

**The Miranda Warning:
Readability and the Rights of Children with Disabilities**

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OVERVIEW

Prior to 1966, the Supreme Court sought to define the Constitution's protection against self-incrimination with regard to juveniles, to the mentally impaired, and to psychological coercion by police (see *Gallegos v. Colorado*, 1962; *Blackburn v. Alabama*, 1960; *Fikes v. Alabama*, 1957; *Chambers v. Florida*, 1940). In *Gallegos v. Colorado*, the Supreme Court, "used a totality of circumstances approach but suggested that special tests be used for a juvenile because 'a 14 year old boy no matter how sophisticated 'cannot be expected to comprehend the significance of his actions'" (Institute of Judicial Administration, n.d.,

In 1966, the United States Supreme Court consolidated its previous defenses against self-incrimination in *Miranda v. Arizona* (1966). The Court ruled individuals had certain basic rights and protections under the Fifth and Fourteenth Amendments against self-incrimination. These guarantees included the right to remain silent, the right to legal counsel prior to or during questioning, and the right to obtain legal counsel at public expense, if necessary. Although some have argued the Miranda Warning has unnecessarily encumbered law enforcement officials, last year, the Supreme Court upheld *Miranda* in a 7-2 decision (*Dickerson v. United States*, 2000).

Despite these rulings, individual judges and juries have remained as the initial determiners if law enforcement officials violated an individual's rights, especially in regards to juveniles and those with mental impairments (see *Fare v. Michael*, 1979; *In Re Gault*, 1967; *Vance v. Bordenkircher*, 1982; *Cooper v. Griffin*, 1972; *Henderson v. Detella*, 1996; *United States v. Masters*, 1976). Two significant cases are *In re Gault* and *Fare v. Michael C.* In 1967, the Supreme Court extended the Miranda protections to juveniles with regard to police procedures for interrogation in *In re Gault*. In essence, the Court sought to insure that

adolescents did not waive their Miranda rights due to their potential vulnerability by clearly stating three rights for juvenile defendants.¹ First, police must give timely written notice “of the specific charge or factual allegations” prior to the initial hearing of the case against the juvenile (*In Re Gault* 387 U.S. 1 (1967); 1967 U.S. LEXIS 1478, at *29). Second, police must inform children and parents of their right to a publicly-funded attorney. Third, the Constitutional protection against self-incrimination applies to juveniles so the confession is “not the product of ignorance of rights or of adolescent fantasy, fright or despair.”

In *Fare v. Michael C.*, the Supreme Court identified several factors to determine the “totality of circumstances” when considering whether a juvenile waived his Miranda Rights knowingly, intelligently, and voluntarily.

This totality-of-the-circumstances approach is adequate to determine whether there has been a waiver even where interrogation of juveniles is involved. We discern no persuasive reasons why any other approach is required where the question is whether a juvenile has waived his rights, as opposed to whether an adult has done so. The totality approach permits -- indeed, it mandates -- inquiry into all the circumstances surrounding the interrogation. This includes evaluation of the juvenile's age, experience, education, background, and intelligence, and into whether he has the capacity to understand the warnings given him, the nature of his Fifth Amendment rights, and the consequences of waiving those rights. (*Fare v. Michael, C.*, 442 US 707 (1979); 1979 U.S. LEXIS 133, at *17)²

The Institute of Juvenile Justice's (1979) publication *The Standards Relating to Police Handling of Juvenile Problems* includes a detailed discussion about the rights of juveniles, relevant case law and associated issues.

¹ In the original version you cited LEXIS' summary of *In re Gault* and point four does not apply to article's thesis.

² In the original version you cited the dissenting opinion.

Grisso (1998a) described two broad classes of variables courts should consider when examining the totality of circumstances: the circumstances of the interrogation and the defendant's individual characteristics. He sorted circumstances of the interrogation process into several time periods including: the days prior to the arrest; the time of the arrest; transportation to the police station; at the station prior to questioning; questioning; parent and youth communications prior to a waiver; and the description and sequence of the questioning process. Grisso also explored several factors pertaining to the juvenile in question including age, education and level of intelligence.

There is a growing body of case law that includes motions to suppress confessions on the grounds that a juvenile did not give a waiver of the Miranda Warnings voluntarily, knowingly or intelligently. Such case law has been identified at the United States Appellate, United States District and State Court levels:

United States Appellate Courts

United States v. Male Juvenile, 121 F.3d 34 (2nd Cir. 1997), 1997 U.S. App. LEXIS 19219
Henderson v. Detella, 97 F.3d 942 (7th Cir. 1996), 1996 U.S. App. LEXIS 26112
Singleton v. Thigpen, 847 F.2d 668 (11th Cir. 1988), 1988 U.S. App. LEXIS 18057
Vance v. Bordenkircher, 692 F.2d 978 (4th Cir. 1982), 1982 U.S. App. LEXIS 24114

United States District Courts

Powell v. Bowersox, 895 F. Supp. 1298 (E.D.Missouri 1995), 1995 U.S. Dist. LEXIS 11887
United States v. Young, 355 F. Supp. 103 (E.D.Penn. 1973), 1973 U.S. Dist. LEXIS 15084
United States v. Blocker, 354 F. Supp. 1195 (D.D.C. 1973), 1973 U.S. Dist. LEXIS 15002
United States ex rel. Bishop v. Rundle, 309 F. Supp. 312 (E.D.Penn. 1970), 1970 U.S. Dist. LEXIS 12953
United States ex rel. Lynch v. Fay, 184 F. Supp. 277 (S.D.N.Y. 1960), 1960 U.S. Dist. LEXIS 2847

Supreme Court of Alabama

Rutledge v. State, 482 So. 2nd 1250, 1983 Ala. Crim. App. LEXIS 4703

Appellate Court of Illinois

In re M.W., 314 ILL. App. 3d 64, 731 N.E. 2d 358, 2000 Ill. App. LEXIS 442

Supreme Judicial Court of Massachusetts

Commonwealth v. Daniels, 366 Mass. 601; 321 N.E.2d 822, 1975 Mass. LEXIS 1121

Supreme Court of Missouri

Wilson v. State of Missouri, 813 S.W.2d 833; 1991 Mo. LEXIS 77

Court of Appeals of Missouri

State of Missouri, v. Jack, 813 S.W.2d 57, 1991 Mo. Appeals LEXIS 921

Court of Appeals of Wisconsin

Jennifer A.J. v. State of Wisconsin, 94-2735, 1995 Wisc. App. LEXIS 1024

Usually, in such cases, defendants and witnesses presented evidence and testimony of levels of intelligence that are below the average range, of poor academic performances, of histories of special education and of low levels of reading and reading comprehension in general. However, in the vast majority of cases, courts have determined that the defendant gave a “voluntary, knowing and intelligent” waiver of his rights. Usually, the decisions of lower courts are upheld upon appeal. However, in at least some cases, higher courts reversed such decisions (see *United States v. Blocker*, 1973; *In re M.W.*, 2000; *Commonwealth v. Daniels*, 1975). Further review of relevant case law revealed dissenting opinions were rarely offered when the defendant’s levels of intelligence and reading comprehension were considered as part of the totality of circumstances (see *Vance v. Bordenkircher*, 1982; *Jennifer A.J. v. State of Wisconsin*, 1995; *Wilson v. State*, 1991).

The Concept Of Readability

Forensic linguists have explored the relationship between language and the law (Ainsworth, 1993; Solan, 1999; Shuy, 2000; Tiersma, 1999). Tiersma provided an informative discussion about linguistic aspects of the Miranda Warning. He explored sentence embedding and complexity. “Embedding results when clauses are joined or introduced by *and*, *but*, *or*,

when, if so, and that.” (Tiersma, 1999, p. 56). For example, he noted most listeners process two or three levels of embedding with little challenge. However, he indicated the Miranda Warning incorporates five to six levels. He suggested the deeper the embedding, the more difficult it is for a listener to comprehend.

Other linguists have focused on other aspects of the communication process with regard to understanding and appreciating one’s rights, viz. *how* police administered warnings. Cotterill studied the administration of the Pre-Criminal Justice and Public Order Act (CJPOA) by law enforcement officers within the United Kingdom. She focused on the complexities of interpreting those rights.

It is interesting to note that the explicit indications given consist exclusively of shortcomings on the part of the DP (detained persons)—they are deemed to have comprehension difficulties apparently due to the influence of fatigue, learning difficulties, chemical incapacitation or linguistic ignorance. At no point is there any over acknowledgement that the difficulty may in fact derive either from the wording of the caution itself, or from inadequacies in its delivery (content and/or style) by the officer concerned. Such possibilities may in fact be subsumed under the *inter alia* category, but even so, they are relegated to the status of implied factors not worthy of explicit comment.

Cotterill included fifty officers and 100 detained persons in her study. She described the particularly burdensome task officers face when they try to interpret a suspect’s relative degree of understanding of the caution. Her research highlighted the difficulties in interpretation of the caution for officers as well as for detainees.

One specific concept pertaining to understanding of text is that of readability. Waples (1940) defined readability as "the ease of comprehension because of style of writing. Readability, together with accessibility and subject interest, is a major determinant of one's reading." Many variables in a text may contribute to its readability, including cohesiveness, concept load or density, content, format, literary form and style, sentence complexity, typography, and vocabulary difficulty (Lindamood-Bell, 1998).

Many variables within the reader also contribute, including motivation, abilities, background knowledge, and interests. Text and reader variables interact in determining the readability of any piece of reading material for any individual reader.

An objective estimate or prediction of reading comprehension of material usually in terms of reading grade level, is based on selected and quantified variables in text. Indexes of vocabulary difficulty and of sentence difficulty are two critical Variables(Lindamood-Bell, 1998).

Readability is usually assessed in terms of grade level. If a text has a fourth grade level of readability, "[I]t means simply that an average fourth grader with a known instructional level in that particular text of fourth grade could answer 70 percent of the questions that a teacher might ask after the reading material." (Rupley & Blair (1981) Readability formulas assess samples of texts in terms of "scores that are simply estimates, not absolute levels, of text difficulty. These estimates are often determined along a single dimension of an author's writing style: vocabulary difficulty and sentence complexity measured by word and sentence length, respectively." (Vacca, Vacca & Gove, 1995). Fry notes estimates of readability are generally reliable within one grade level above or below the level determined (personal communication,

December 1999; Franz, 1995; 1998). Thus, if a formula rates a sample of text to be at a sixth grade level, it is reasonable to estimate the true level of readability falls within the fifth though the seventh grade levels.

It is well accepted in the fields of psychology and education that even standardized, nationally normed test instruments utilized to estimate academic functioning and intelligence provide *estimates* of performance. Interpreters of test results obtained from such instruments should consider the standard errors of measurement of a particular test. Thus, a child may evidence a full-scale intelligence score of 85, however, the true score might be as low as 78 or as high as 92. Despite the fact that commonly administered tests of achievement and of intelligence do not provide exact, quantitative results, clinicians in private practice, the courts, and school personnel routinely use such instruments to reach conclusions and make decisions.

The concept of readability is a few thousand years old. The originators may be the Talmudists, who recorded the number of occurrences of words in their scrolls (Smith, 1998). Thorndike initiated modern research in 1921. Thorndike published a list of high frequency words identified in texts. Research on readability continued throughout the 1930's and the 1940's. The Lorge Formula was published in 1939. By 1943, Flesch had published his formula to analyze adult reading material. This procedure utilized four factors to rate the text: the average number of words per sentence, the number of personal sentences per hundred words, the number of personal words per hundred words, and the number of syllables per hundred words. Other formulas exist including the Dale-Chall (1948), the Gunning-Fog (1952), the Fry Readability Graph (1965), the Bormouth Formula (1969), the Mugford Readability Chart (1970), and the Harris-Jacobson (1974). (Taylor & Wahlstrom, 1999)

Educators estimate the readability level of text in novelettes, novels, short stories, textbooks and other sources of written materials. They match a student's reading ability to the difficulty level of the material to decrease oral reading miscues and increase silent reading comprehension. Fry (1987) noted many states use readability formula scores for purposes of book adoption. Librarians use readability formulas through a reference work identified as the Elementary School Library Connection. Those who are concerned with adult education also use readability formulas to estimate the level of reading material designed for instructional purposes.

The Role Of Readability In Legal Matters

Businesses and government agencies have long used readability formulas. Banks and life insurance companies use them to explain their regulations to their clients. According to Fry (1998, p.6), more than half of our states now mandate "that personal automobile and homeowners policies pass a readability criterion." Fry noted states commonly utilize a criterion score of 40-50 on the Flesch scale (ease of readability) that approximates a 10th grade reading level. Also, the publishing industry uses readability formulas with regard to newspapers, textbooks and other reading material. For example, Flesch consulted with the Associated Press in the 1940's to bring the level of readability down from grade 16 to grade 11.

Federal and state governments began passing plain language legislation in 1975. A recommended range of readability for federal documents is between a 6th and a 10th grade level. The Internal Revenue Service has employed outside consultants to review the readability of some tax documents. The Flesch-Kincaid grade formula is the United States Department of Defense standard. Also, the Pentagon mandates all contractors use this rating scale when preparing technical manuals. The Oregon Department of Administrative Services recommends the Flesch-Kincaid formula to its employees when publishing a document or planning wide

distribution of memos or other documents. Oregon also tests the readability of election ballots, warnings and warrants. (Fry, 1987, 1998; Oregon Department of Administrative Services, March 24, 1999).

The judicial system is familiar with readability formulas because reading specialists and others have testified or provided written expert opinions in civil rights litigation, criminal law, contracts, warranties, and due process (Fry, 1998). For example, in a product liability case a Federal judge required the A.H. Robbins pharmaceutical company to rewrite a notice on an intrauterine contraceptive device at a 4th to 5th grade reading level (Fry, 1987). Fry (1998) cited another case in which the California Appellate Court found that the lower court erred when it would not allow the testimony of Dr. Rudolph Flesch (*State Farm Fire & Cas. Co. v. Alstadt*, 1980). Dr. Flesch had proposed to use his readability test. A third example cited by Fry (1998) was a case in which a group of Florida prisoners claimed the State had denied their constitutional right to have access to the courts (*Hooks v. Wainwright*, 1982). Dr. George Mason, a readability specialist, analyzed over 100 documents and determined they were written at graduate levels. The court ruled the inmates were entitled to a law library and access to legal counsel.

1. Fry (1987) summarized the issues involved in a Federal case in which he served as an expert witness (*David v. Heckler*, 1984). The matter pertained to written communication from the New York Medicare office. He noted that one letter was determined to have a 16th grade level. Furthermore, the letter had a confusing format. Given that the average Medicare recipient had about an 8th grade education, the readability of the letter was of considerable concern. Judge Weinstein of the U.S. District Court, Eastern District of New York ordered the United States Secretary of Health and Human Services to revise the letter.

OR

2. Fry (1987) describes a Federal case, *David v. Heckler* (1984), in which Medicare documents were written at a Fry Readability level of grade 16. He notes that Judge Jack Weinstein, who was known for Agent Orange and other cases of national significance, viewed the document as “gobbledgegook”. The matter before the court was a class action suit, Legal Services for the Elderly. Fry noted that the government defended the letter and criticized the application of the Fry Readability Formula. According to Fry, the government argued that the formula exaggerated the reading difficulty of the letters because it took into account numerals and proper names. However, Judge Weinstein found that the letters were still written at a reading level above that achieved by many elderly individuals in New York. Thus, the Secretary of the U.S. Department of Health and Human Services was ordered to take “prompt action” to improve the readability of Medicare letters (Ibid, pp. 3-4)..

Some Reported Case Law Involving Readability And The Miranda Warning.

Since *In Re Gault* (1967), a number of attorneys, courts, and writers have expressed serious concerns about the complexities involved in comprehending the Miranda Warning. In some cases, adults have waived their right to have an attorney present at the time of questioning. Once legal proceedings have begun and defendants have retained legal counsel, issues about level of education, experience and intelligence become of concern. While it is not uncommon for defense attorneys to utilize specialists to evaluate a defendant’s abilities in terms of general academic skills, intelligence and level of reading comprehension, it is far less common for evaluators to examine the level of readability for the Miranda Warning. Given the Warning was based upon a Supreme Court decision, some might assume there is only one version. Others might assume each state has its own version of the Miranda Warning based upon a Federal Warning. Actually, several versions of the Miranda Warning are likely to exist within each state. (Grisso, 1998; Stone, 2000).

In his 1998 article, Fry cited a legal matter in which a readability analysis was done using a Miranda Waiver Form (*Rutledge v. State*, 1983). Professor Robert Benson from Loyola Law School identified this case through a LEXIS search. It may be the first state appellate case in which a readability analysis was reported. The State of Alabama indicted and convicted Mitchell

Rutledge for robbery and intentional murder for which he received the death sentence. The defendant contended his written confession was inappropriately admitted into evidence. Through legal counsel, the defendant argued his illiteracy prevented him from understanding his rights under *Miranda*. The court qualified Dr. Thomas Worden, assistant professor of elementary education at Auburn University, as an expert in reading. Worden testified Rutledge's oral reading and silent reading abilities were at a primer or pre-first grade level although he evidenced sixth grade listening comprehension skills. Worden conducted a readability analysis using the Fry Formula (personal communication, February 18, 2001). The particular warning analyzed was determined to be at an eighth grade, second semester level. Based upon his analyses, he concluded that although the defendant was "streetwise", he could not have read or understood the form the police presented to him. A criminal psychologist, Terry Frye, testified the defendant had a level of intelligence that was within the low-average range (84). Frye stated the defendant would have had a limited understanding of questions posed by the officer who read him his rights and interviewed him. The court found, despite these facts, the defendant demonstrated a capability to understand his Miranda rights during the trial. The Alabama Criminal Appellate Court upheld decisions made by the lower court in this matter.

A more recent case criminal case identified by Professor Benson that involved an application of a readability analysis is *State of Missouri v. Jack* (1991). In this matter, Dr. Warren Wheelock, a professor of education at the University of Missouri-Kansas City examined the defendant, Lee Otis Jack. Dr. Wheelock noted that the defendant had an I.Q. of between 68 and 78, could read at a third grade level and could comprehend through listening at a sixth grade level. Dr. Wheelock applied the Harris-Jacobson Readability to the Miranda Warning by hand (personal communication, February, 20, 2001). He determined the Miranda Warning used in this

matter was at a tenth grade level. He determined the defendant's statement, taken by Detective Russell, was at the sixth grade level. Based upon testimony by the defendant, the court granted a motion to exclude Dr. Wheelock's testimony. The motion to exclude was unrelated to the application of readability in this matter. The Missouri Appellate Court upheld the lower court's ruling.

Comprehension Of The Miranda Rights By Juveniles

Several authors have expressed concerns about the vulnerability of juveniles with regard to the Miranda Warning during the past twenty years (Abramovitch, Higgins-Biss, & Biss, 1993; Grisso, 1998a & 1999; Jaffe, Leischfield & Farthing, 1987; Melton, 1981; Saunders, 1981; Shepherd 1999; Shepherd & Zaremba, 1995). The aforementioned writers have conducted studies demonstrating the nature and the depth of vulnerability that adolescents may experience when deciding whether or not to waive their Miranda Rights or their rights provided by the **Canadian Young Offenders Act (1985). WHAT ARE TYPICAL FINDINGS???**

Professor Benson also identified a case heard by the Wisconsin Court of Appeals in 1995, *Jennifer A.J. v. State of Wisconsin*. Jennifer had an auditory deficit disorder with a verbal IQ of 74 and a nonverbal IQ of 108. Police twice read Jennifer her Miranda rights at 3:00 a.m., slowly and with many pauses. Despite these techniques, Jennifer's psychologist, William Merrick, believed she "could have a very limited understanding of these rights as read to her." (*Jennifer A.J. v. State of Wisconsin*, 94-2735, 1995 Wisc. App. LEXIS 1024, at *2)

Jennifer's current learning disabilities specialist, Kathryn McCosky, also testified. According to McCosky, the Miranda-rights card used by the Dane County Sheriff's Department was written at an eighth-grade reading level. She reached this conclusion by performing a hand analysis using the Fry Readability Scale (personal communication, February 18, 2001).

She testified that after reading Jennifer's file, it became evident that Jennifer had an auditory deficit disorder and that '[j]ust hearing something would be the worse [sic] way for her to pick up information.' McCosky stated that in the classroom setting, Jennifer would almost always say she understood oral instructions when, in fact, she did not.

McCosky testified that Jennifer reads at between a third and fourth-grade level, and that her ability to understand oral information was more impaired than her ability to understand written material. (*Jennifer A.J. v. State of Wisconsin*, 1995, at *3)

Prosecutors called Carol Stephenson, Jennifer's special education teacher, to testify about how Jennifer typically behaved when she was inattentive or when she found the material incomprehensible.

These behaviors included a failure to make eye contact, fidgeting, twisting her hair, turning her body away and getting angry...When asked whether she had an opinion to a reasonable professional probability as to whether Jennifer was capable of understanding her Miranda rights, assuming that the rights were read at 3:00 a.m., that while her rights were being read she was maintaining eye contact and nodding her head in an affirmative fashion, that her rights were read one at a time, that she was asked 'Do you understand that right?' after each right was read, that she replied affirmatively after each question, that the entire procedure lasted two minutes, and that she was not emotional, Stephenson replied, 'If she said yes, I accept the yes.' (*Jennifer A.J. v. State of Wisconsin*, 1995, *4)

Based upon Stevenson's testimony and some additional considerations, the court determined Jennifer gave a knowing, intelligent and voluntary waiver of her *Miranda* rights.

Although, the Wisconsin Appellate Court upheld the lower court's ruling and also upheld Jennifer's conviction for murder in the first degree, one judge expressed a dissenting opinion.

Judge J. Sundby believed the police coerced the confession, not directly but under the circumstances the fifteen-year-old was questioned in the very early hours of the morning (from 3:00 a.m. until 7:30 a.m.) without the presence of counsel, a friend, or a parent. Judge Sundby also considered other aspects of the totality of circumstances such as Jennifer's age, background, education and intelligence. She had no prior contact with the police and had an auditory processing disorder, a history of learning disabilities, and a verbal IQ of 74. Judge Sundby concluded "Jennifer was unable to understand the rights she was waiving, or what the consequences of waiver would be" and "the record does not show that the police explained to Jennifer the meaning or consequences of her waiver." (*Jennifer A.J. v. State of Wisconsin*, 1995, at *10, *12)

In two of the three cases reviewed above, the courts accepted the use of readability formulas into the record, Dr. Robert Shepherd, a professor of law at the University of Richmond Law School and a past chair of the Juvenile Section of the American Bar Association's Criminal Justice Committee, believed readability may have been a significant factor in other cases. However, if the cases were not appealed, a search of case law would not identify them. (personal communication, December 1999).

Some Challenges For Readability Experts: Reading The Fine Print

While it is the author's opinion that the concept of readability can make a significant contribution to an analysis of the totality of circumstances in cases that pertain to the Miranda Warning, this hypothesis is not without its flaws. Dr. Fry, who has been a moving force in the field of reading for many years, has discussed various legal applications of readability as described earlier in this paper. However, Dr. Fry notes there are limitations on the use readability. He maintains that whenever possible it is more advantageous to evaluate a person's

comprehension using the exact passage(s) of concern. Through the process of *standardization* a person reads a particular selection and is then asked questions based upon that selection. He also notes that readability is not a measure of writing maturity. Readability formulas were not developed for the purpose of analyzing the grade level a text (Fry, 1998). Readability formulas use specific measures such as the number of difficult words, the number of polysyllabic words, the number of syllables in sentences, the number of words or sentence length. Such formulas do not, in and of themselves, assist an evaluator in determining other factors that may be significant in the comprehension of certain material. (Fry 1987, 1998)

There are several additional aspects, known as the totality of the circumstances that influence one's understanding of the Miranda Warnings. Such potentially significant factors include a defendant's motivation, prior experience with the police, the time of day the rights were presented, the relative degree of stress experienced by the defendant and the demeanor of the arresting officers (the degree to which the defendant felt threatened). However, whether a parent is present or not, whether a defendant has had the Miranda Warning presented on several occasions, or simply getting a defendant to state that "he understands is not likely to insure comprehension of rights"(Grisso, 1998).

Courts must determine whether testimony based upon readability analyses will be accepted. The concept of standard was examined in *Frye v. United States* (1923). At that time, the court held that "*while courts will go a long way in admitting expert testimony deduced from a well recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.*" (*Frye v. United States*, 54 App. D.C. 46, 293 F. 1013, 1923 U.S. App. LEXIS 1712, at *2) In Massachusetts, the *Frye* test has been adopted based upon *Commonwealth v.*

Lanigan (1992). However, the *Frye* test has been criticized because of its rather conservative standard (*Commonwealth v. Mendes*, 1989). In essence, the concern is that reliable and valid evidence may be barred primarily because the scientific community has not adequately weighed or agreed upon the foundation of the evidence. Additionally, it is not clear what constitutes ‘general acceptance’ in the scientific community. (*Handbook of Massachusetts Evidence*, 1994, Section 7.8, pp.383-388)

A thorough discussion pertaining to standards of expert testimony can be found in Professor’s Lawrence Solan’s (1999) article entitled, “Can the legal system use experts on meaning?” Although Rule 702 replaced the *Frye* standard in 1975 based upon the new Federal Rules of Evidence; however, Solan noted some courts continued to rely on *Frye*. The issue of which standard reigned supreme was resolved in 1993 when the highest court of the land decided *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993). In *Daubert*, the Supreme Court identified four, “non-exclusive indicia: whether the theory offered had been tested; whether it had been subjected to peer review and publication; the known rate of error; and whether the theory is generally accepted in the scientific community” (Solon, 1999, p. 1196).

The Supreme Court ruled federal rules of evidence superceded the *Frye* test. The Court charged trial judges with the responsibility for making an initial finding of whether scientific testimony and evidence is relevant and reliable. Peer review and publication are two factors, which might be considered in examining the potential for error would also seem reasonable. However, the Court suggested the use of flexibility when applying federal rules of evidence. An expert who uses accepted instruments or theories may be permitted to give his opinion, even when he has developed and applied his own techniques.

Some courts have ruled that testimony based upon readability analyses is appropriate. Clearly, Fry (1987, 1998) cited cases in which judges employed the results of readability analyses in reaching conclusions and issuing orders. However, a number of questions arise. Are only certain readability formulas appropriate to utilize when analyzing Miranda Warnings? The Fry Readability Formula has been used in two of the three state supreme courts cited within this paper. In one case, the results of the analysis were presented by a professor of elementary education (*Rutledge v. State*, 1983) In another case, a special education teacher testified (*Jennifer A.J. v. State of Wisconsin*, 1995).

Some have suggested the computer-based Flesch-Kincaid Readability Formula available through Microsoft Word 2000 is an appropriate tool to use for the stated purpose. Dr. Herbert Walberg (2001), a professor of education at the University of Chicago, applied the Flesch-Kincaid computer-based readability formula to analyze New York State Regents Competency Tests. In a personal communication (February 23, 2001), Walberg noted he researched readability formulas and determined that the Flesch-Kincaid was widely used by businesses, by the military, and in other applications. He found it especially easy to apply. He suggested it might be appropriate to use in analyzing Miranda Warnings. Dr. Walberg also noted his familiarity with a computer-based program published by Micro Power and Light.

Dr. Mitchell Handelsman, a psychologist at the University of Denver, conducted research in which he analyzed consent forms used by mental health professionals in Colorado. Dr. Handelsman and colleagues (Handelsman, Martinez, Geisendorger, Jordan, Wagner, Daniel, & Davis, 1995) utilized the Flesch-Kincaid. He determined that a sample of such forms had a readability level of 15.74—appropriate for college seniors. He used the entire document as the

population of words, when documents contained less than three hundred words, rather than using sampling techniques (personal communication, February 24, 2001).

Applications Of Readability For Waivers Of The Miranda Warning: Some Future Directions

While the Miranda Warning continues to generate controversy, relatively little has been published its readability. It is clear that any and all professionals including educators, lawyers, psychologists, and special educators, will need to share information if this field of research is to progress. At the present time, no one individual has emerged as a leader in the field of this relatively new area of research. However, there are a number of individuals with whom this author has communicated who are interested in the topic. Several individuals have suggested that it is quite appropriate for experts to provide testimony about readability levels and various Miranda Warnings. Collaboration through shared results, case law, and theoretical perspectives will be especially helpful in advancing the potential use of readability as one evaluation tool.

The use of computer-based readability formulas increases the potential for interested parties to compare results of analyses of Miranda Warnings. The same text can be subjected to several analyses in a matter of minutes through the use of standardized computer programs.

The author recently conducted computer-based readability analyses based upon Dr. Le Roy Stone's (2000) publication. Stone analyzed the readability the Miranda Warning issued by law enforcement officers from Martinsburg, West Virginia, using the Fry, Raygor, Flesch and the Gunning-Fog Formulae. He ultimately computed an average of the formulas he used. This writer utilized a computer-based program developed by Micro Power and Light Company to assess the readability levels of the Martinsburg, West Virginia, Miranda Warning. He relied upon the Fry, Flesch and Fog formulas. Additionally, he applied the Flesch-Kincaid from Microsoft Word 2000. The Martinsburg Miranda Warning was forwarded to Edward Franz at

Micro Power and Light Company for his own computer analysis. The results of the three analyses of the Martinsburg Warning are summarized below (with written permission from Dr. Stone and Mr. Franz (February 27, 2001). Imber obtained a Flesch-Kincaid readability level of grade 10 with an ease of 62. Using the Raygor, Stone identified a 9.25 grade level. All tests used the entire 605-word statement.

---PLACE TABLE 1 ABOUT HERE---

This author recently analyzed the Miranda Warning from the Dane County (Wisconsin) Sheriff's Office. A Dane County law enforcement officer gave a Miranda Warning to Jennifer just prior to her arrest (*Jennifer A.J. v. State of Wisconsin*, 1995). As noted earlier, Kathryn McCosky, Jennifer's special education teacher at McFarland High School, presented evidence that a Fry Readability Analysis (by hand) yielded an eighth grade level. The author utilized Micro Power and Light computer-based readability software to examine the Dane County's Miranda Warning. The results of this analysis revealed a Fry Readability level of grade nine. There is approximately a one grade level difference between McCosky's analysis and that of the author. The Micro Power and Light Company also yielded a Flesch Readability level of grade ten. The Flesch Reading Ease was at 64.32. The Fog Grade Level was at 12.0. The author also utilized the Flesch-Kincaid Readability Formula from Microsoft Word 2000. The readability level was grade ten with a Reading Ease of 64.

Some caution must be exercised in drawing any definitive conclusions from the McCosky-Imber comparison. While it is likely that the Miranda Warning administered to Jennifer in the early 1990's has not changed, only the arresting officer could actually verify that the exact same Warning was used (Sgt. John Brogan, Dane County Sheriff's Office, Madison, Wisconsin, personal communication, March 2, 2001). The above results revealed considerable

similarities in the determination of grade levels. However, readability results are considered generally reliable, with an error range of plus or minus one grade level (personal communication, Fry December 1999; Franz 1995, 1998). Additionally, many of the complexities of the vocabulary, embedding and other linguistic considerations are not reflected directly by the results. The prior discussion from Grisso (1998a, 1999) and Tiersma (1999) suggests that readability is but one consideration. The Miranda Warning includes abstract, complex, and subtle concepts that may be very difficult to understand and appreciate.

It would also seem appropriate in most cases to evaluate a defendant's level of intelligence and abilities to decode, to comprehend through oral and silent reading, as well as to comprehend through listening. Furthermore, it is appropriate to evaluate a defendant's understanding as well as his appreciation of Miranda rights. Dr. Thomas Grisso (1998b) has developed test materials designed to assess a. Grisso argued even if a defendant has a good understanding of what the rights defendant's comprehension of Miranda rights through a recognition and an appreciation of those rights and an understanding of Miranda vocabulary mean, the defendant may not appreciate the implications of waiving those rights. Unfortunately, the consequences of such a waiver may be devastating to a defendant. As Fry noted, readability is a useful tool. Accordingly, a direct evaluation of what a person may or may not know through direct examination with specific materials will prove especially helpful. However, in criminal matters in which a defendant waived his or her Miranda rights were waived, subsequent advice from legal counsel may confound direct assessment of the defendant's knowledge and appreciation of Miranda rights. Thus, it would not seem unreasonable that an attorney would advise his client of the importance of the Miranda Warnings. Such communication is likely to be in the client's best interests.

At this time, the field would be advanced if results of readability analyses on Miranda Warnings were shared through conferences, printed publications and publications on the Internet. E-mail has proven to be a powerful means of sharing questions and information in a remarkably condensed time frame.

Conclusions

Readability has been utilized as one evaluation technique in cases where there has been a question of whether a defendant has waived the Miranda rights in a “knowing, intelligent and voluntary manner.” Readability has the potential to provide one important piece of the puzzle in light of an analysis of the totality of circumstances. Readability formulas have limitations, as do all procedures for assessment. However, through continued research, application and refinement, readability estimates of Miranda Warnings may assist courts in determining whether a defendant has waived his/her rights “knowingly, intelligently and voluntarily.”

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Federal rules of Evidence

Table 1. A comparison of three sets of computer-based analyses of Readability of the Martinsburg, West Virginia Miranda Warning by grade level

ANALYST	FRY	FLESCH	FOG	AVERAGE
Imber, E.	9	9.4	12.2	10 th grade level
Franz, E.	9	9.1	12	10 th grade level
Stone, L.	8.5	9	12.60	10 th grade level