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EDITOR'S NOTE -

The following monograph-length article, by Dr. Imber, should be considered to represent a "working paper" as it was the handout when Dr. Imber delivered his paper to the Lorman Education Service conference, that was held in Providence, RI, on 11 April 2001. Dr. Imber intends to further develop this written work and sometime in the future to offer it for publication in one of the highly recognized forensic psychology, 'hard-copy' journals. However, the Editor of the *FPM* believes that what is currently presented in Dr. Imber's work is of such practical interest and importance that a more immediate publication of his early "working paper" has some real value. Such is the *raison d'etre* for this particular presentation, a 'here and now' display of this highly interesting work. Dr. Imber's address is: 145 Waterman St., Providence, RI 02906. His Email address is: scimber1@aol.com and his Web Site can be found at: <http://members.aol.com/scimber1/forensic.htm>.

The Miranda Warning: Readability and the Rights of Children with Disabilities 2001

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Overview

More than thirty years ago, the United States Supreme Court ruled that an individual had certain basic rights and protections under the Fifth and Fourteenth Amendments prior to that individuals' confession including 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 (*Miranda v. Arizona*, 384 US 436 (1966)). Although some have argued that the Miranda Warning has unnecessarily encumbered law enforcement officials, last year, the Supreme Court upheld *Miranda* in a 7-2 decision (*U.S. v. Dickerson*, No. 97-4750).

In 1967, the Supreme Court extended protections to juveniles with regard to police procedures for interrogation. In essence, the Court sought to insure that adolescents did not waive their Miranda rights due to their potential vulnerability:

The Supreme Court extended protections to juveniles with regard to police procedures for interrogation. In essence, the Court sought to insure that adolescents did not waive their Miranda rights due to their potential vulnerability 1) written notice of the specific charge or factual allegations, given to the child and his parents or guardian sufficiently in advance of the hearing to permit preparation; (2) notification to the child and his parents of the child's right to be represented by counsel retained by them, or if they are unable to afford counsel, that counsel will be appointed to represent the child; (3) application of the constitutional privilege against self-incrimination; and (4) absent a valid confession, a determination of delinquency and an order of commitment based only on sworn testimony subjected to the opportunity for cross-examination in accordance with constitutional requirements In *Re Gault* 387 U.S. 1 (1967), 1967 LEXIS 1478.

In *Gallegos v. Colorado* 370 U.S. 49 (1962), the United States 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’” Standards Relating to Police Handling of Juvenile Problems (1979) Institute of Judicial Administration, American Bar Association; Juvenile Justice Standards.

In *Fare v. Michael C.* (1979), the Supreme Court identified several factors for judges to examine with regard to the “totality of circumstances” when considering whether a juvenile waived his Miranda Rights voluntarily, knowingly and intelligently *Fare v. Michael*. 442 US 707 (1979)

The question of whether statements obtained during the custodial interrogation of a juvenile are admissible on the basis of waiver of the juvenile's rights to assistance of counsel and to remain silent may be resolved by inquiry to the totality of the circumstances surrounding the interrogation; this approach mandates inquiries into all circumstances surrounding the interrogation, including evaluation of the juvenile's age, experience, education, background, and intelligence and into whether he has the capacity to understand any warnings given him by the police, the

nature of the Fifth Amendment rights, and the consequences of waiving those rights. (Marshall, Brennan, and Stevens, J.J. dissented from this holding.) Ibid.

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

Grisso describes two broad classes of variables that should be considered when examining the totality of circumstances: the circumstances of the interrogation and the defendant's individual characteristics. (Grisso, T. (1998) *Forensic Evaluations of Juveniles*. Sarasota, Florida: Professional Resource Press). Grisso explores both classes of variables in detail. He has sorted circumstances of the interrogation process into several categories including: circumstances of the days prior to the arrest; circumstances at the time of the arrest; transportation to the police station, experiences while at the station prior to questioning; questioning; parent and youth communications prior to a waiver; sequence, and description of the questioning process (Ibid. 61). Grisso also explores several factors that pertain to the juvenile in question including age, level of intelligence and education. (Ibid, p.49).

There is a growing body of case law that includes motions to suppress confessions on the grounds that a waiver of the Miranda Warnings was not given voluntarily, knowingly or intelligently. Such case law has been identified at the Appellate, District and State Supreme 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 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

Mitchell 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
State of Missouri, Respondent, v. Lee Otis Jack, Appellant, No. 43, 535, 1991 App.
Missouri WD, 813 S.W. 2d 57, 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, evidence and/or testimony yield levels of intelligence that are below the average range, poor academic performance, and a history of special education and generally low levels of reading and reading comprehension. However, in the vast majority of cases, courts have determined that the defendant gave a “voluntary, knowing and intelligent” waiver of his rights. Generally, 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*, 354 F. Supp. 1195 (D.D.C), 1973 U.S. Dist. LEXIS 15002; *In re M.W.*, 314 ILL. App. 3d 64, 731 N.E. 2d 358, 2000 Ill. App. LEXIS 442; *Commonwealth v. Daniels*, 366 Mass. 601; 321 N.E.2d 822, 1975 Mass. LEXIS 1121).

Further review of relevant case law reveals that 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*, 692 F.2d 978 (4th Cir. 1982), 1982 U.S. App. LEXIS 24114; *Wilson v. State of Missouri*, 813 S.W.2d 833; 1991 Mo. LEXIS 77; *Jennifer A.J. v. State of Wisconsin*, 94-2735, 1995 Wisc. App. LEXIS 1024).

THE CONCEPT OF READABILITY

Forensic linguists continue to explore the relationship between language and the law (see Ainsworth, 1993) "In a different register: the pragmatics of powerlessness in police interrogation", *Yale Law Journal*, 103: 259-322; Solan "Can the legal system use experts on meaning. (Summer 1999) *Tennessee Law Review*, vol 66, 1167-1199; Shuy, R. W. (2000) *The Language of Confession, Interrogation and Deception*. Thunder Oaks, California: Sage Publications; Tiersma, P.M. *Legal Language* (1999) Chicago: University of Chicago Press. Tiersma provides an informative discussion about linguistic aspects of the Miranda Warning. He explores 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 notes that that most listeners can process two or three levels of embedding with little challenge. However, he indicated that the Miranda Warning incorporates five to six levels. He suggests that the deeper the embedding, the more difficult it is for a listener to comprehend (Ibid, p. 57).

Other linguists have focused on other aspects of the communication process with regard to understanding and appreciating one's rights, viz. how warnings are administered. Janet Cotterill has studied the administration of the Pre-Criminal Justice and Public Order Act (CJPOA) by law enforcement officers within the United Kingdom. She notes:

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, J. (2000), *Reading the rights: a cautionary tale of comprehension and comprehensibility*. Vol 7, Number 1.

Cotterill included 50 officers and 100 detained persons in her study. She describes the particularly burdensome task that officers face where they try to interpret a suspect's relative degree of understanding of the caution. She examined the complexities of interpretation of those rights. Her research highlights the difficulties in interpretation of the caution for officers as well as detainees.

One specific concept pertaining to understanding of text is that of readability. Readability has been defined 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" (Waples et al., 1940). Many variables in text may contribute to readability, including format, typography, content, literary form and style, vocabulary difficulty, sentence complexity, concept load or density, cohesiveness, etc. {Lindamood-Bell (1998) *Sensory Cognitive Solutions: definitions and terminology resource*. }.

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. (Ibid).

An objective estimate or prediction of reading comprehension of material usually in terms of reading grade level, based on selected and quantified variables in text, especially some index of vocabulary difficulty and of sentence difficulty. (Ibid).

Readability is usually assessed in terms of grade level. If a text has a fourth grade level of readability, "It 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) *Reading Diagnosis and*

Remediation: Classroom and Clinic. Boston: Houghton-Mifflin.

Readability of samples of text is assessed through the use of readability formulas. “Readability formulas yield 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) *Reading and Learning to Read Third Edition*. New York: HarperCollins College Publishers.

Dr. Edward Fry, notes that estimates of readability are generally reliable within one grade level above or below the level determined through an application of a readability formula. (personal communication, December 1999); Franz, 1995; 1998. *Readability Calculations, Micro Power & light Company Manual*, 1995). Thus, if a sample of text is determined to be at a sixth grade level, it is reasonable to estimate that the true level of readability falls with the fifth through the seventh grade levels.

It is well accepted in the fields of psychology and education that even well standardized, nationally normed test instruments utilized to estimate intelligence and academic performance provide estimates of performance. Interpretation 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 intelligence and achievement do not provide exact, quantitative results, such instruments are used routinely by school personnel, clinicians in private practice and the courts in order to reach conclusions and make decisions.

According to one author, the concept of readability can be traced back to the Talmudists who recorded counts of the number of occurrences of words in their scrolls (Smith, S. (1998) *Readability testing health information*. The Prenata_Hlt5073208021 Ed site:

Modern research was initiated by Thorndike in 1921. Thorndike published a list of high frequency words identified in texts. Research on readability continued thorough the 1930’s and throughout the 1940’s. Taylor and Wahlstrom note that the Lorge Formula was published in 1939. By 1943, Flesch published his formula. His formula utilized four factors: the number of syllables per hundred words, average number of words per sentence, number of personal words per 100 words, and the number of personal sentences per hundred words. This formula was

designed to be used with adult reading matter. (Taylor, M.C. & Wahlstrom, (1999) M.W. Readability as applied to an ABE assessment instrument. National Adult Literacy Database (NALD) website:)

Other formulas were introduced 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)*

THE ROLE OF READABILITY IN LEGAL MATTERS

It should be reasonably clear that readability is not exactly a new concept. It is well known that readability formulas have been used by educators to estimate the level of text in short stories, novelettes, novels, text books and other sources of written materials. Educators match a student's reading ability to the difficulty level of the material decrease oral reading miscues and increase silent reading comprehension Fry, E.B. (1987). The varied uses of readability measurement today. *Journal of Reading*, 30, 338-343.

Fry notes that readability formula scores are used in many states 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. (Fry, 1987).

Readability formulas are also used in business by banks, life insurance companies, and for consumer guides. Federal and state government have passed plain language legislation since 1975. Fry notes that in 1978, "President Carter issued an executive order to all departments in the Executive Branch to improve readability of their written communications (Ibid, p. 341). The Internal Revenue Service subsequently employed outside consultants to review the readability of some tax documents.

Various branches of the military employ readability formulas to assess training manuals. The publishing industry uses readability formulas with regard to textbooks and other reading material. Readability formulas have been used by the newspaper industry as well (Ibid, p. 342-343). Fry notes that Rudolph Flesch worked as a consultant to Associated Press in the 1940's to bring the level of readability down from level 16 to level 11.

The Oregon Department of Administrative Services has recommended

the Flesch-Kincaid to its employees when anyone is publishing a document or planning wide distribution. The memo notes that the Flesch-Kincaid grade formula is the United States Department of Defense standard. It is also noted that the Pentagon mandates that all contractors use it when preparing technical manuals. A recommended range of readability for federal documents is between a 6th and a 10th grade level based upon the memo. Oregon Department of Administrative Services (March 24,1999), Document Readability Frequently Asked Questions,

Fry documented that readability formulas have also been used in court cases. He summarized the issues involved in a Federal case in which he served as an expert witness. 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. Fry noted that 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 (Ibid, p. 341).

Fry cites another case that involved readability and product liability. He cited Federal case in which the A.H. Robbins pharmaceutical company was required to rewrite a notice on an intrauterine contraceptive device at a 4th to 5th grade reading level (Ibid, p. 341).

Fry cites law professor, Robert Benson's article, "The End of Legalese: The Game is Over" published in the New York University Review of Law and Social Change (1984-85). Professor Benson included information on jury instructions. He also included information on the application of the Fry and Flesch readability formulas (Ibid, p.341).

More recently, Fry discussed cases in which reading specialists and others have testified or provided written expert opinions in civil rights litigation, criminal law, contracts, warranties, and due process (Fry, E. (1998) The legal aspects of readability. Educational Research Information Center (ERIC) Reference ED 416466, U.S. Department of Education: Office of Educational Research and Improvement (OERI). The author has revised this article based upon a presentation given to the International Reading Association, New Orleans, May 1989.

Fry 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). * David v. Heckler (1984) No. 79 C 2813, U.S. District Court, E.D. New York.

Fry cites another case (State Farm v. Alstadt 1980 Civ. No. 22282 Cal. Fourth Dist. Div. One. In which the Appellate Court found that the lower court erred when it would not allow the testimony of Dr. Rudolph Flesch. Dr. Flesch proposed to use his readability test. (Fry, 1998, p. 4).

Fry cites a case in which a group of Florida prisoners claimed that the State denied their constitutional right to have access to the courts. Fry notes that a readability specialist, Dr. George Mason, analyzed over 100 documents and determined that they were written at graduate levels. The court held that the inmates were entitled to a law library and access to legal counsel. Hooks v. Wainwright (1982) Nos. 71-144 Civ.- J.S., 71-1011 – J.S. U.S. Dist. Court M.D. Florida.

Fry notes that issues of readability of written text have affected the preparation governmental documents in Oregon, election ballots, warranties and warnings (Ibid, p.5-6).

According to Fry, more than half of our states now mandate “that personal automobile and homeowners policies pass a readability criterion” (Ibid, p. 6) Fry notes that it is common for states to utilize a criterion score of 40-50 on the Flesch scale (ease of readability) which approximates a 10th grade reading level.

COMPREHENSION OF THE MIRANDA RIGHTS BY JUVENILES

Since In Re Gault (1967), a number of 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 were initiated

and defendants were represented by legal counsel, issues about level of education, intelligence and experience were at issue.

Several authors have expressed concerns about the vulnerability of juveniles with regard to the Miranda Warning during the past twenty years including: Melton (1981); Saunders (1981); Jaffe, Leischfield & Farthing, (1987); Abramovitch, Higgins-Biss, & Bliss, (1993); Shepherd, & Zaremba (1995); Grisso, (1998); Grisso (1999) and Shepherd (1999). All of the aforementioned writers have conducted studies that demonstrate the nature and the depth of vulnerability that adolescents may experience when deciding whether or not to waive their Miranda Rights or rights, which are provided through the Canadian Young Offenders Act (1985).

SOME REPORTED CASE LAW INVOLVING READABILITY AND THE MIRANDA WARNING.

While it is not uncommon for defense attorneys to utilize specialists to evaluate a defendant's abilities in terms of intelligence, general academic skills and level of reading comprehension, it is far less common for evaluators to examine the level of readability for the Miranda Warning. Given that the Warning was based upon a Supreme Court decision, some might assume that there is only one version. Others might assume that states have their own version of the Miranda Warning that is based upon a Federal Warning. Actually, several versions of the Miranda Warning are likely to exist within each state. (Grisso, 1998; Stone, 2000). Stone, L. (2000) A demonstration of different estimations of readability for several forms of the Miranda Warnings and associated waivers of rights *Electronic Journal of Forensic Psychonomics*, 1,1-10 ()

In his 1998 article, Fry cites 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. Mitchell Rutledge was indicted and convicted for robbery and intentional murder. He was ultimately sentenced to death. The defendant contended that his written confession was inappropriately admitted into evidence. Through legal counsel, the defendant argued that his illiteracy prevented him from understanding his rights under Miranda. Dr. Thomas Worden, assistant professor of elementary education at Auburn University, was qualified as an expert in reading. Worden testified that the defendant's oral reading and silent reading abilities were at a primer or pre-first grade level although he

evidenced sixth grade listening comprehension skills. He conducted a readability analysis using the Fry Formula (personal communication 02-18-01). The particular warning that was 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 that was presented to him. A criminal psychologist, Terry Frye testified that the defendant had a level of intelligence that was within the low-average range (84). Frye testified that the defendant would have only had a limited understanding of questions posed by the officer who read him his rights and interviewed him. The court found that 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, Respondent, v. Lee Otis Jack, Appellant, No. 43, 535, 1991 App. Missouri WD, 813 S.W. 2d 57, LEXIS 921*. 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 02-20-01). He determined that the Miranda Warning used in this matter was at a tenth grade level. He determined that 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.

Professor Benson also identified a case which was appealed to the Wisconsin Supreme Court in 1995 (*Jennifer A.J. v. State of Wisconsin, 94-2735, 1995 Wisc. App. LEXIS 1024*).

Jennifer has an auditory deficit disorder (verbal IQ of 74 and nonverbal IQ of 108) and was twice read Miranda rights at 3a.m. slowly and with many pauses. One of her teachers believed she had an understanding based on police’s description of interrogation techniques. Jennifer's current learning disabilities specialist, Kathryn McCosky, also testified. According to McCosky, the Miranda-rights card read to Jennifer was written at an eighth-grade reading level. This analysis was done by hand (personal

communication 02-18-01). She testified that after reading Jennifer's file, it became evident that Jennifer had an auditory deficit disorder and that 'just hearing something would be the worst 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 read 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. McCosky testified that she performed what she referred to as a "Fry Readability Scale" on the Miranda-rights card used by the Dane County Sheriff's Department. She obtained a level of grade eight. According to another special education teacher, Stephenson, there were particular behaviors that indicated Jennifer either was not paying attention or did not understand something. 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." Based upon Stevenson's testimony and some additional considerations, the court found that 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 expressed his opinion that the confession was coerced by the police, not directly but under the circumstances where a 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 a parent, counsel or friend. Judge Sundby also considered other aspects of the totality of circumstances such as Jennifer's level of age, intelligence, education and her background. He noted that Jennifer had a history of learning disabilities and auditory processing disorder He also noted that Jennifer had a verbal IQ of 74. She had no prior contact with the police. Judge Sundby stated that Jennifer evidenced a third to fourth-grade reading level. The Judge also noted that there was testimony that placed the readability level of the Miranda Warning at an eighth grade level. Finally, he noted testimony in which Jennifer usually stated that she understood instructions when she did not.

Judge Sundby concluded that Jennifer did not understand her rights or the “consequences of waiving those rights” and “the record does not show that the police explained to Jennifer the meaning or consequences of her waiver.”

Although, the use of readability formulas was accepted as a part of the record in two of the three cases reviewed, Dr. Robert Shepherd, a professor of law at the University of Richmond Law School and a past chair of the Juvenile Section of the Criminal Justice Committee, noted that readability might have been one significant factor in any number of cases. However, if the cases were not appealed, they would not be identified through a search of case law (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, it 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 that readability is not without its limitations. 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 writing analysis at particular grade levels (Fry, 1998, p 7).

Readability formulas use specific measures such as the number of words, number of syllables in sentences, sentence length, number of polysyllabic words, or the number of difficult words. Such formulas did not, in and of themselves, assist an evaluator in determining other factors that may be significant in the comprehension of certain material.

With regard to the Miranda Warnings, such factors as a defendant’s motivation, prior experience, the time of day the rights were presented, the relative degree of stress experienced by the defendant and the demeanor of the arresting officers (degree to which the defendant felt threatened) may all be significant.

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 that is based upon readability analyses will be accepted. The concept of standard was examined in *Frye v. United States*, 293 F. 1013, 1014 (DC Cir 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” In Massachusetts, the Frye test has been adopted based upon *Com. V. Lanigan*, 413 154, 596 NE2nd 311 (1992). However, the Frye test has been criticized (*Com. V. Mendes*, 406 Mass 201, 204, 547 NE2nd 35, 37 1989) because its standard is rather conservative. 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.

More recently, the Supreme Court has ruled held that federal rules of evidence supercede the Frye test. *Daubert v. Merrill Dow Pharmaceuticals, Inc.* US, 113 S Ct 2786 (1993). The Court noted that trial judges are responsible 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. Examining the potential for error would also seem reasonable. However, the Court suggested that flexibility be utilized 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 (*Ibid*).

A thorough discussion pertaining to standards of expert testimony can be found in Professor’s Lawrence Solan’s article entitled, “Can the legal system use experts on meaning.” (Summer 1999) *Tennessee Law Review*, vol 66, 1167-1199. Solan notes that Rule 702 replaced the Frye standard in 1975 based upon the new Federal Rules of Evidence (*Ibid*, p. 1194); however, Solan notes that some courts continued to rely on Frye (p.1195). The issue of which standard reigned supreme was resolved when the highest court of the land decided *Daubert v. Merrell Dow Pharmaceuticals*,

Inc. in 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 (Ibid, p. 1196).

At least some courts have ruled that testimony based upon readability analyses is appropriate. Clearly, Dr. Fry cites cases in which judges utilized 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 was presented by a professor of elementary education (*Mitchell Rutledge v. State*, 1983) In another case, the testimony was given by a special education teacher (*Jennifer A.J. v. State of Wisconsin* 1995). As noted previously, Judge Sundby included reference to the testimony of Kathryn McCosky who used the Fry Readability formula to determine that the warning presented to Jennifer was at an eighth grade level.

Dr. LeRoy Stone has utilized the Fry Readability formula through the use of computer analysis. He has also utilized computer-based analyses of the Raygor Formula, the Fog Formula and the Flesch. His work has been published on the Internet. (Stone, L. (2000) A demonstration of different estimations of readability for several forms of the Miranda Warnings and associated waivers of rights *Electronic Journal of Forensic Psychonomics*, 1, 1-10.

Some have suggested that the computer-based Flesch-Kincaid Readability Formula available through Microsoft Word 2000 is an appropriate tool to use for the purpose stated. Dr. Herbert Walberg, 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 *Evidence: Policy Reports from the CFE Trial*, Vol 1, 200: Setting the standard for a sound basic education) . In a personal communication (02-23-01) Dr. Walberg noted that he researched readability formulas and determined that the Flesch-Kincaid is widely used in the military, business and other applications. He noted that it is especially easy to apply. He suggested that 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 (Ibid).

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 utilized the Flesch-Kincaid. He determined that a sample of such forms had a readability level of 15.74 – appropriate for college seniors (Handelsman, M., Martinez, A. Geisendorger, S., Jordan, L., Wagner, L. Daniel, P., & Davis, S. (1995) Does legally mandated consent to psychotherapy ensure ethical appropriateness? The Colorado experience. *Ethics and Behavior*, 5, 119-129. He noted that when documents were less than three hundred words, he used the entire document as the population of words rather than using sampling techniques (personal communication 02-24-01).

Even when readability is used in cases where a Miranda rights waiver is at issue, it will only serve as one consideration in the totality of circumstances. The discussion presented by Grisso (1998) is particularly helpful on this topic.

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 about readability and the Miranda. It is clear that any and all professionals, including educators, lawyers, psychologists, special educators and others 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 various 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 publication in *Electronic Journal of*

Forensic Psychonomics, 1, 1-10. Dr. 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. He ultimately computes an average of the formulas that he uses. 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. The Martinsburg Miranda Warning was forwarded to Mr. 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 (02-27-01). The results are based upon the entire 605-word statement.

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, S.
9
9.4
12.2
10th grade level

Franz, E.
9
9.1
12
10th grade level

Stone, L.
8.5
9

12.6
10th grade level

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.

The author recently had an opportunity to analyze the Miranda Warning from Dane County Sheriff's Office. A law enforcement officer from Dane County 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 from the 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 (low ninth grade level). 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 10. 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 10 with 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 (personal communication: Sgt. John Brogan, Dane County Sheriff's Office, Madison, Wisconsin 03-02-01). The above results reveal considerable similarities in the determination of grade levels. However, readers are reminded that readability results are considered generally reliable, with an error range of plus or minus one grade level. Additionally, many of the complexities of the vocabulary, embedding and other linguistic considerations are not reflected directly by the results. Prior discussion from Grisso and Tiersma suggests that readability is but one consideration. The Miranda Warning includes subtle, complex and

abstract concepts that may be very difficult to understand and appreciate.

It would also seem appropriate in most cases to evaluate a defendant's levels of intelligence, ability to decode, 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 has developed, and, recently published test materials designed to assess a defendant's comprehension of Miranda rights, understanding of Miranda vocabulary, comprehension of Miranda rights through recognition and an appreciation of those rights (Grisso, 1998). Grisso notes that even if a defendant has a good understanding of what the rights 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; however, 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 Miranda rights were waived, problems of direct assessment of a defendant's knowledge and appreciation of Miranda rights may be confounded by subsequent advice from legal counsel. Thus, it would not seem unreasonable that an attorney would subsequently advise his client of the importance of the Miranda Warnings. Such communication is likely to be in the client's best interests; however, any direct assessment of knowledge and appreciation of the Miranda rights may be confounded.

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 already 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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