3d at 1265; *see also Washington*, 498 F.3d at 231 ("Any concern[] about the reliability of such machine-generated information is addressed through the process of authentication and not by . . . Confrontation Clause analysis."). In sum, Ziegler's concerns regarding the reliability of the data and the data-retrieval process are not resolved under the Confrontation Clause.

In conclusion, we hold that machine-generated data that do not contain the statements of human witnesses are not testimonial statements within the meaning of the Confrontation Clause. Thus, the SDM data in this case are not testimonial statements and admission of the data through Sergeant Inglett's testimony did not trigger Ziegler's right of confrontation under the Sixth Amendment. This case simply does not present a situation in which a person's ex parte statement was offered against a criminal defendant at trial in lieu of testimony, which is the primary concern of the Confrontation Clause. *See Crawford*, 541 U.S. at 50-52, 124 S. Ct. at 1363-64.

D E C I S I O N

Because the machine-generated SDM data in this case are not testimonial statements within the meaning of the Confrontation Clause, the admission of that data through a witness's trial testimony did not violate Ziegler's right to confrontation under the Sixth Amendment.

Affirmed.