

PROVINCIAL JUDGES'

Journal

DES JUGES PROVINCIAUX

Justice without wisdom is impossible / La justice sans la sagesse n'est pas la Justice. - Froude.

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EDITOR'S NOTEBOOK/REMARQUES DE L'ÉDITEUR

Alan Gold of *Gold & Fuerst* in Toronto, was one of the presenters for the educational portion of the CAPCJ conference in Calgary in October, 1998. His paper for that presentation was "When 'Experts' Speak, Should Judges Listen: Some Basic Science Lessons". It is an illuminating, and, at times, controversial, examination of what Gold calls the "junk science" which is becoming a staple in our courts. Gold has a message for judges. It is probably understating that message to say that he encourages a little skepticism from us with respect to some of the evidence which he finds suspect. What drew me into the Gold paper, and kept me there, was the force of his logic and the clarity of his thinking. He makes no apology for the hard positions that he takes. A sample of his directness may be gauged from this small snippet:

"Junk science, self-delusional 'clinical experience,' opinions derived from bad data or faulty logic, all lack 'real probative value' and constitute in a real sense a fraud on the court. It is forensic 'snake oil' that can lead to miscarriages of justice or at the least bring the administration of justice into disrepute by demonstrating an embarrassing gullibility."

There is much more of the same to be had from this reading. I saw Alan Gold in full flight when he was presenting his paper and it was clear to me that this subject excites him. It will excite you too.



Alan Gold, de *Gold & Fuerst* de Toronto, était l'un des présentateurs de la partie pédagogique de la conférence de l'ACJCP à Calgary en octobre 1998. Son article pour cette communication était intitulé : " When >Experts= Speak, Should Judges Listen: Some Basic Science Lessons " (Lorsque les experts parlent, les juges devraient-ils écouter? Quelques leçons élémentaires de sciences). Il s'agit d'un examen instructif et parfois controversable de ce que Gold appelle la " science bidon " qui est en train de devenir une constante de nos tribunaux. Gold a un message pour les juges. C'est probablement un euphémisme de dire que son message incite à un peu de scepticisme de notre part à l'égard de certaines preuves qu'il trouve d'une authenticité douteuse. Ce qui m'a attiré vers l'article de Gold et ce qui m'y a fasciné sont la force de sa logique et la clarté de sa pensée. Il n'essaie pas de se justifier de ses prises de position. Ce petit extrait permet de juger un échantillon de son franc-parler:

" La science bidon, l'expérience clinique trompeuse, les opinions issues de données erronées ou de logique fautive, manquent toutes de " véritable valeur probante " et constituent au sens propre une fraude à l'égard de la cour. C'est du charlatanisme médico-légal qui peut mener à des erreurs judiciaires ou, pour le moins, jeter le discrédit sur l'administration de la justice en révélant une embarrassante crédulité ".

Cette lecture vous apportera beaucoup d'autres réflexions de la même nature. J'ai vu Alan Gold en action lorsqu'il présentait sa communication et il est

deterrence and so much in favour of just desserts. His argument is that sentences do not reduce crime. No one ever though they did. If they did we would have no work eventually. Nevertheless, there is a firm belief in the public mind and the minds of many sentencers that the crime rate, probably always rising, is retarded somewhat by the sentences that are being handed out. It can't be proven one way or another, and that's where common sense comes into play; common sense - that internal gyroscope that puts up with excesses of imagination, logic, frivolity, principle for only so long.

To assist his argument the author narrowly defines like-minded persons as those who have the same triggers, same stresses. He doesn't allow for the slightly less stressed, the slightly more thoughtful, the slightly more cowardly, the slightly less vicious who might still be labelled 'like-minded' by a person trying to support deterrence as a principle.

The problem with just desserts is that it calls for a precision of measurement and a refined degree of moral certainty that many might feel they lack.. For instance, I would have difficulty fixing a proportionate sentence, conditional or otherwise, under the stringent rules laid down by the author. He advises that

Only in cases where there is palpable and compelling mitigation should a conditional sentence be used for a crime of significant violence or devastating carnage.

I would be inclined to go for deterrence on that one.

The author laid out the reason for technicalities clearly - there's got to be some rules. As he put it one could easily appreciate the explanation for 'rule utilitarianism'- long-term usefulness. However, the author began to support so much of what he favoured by referring to 'the long term' that one had to suspect they would not be susceptible to testing - a matter of faith, rather like general deterrence.

In this book ' technicalities ' are closely related to courts and judges 'throwing out' stuff. As a judge I would prefer he had said the evidence was *ruled inadmissible*, or the case was *dismissed*, thereby helping the public and media away from this intemperate image.. It's an image that makes us all seem too much like the Queen during the trial of the Knave of Hearts. In addition, there was the scattered distracting phrase - 'good justice' , 'country prosecutor', 'sentencing mission' - all serving to make me lose my train of thought.

However, now that Mr Editor had gotten me to read this book, I think you should all read it. It's a bit slow getting into, but it gets more engaging as it goes on. The book, with its selection of cases, each with a slight shift, demonstrates nimble-minded teaching skill, and deserves readers I'm sure you've read all the cases before, and know the issues as well as the author - but just to refresh your memories...

Are people getting away with murder? Well, 'yes' if you consult page 4, but 'no' when you get to page 324.

one part relates to another, then putting it back together again, and attesting that it is still working fine. He calls on those within the system with the power, to assist in achieving the same result by being honest enough and brave enough to make a few corrections, (eg. removing the mandatory minimum punishments for murder, while resisting legislative changes that are injurious to the integrity of the system, though inspired by current popular demand, (eg. demands for extensions of victims rights, and some reduction in the quantity or quality of rights enjoyed by accused persons).

Writing for these two audiences makes the thesis a hard sell. Even another insider might wonder if the public attitude has undergone such a shift for the worst so as to make a 'crisis'. In a speech to the American Bar Association in 1906 Dean Roscoe Pound said,

Dissatisfaction with the administration of justice is as old as the law. cited in Charles E. Silberman, **Criminal Violence, Criminal Justice**, Random House, 1978, pp.171-172

Outsiders might be sceptical too. In the legal system, a self-confessed 'insider' enjoys 'the 'artificial reason' the late Mr Justice Coke spoke so highly of, when putting King James in his place. He is proficient in logical thinking and persuasion, and has a professional duty to clarify his particular system for 'outsiders'. However, this professional duty mutes his criticism, limiting it to matters of appearance and fine tuning. An outsider like John Ralston Saul would dare to say things have gone fundamentally awry. Although they both agree there is too much complexity, the

author, Paciocco, even if he believed it could not say what the author, Saul could say,

In many ways, with its ineffectual complexity, law has become like court etiquette of the eighteenth century. Each man goes through the motions of acquiescence. Then those with power go away and do something quite different. And the judges preside over these formalities like rational princes who have neither the paternalistic authority of an absolute monarch nor the populist authority of an elected leader to insure that the social contract is respected. **Voltaire's Bastards, The Dictatorship of Reason in the West**, Penguin Books, 1993, p 335

Saul's pronouncement on the criminal law is that it's "...not too bad when it comes to dealing with amateurs, pretty hopeless with small time thieves, and unable to touch the professionals." If there's any clarity and enforceability still to be found, he says, it is limited to the crime of murder.(pp.323, 335).What practising lawyer would write such a thing.?

But I digress.

As another insider, more restricted than the author, I can readily agree that all is well. And that's a fact! Conclusion first, logic applied afterwards, which is the way 'outsiders' suspect we logical chaps do things.

As a provincial Court Judge I don't get to try many murder cases, but I do get to do quite a lot of sentencing, - 'amateurs' mostly. Therefore, I was surprised to see the author so firmly against the principal of general

Gold is an engaging speaker. The oomph that he shows in the flesh leaps off the page at you as you read his words. Do it!

In the same vein is another contribution from Judge Timothy White. In fact, Judge White told me that he was inspired to do his piece, "Opinion Evidence: Guidelines for Admissibility and Proper Usage in Canadian Courts", by Alan Gold's presentation in Calgary. When you have finished with the passion of the Gold piece it is profitable to sit back with the balanced reserve of the White paper and consider your own posture on the issue. At the very least, each is a comprehensive primer for those of us who face those nettlesome admissibility rulings on a daily basis.

If you like the sweep of Alan Gold's paper, you will be positively enthralled by the range that David M. Paciocco achieves in "Getting Away With Murder: The Canadian Criminal Justice System". Regrettably you will have to experience this vicariously for the time being. You can do so through the perspicacious (blue too!) eyes of Judge Gerald Barnable. Most of you will know Judge Barnable as a past-president of the Association. At my request he has reviewed this book which is just off the presses at Irwin Law. In my view, this is the kind of book that should be mandatory reading, on a regular basis (say, once a year), for every judge. I think that Judge Barnable shares my view in this and I will let you read his review to find out why.

In my last Notebook, I told you about my trip up Tunnel Mountain in Banff with Judges Moxley and Morris of

clair que son sujet le passionne. Il vous passionnera aussi. Gold est un orateur captivant. Le dynamisme dont il fait preuve en personne se dégage avec force des pages que vous allez lire. Ne manquez pas cela!

Dans la même veine, vous trouverez une autre contribution du Juge Timothy White. En fait, le Juge White m'a dit que son article "Opinion Evidence: Guidelines for Admissibility and Proper Usage in Canadian Courts" (Témoignages d'opinion : Directives pour leur admissibilité et leur usage approprié dans les cours canadiennes) lui avait été inspiré par la communication d'Alan Gold à Calgary. Lorsque vous en aurez terminé avec l'article passionné de Gold, il sera bon de prendre du recul avec l'article sagement mesuré de White et de songer à votre propre position sur la question. Chacun de ces articles apporte, pour le moins, des notions élémentaires à ceux d'entre nous qui sont confrontés quotidiennement à ces décisions épineuses d'admissibilité en preuve.

Si vous aimez la verve de l'article d'Alan Gold, vous serez absolument captivé par la portée des réflexions de David M. Paciocco dans son article "Getting Away With Murder: The Canadian Criminal Justice System" (L'art de s'en tirer impunément : Le système canadien de justice pénale). Malheureusement, vous devrez faire cette expérience par personne interposée pour le moment. Vous la ferez au travers du regard perspicace (aux yeux également bleus) du Juge Gerald Barnable. La plupart d'entre vous connaissent le Juge Barnable comme président sortant de l'association. À ma demande, il a écrit une critique de ce livre qui vient tout juste de sortir des presses d'Irwin Law. Selon moi, c'est le type d'ouvrage dont la lecture devrait être obligatoire, à intervalles réguliers (disons une fois par an), pour tous les juges. Je pense que le Juge Barnable partage mon point de

Saskatchewan, and how I found out in casual conversation that Judge Morris was going to "do" the New York Marathon. At the time of the last publication I knew that Judge Morris had "done it" but I didn't know *how*. Well, I do now and you can too! She has graciously complied with a request for an article on her escapades in New York. It is here for all to see, replete with tales about brass bands, New York fries, peeing off the Verrazano-Narrows Bridge, and more. And if you think that New York was an adventure, wait until I catch up with her again. At the time of this writing, Judge Morris was on safari in Africa. (I wonder if she will get to see the "snows of Kilimanjaro"?)

Elliott Goldstein is a lawyer in Thornhill, ON who has this "thing" for visual evidence. He defines "visual evidence" as "evidence admitted in civil and criminal courts in the form of videotapes, photographs, motion picture films, illustrations, drawings, and computer animations and simulations". Let me assure you, he knows what he is talking about. He has written *the* book on the topic. Published by Carswell, it is entitled "Visual Evidence: A Practitioner's Manual". He has also provided me with an article on the topic, specifically tailored for provincial court judges to use on the bench. I recommend this writing to you which appears here under the title "Visual Evidence in Provincial Courts". When you have finished with reading it, keep this edition of the Journal on the bench with you so that you can handily get to the useful assistance which Goldstein has to offer.

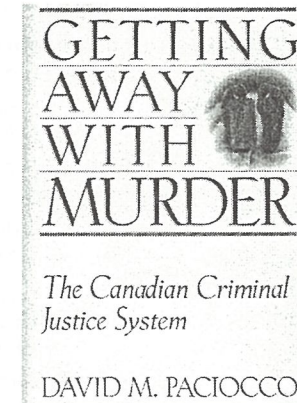
vue là-dessus et vous découvrirez pourquoi en lisant sa critique.

Dans mes précédentes remarques, je vous ai raconté mon escalade de Tunnel Mountain, à Banff, en compagnie des juges Moxley et Morris du Saskatchewan, et comment j'avais découvert au hasard de nos conversations que la juge Morris allait "faire" le marathon de New York. Lors du dernier numéro, je savais que la juge l'avait "fait", mais je ne savais pas **comment**. Et bien, maintenant je le sais et vous pouvez le savoir aussi! Elle a gracieusement accédé à ma demande en écrivant un article sur ses escapades à New York. Il est présenté ici pour notre plaisir à tous, avec ses histoires de fanfares, de frites de New York, de la nécessité d'uriner du haut du pont Verrazano-Narrows, et plus encore. Et si vous pensez que New York a été une aventure, attendez que je rattrape la juge Morris. Au moment où j'écris ces lignes, elle fait un safari en Afrique. (Je me demande si elle aura l'occasion de voir "Les neiges du Kilimanjaro")

Elliott Goldstein est un avocat de Thornhill, Ontario, qui a la "manie" de la preuve visuelle. Il définit la "preuve visuelle" comme "une preuve admise dans un tribunal civil ou pénal sous forme de bandes vidéos, de photos, de films, d'illustrations, de dessins ou d'animations et de simulations sur ordinateur". Et je peux vous assurer qu'il sait de quoi il parle. Il a écrit *le* livre sur le sujet. Publié par Carswell, son ouvrage a pour titre "Visual Evidence: A Practitioner's Manual" (La Preuve visuelle : Un Manuel du juriste). Il m'a également fourni un article à ce sujet, spécialement destiné à l'usage des juges de cours provinciales. Je vous recommande vivement cet article qui est publié ici sous le titre "Visual Evidence in Provincial Courts" (La Preuve visuelle dans les cours provinciales). Lorsque vous aurez fini de le lire, conservez toujours sur vous ce numéro du journal afin de pouvoir accéder facilement aux

BOOK REVIEW*

Getting away With Murder, the Canadian Criminal Justice System, Irwin Law, 1999 is an engaging book, written by former prosecutor, part-time defence lawyer, and law professor, David Paciocco. Throughout the book the author amply demonstrates the claim he made in the preface -that he loves his subject. He knows it too, and how it can be taught entertainingly. His confession that he 'even enjoys bowing for judges,' is admissible... and duly noted.



The book is a romp through the criminal law, using murder and its colourful, kindred crimes to highlight its intricacies, its history, the integrity of the system, the controversies that arise from time to time over rulings, and reforms that can be made to render the process more acceptable without damaging the fabric itself.

The reader has opportunity to revisit the Makins on their farm, put to sea with Dudley and Stephens, find out more about Finta, than he ever knew. Bedingfield got his just desserts, but if you want to know whether the new and improved jury charge made a difference to Woolmington's fate you're out of luck. Still, the reader is taken deeper than that.

When finished at last, you realize the teacher has poured a lot in. If it didn't already have such a catchy title it might be considered one of these **The Idiot's Guide to...**type books. You think it's going to be all vivid pictures, highlighting Canadian decisions in ways similar to the "That's Outrageous" feature appearing from time to time in Reader's Digest...and find out part way through that a bit of a mental stretch is required.

The author's thesis is that the criminal justice system in this country is a marvellous piece of work but nevertheless, public confidence in it is declining..

...we have one of the best criminal justice systems in the world. This is not some platitudinous endorsement from an insider. It is a fact. There is no criminal justice crisis. What there is however, is almost as serious. There is a crisis of confidence in the criminal justice system.

Paciocco wrote his book for two audiences. He believes the slide can be slowed, halted, even reversed by explaining the system to the public - taking it apart like a clock, showing how

*This review is by Judge Gerald Barnable. He is a member of the Provincial Court of Newfoundland. He sits in Placentia. Judge Barnable is a Past-President of the CAPCJ.

INVITATION A SE PROMENER DANS LES JARDINS DE QUEMAGNET

Ouvert à vie sur l'Internet. **Quemagnet**, agora judiciaire est ouvert depuis l'aurore du jour de l'an 1999 à tous les juges du Quebec et a tous les juges francophiles du Canada.

Quemagnet, c'est un lieu de paroles et de promenades dans un environnement détendu et confidentiel. En toute confiance, on peut y échanger sur les tocs et les riens de nos travaux et nos jours avec ses peines et ses joies.

Par défaut, on a fait de moi le concierge de cet agora, de cette place érigée grâce à la compétence du collègue Denis Laliberté et la complicité de l'Université de Montréal où siège le robot serveur confidentiel.

S'il vous chantait de venir vous balader dans les jardins de **Quemagnet**, veuillez communiquer avec son jardinier-concierge par Internet à . On vous remettra alors un clé vous donnant accès aux jardins avec ses bancs, ses sentes et ses fontaines où vous pourrez deviser avec des dizaines de collègues provenant d'autres chambres et tribunaux.

JACQUES R. ROY
jasiro@videotron.ca

QUEMAGNET

On January 1, 1999, Quémagnet was born. It is a secure and confidential site on the Internet for judges in Canada. It is an open forum for exchanging ideas, comments, and inspirations between all judges from Québec or everywhere in Canada who are "francophiles". These exchanges take place mainly in Felix Leclerc's language. Outside Québec, Quémagnet have already two colleagues from British Columbia. Bienvenue sur Quémagnet!

I have for you as well many of the staples ("Literary Vein", "Lighter Vein", etc.) that you have come to expect and which I am glad to say a lot of you tell me you look forward to seeing.

I have to check myself now! I am having such fun detailing all of this material for you that I could go on at length. But I have already gone on too long. To do more would only remove some of the joy of discovery that lies in thumbing through the pages and finding for yourself what you want to read. That said, I leave the rest to you. Enjoy! Until the next time....

conseils utiles qui nous sont prodigués par Goldstein.

Je vous convie également à la plupart des rubriques habituelles (" In a Literary Vein ", " In a Lighter Vein ", etc.) auxquelles vous vous attendez et, j'ai le plaisir de le signaler, vous êtes nombreux à me dire que vous les attendez avec impatience.

Il faut tout de même que je m'arrête là! Je prends tellement plaisir à vous raconter en détail le contenu de ce numéro que je pourrais continuer indéfiniment. Mais j'en ai déjà trop dit. En dire plus reviendrait à vous priver des joies de la découverte que vous allez faire en feuilletant ces pages pour choisir vous-même ce que vous voulez lire. Voilà, c'est à vous de jouer. Bonne lecture et à la prochaine fois...

"A Canadian is someone who drinks Brazilian coffee from an English teacup, and munches a French pastry while sitting on his Danish furniture, having just come home from an Italian movie in his German car. He picks up his Japanese pen and writes to his Member of Parliament to complain about the American takeover of the Canadian publishing business."

— Campbell Hughes, then of the Canadian Book Publishers Council, in 1971.

"My experience of the world is that things left to themselves don't get right."
—T. H. Huxley

"Too many people spend money they haven't earned, to buy things they don't want, to impress people they don't like."
—Will Rogers

The Wife

Was she ironing your shirt when you hit her

Occasioning actual bodily harm,

The creases disappearing as the bruises began?

Such a clean man for spreading blue-black stains.

Pin-neat in the dock, the knife edges of your pockets,

Palest blue bound with white, almost, but not quite,

Match the stitches, the five stitches across her face.

You've grown accustomed to her face.

I'm so near, I can smell freshness on your clothes.

Did she add a softener for you before you

Clenched your fist once more to soften her?

Can you hear her now pleading for you?

'He's a good man. It's the stress.'

Do you see her now the state of her?

The mess? She calls it love.

What do you call it, mate?

Geraldine Paine (Faversham and Sittingbourne)

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to either side on the mile long bridge to do their business, the Bridge has become known as the world's largest urinal, a Big Apple variant on the "port-a-potty" convenience.

The press of people was so great at the beginning, it was run or be run over. So I ran the first couple of miles. I enjoyed being part of the collective surge - for awhile at least. I knew I wouldn't be long at that pace!

Bands on corners throughout the route played "New York, New York", the theme from "Rocky", etc. Ghetto blasters perched on window ledges bellowed out upbeat tunes.

The crowds lining the route were fantastic. They encouraged and cajoled: "Lookin' good", "You can do it". If you were wearing your name on your T-shirt, you got personalized encouragement. I learned this tip from Judge Garrett Handrigan, the esteemed editor of the *Provincial Court Judges' Journal*. I had met him at the Calgary Conference, hiking up Tunnel Mountain in Banff. He cautioned me that when your spirits start to decrease and your aches and pains increase, the crowd can keep you going. He was right. "Go Diane, Go", I heard hundreds of times during the day.

I had made a name tag for myself and one for my friend. She took hers off after the first 10 miles saying she couldn't go on smiling and waving at people who seemed to know her. It just took so much effort. I wore mine to the finish. So Garrett, thanks!!

I really felt like a celebrity striding along 5th Avenue in Manhattan smiling and waving to the crowd. (The 15 minutes that Warhol promised me seemed like an eternity!) People clapped their hands. Kids came over to give me "high fives". It was a heady experience. When darkness fell about 5:30 p.m., though there was little smiling and waving. The crowds had diminished. The frigid winds blasted across the final bridge from the Bronx into Manhattan. The last four or so miles were very tough. Each mile sign seemed to be farther away than the previous one.

More questions came to me from the back of those gloves - "What am I doing out here?" Over 7 hours of plugging along "When will this end?" Ah, and what a relief when it did end for me at 7:35:04 p.m.

We finally reached the finish line at Tavern on the Green in Central Park. A beautiful bronze medal was presented to each of us.

My friend and I were glad to get into a warm cab and head back to our hotel for hot baths, a clubhouse sandwich and a glass of red wine. We had done it.

Now that it was all over and the euphoria had set in, another question came out at me: "Where will my next marathon be?"

P.S. If you want to know who won this footrace, see the January 1999 edition of **"Runner's World"**.

instruction sheet, etc. Pier 92 on the Hudson River was the location. Long rows of entrants walked intestinal loops around the dockyard. It was cold and windy and it took about an hour to get inside a building. A Holland American Cruise ship lay at berth nearby. I fantasized that it was my ship and it would be only moments before I got out of the cold icy winds and boarded her for a hot toddy in the lounge. Dream on!

Once inside the shipping building, we acted like kids on a trick or treat mission. After all, it was Hallowe'en. We were given big plastic bags to hold the goodies that sponsors and promoters of marathons worldwide were peddling. My bag was filled to overflowing with posters, postcards, Advil, Power Bars, nasal strip samples and tons of literature on other marathons. Lots to carry back to the hotel. The mood was upbeat. We were all looking forward to and apprehensive of the next day.

I told my friend that we were to rest the day before a marathon - not do much of anything - let alone walk. Fine, it took us forty-five minutes to get to the registration site and the same back to the hotel. Then we took off downtown in search of my friend's sport accessory needs. So why not do a little shopping and sightseeing? We walked for about five hours in total.

About 4:00 p.m. we dined on large New York steaks and New York fries (what else would you have there!) and returned to our hotel to rest and watch "I Love Lucy" reruns on the telly.

The big day arrived for us at 5:30 a.m. It was a hotel breakfast as we joined many others sitting at the tables with their running gear on, replete with numbered bibs. It looked like we were participants in an eating contest.

I am a marathon walker, not runner, now.

There are many marathons which allow for and encourage walkers. The aid stations stay open for several hours after the "runners" are done. I'm not sure if walking a marathon is preferable to running one.

It is true that you have more time to enjoy the sights along the route. And so it was, the Statue of Liberty on Ellis Island, the brownstones of Manhattan, the jazz bands of Brooklyn, etc. You get an opportunity to chat at length with others of your ilk. However, you have to trip over thousands of empty Gatorade and water cups when you're at the end of the pack. You look at your watch after two and a half hours or so and think about the finishers already enjoying a beer or a Manhattan and basking in the glow of congratulatory comments.

There were over 33,000 of us in the 29th running of the New York City Marathon when the starting gun sounded at the base of the Verrazano-Narrows Bridge in Staten Island on Sunday November 1, 1998. Coloured balloons filled the sky. "Stars and Stripes" boomed from the bandstand. Helicopters hovered with cameras. Competitors began to strip away outer clothing worn on the trip down in temperatures of about 40 degrees Fahrenheit. Jackets and track pants clogged the route for the first mile. They would be scooped up and given to the homeless, we were told.

For those people who couldn't get into a portable toilet before the start, no worries. It has become tradition for the Verrazano-Narrows Bridge to accommodate. With runners peeling off

WHEN "EXPERTS" SPEAK, SHOULD JUDGES LISTEN: SOME BASIC SCIENCE LESSONS

by
Alan D. Gold*

Introduction

We live in a time of lotteries and psychic hotlines ("tired of those other phony psychics? call a real psychic!"), a time appropriately described as characterized by "*The Flight From Science and Reason*". The volume of the same name, edited by Gross, Levitt and Lewis, vol. 775, *Annals of the New York Academy of Sciences* (The New York Academy of Sciences, New York, 1996) is a superb documentation of the many areas of contemporary life that have been swept over by an ever rising tide of foolishness and irrationality.

It has been estimated that only approximately 5% of U.S. adults are scientifically literate. Surveys show people have little understanding of basic concepts. Science education is arguably a spectacular failure, with basic principles of scientific method not being taught in a manner to allow otherwise well-educated people to apply them in every day experiences.

As another writer put it: "... it sometimes seems as if the world's most advanced society has collapsed utterly into the worship of pseudoscience, with people possessing just enough education to get everything spectacularly fouled up in their minds": October 1997 issue of

Vanity Fair, Christopher Hitchens, *Vanity Fair*, October, 1997, writing about modern society's bizarre worship of pseudoscience.

The social sciences generally have been badly infected. In Goldberg, "*The Erosion of the Social Sciences*", in *Dumbing Down: Essays On The Strip-Mining of American Culture* (Washburn and Thornton eds.), W.W. Norton & Co., 1996, at pp. 97-111, it is eloquently written:

"There was a time when you could assume that an intelligent person looking for truth was guided by the most basic of scientific intuitions: nature will give you a lift only if you are going her way. The fallaciousness of the ad hominem argument and the argument from consequence, for example, was so obvious that the anticipation of the embarrassment you would feel if you invoked such arguments was sufficient to preclude your doing so.

In social science today we can no longer make this assumption. Even if we continue to assume we are dealing with intelligent people, we find no way to maintain the belief that such people act on an impulse to find the truth. Instead, we find large and increasing numbers of ideologues who act not as if nature is something to be discovered no matter what she may turn out to be,

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but rather as if she is a handmaiden whose purpose is to satisfy one's psychological and ideological needs. Lacking the rudimentary scientific impulse of self-refutation (i.e., if you are happy with the conclusions reached by your research, double-check and triple-check those conclusions), the ideologue assesses truth not by its concordance with reality, but by its concordance with psychological and ideological needs."

Scientific illiteracy like literacy generally, will make the world a better and freer place. "Logical thinking empowers the mind in a way that no other kind of thinking can. It frees the highly educated from the habit of presuming every claim to be true until proven false. It enables average [people] to stand up against the forces of political correctness, see through the chicanery, and make independent decisions for themselves. And it is the bulwark against intellectual servitude for the underprivileged": Savant, **The Power of Logical Thinking** (1995), at p. xix.

But certainly, important social components, such as the legal system, can and must be immunized against this plague of foolishness. The legal system does not necessarily start with any advantage. Science has never been viewed as inexorably linked with a legal education. And as one judge has candidly written:

"Judges, trial and appellate, generally are not recruited from within the ranks of behavioral research scientists. They tend to have little formal, post-secondary, science education, behavioral or otherwise, except as provided in continuing judicial education programs. They tend to have no particular training in statistical analysis as it relates to scientific research. In short they tend to be scientifically ignorant, which means they are not

acquainted with, let alone conversant with, scientific practice or language": Gless, "Some Post-Daubert Trial Tribulations of a Simple Country Judge: *Behavioural Science in Trial Courts*," (1995), 13 **Behavioural Science and the Law** 261, at 262-263.

And scientific literacy cannot be regarded as unnecessary if one resorts only to the "reputable literature." Unfortunately, the so-called "literature" is awash with unworthy publications. How prevalent is junk science? Too prevalent by all accounts. One study concluded simply: "The literature is probably worse than you think", Katzer, Cook and Crouch, **Evaluating Information: A Guide For Users of Social Science Research** (McGraw-Hill, 1991, 3rd ed.), at p. 5 (reporting studies showing high error rates in published materials in all varieties of journals). Articles contain everything from simple mathematical errors, text that is blatantly contradicted by the table of data beside it that it is supposed to reflect, to illogical reasoning that should - but apparently does not - embarrass the authors and publishers. Scientific literacy is necessary to assess both expert witnesses, their procedures and claims, and also the literature and references upon which they in turn rely.

Scientific Literacy

Concern about scientific literacy in the justice system is not new. According to a report issued nearly a decade ago by a committee set up by the British Council for Science and Society and the legal group, Justice, lawyers need to know more about science. The report said that criminal lawyers should have "at least some basic training in scientific methodology, reasoning and language," according to an article entitled "*Science lessons needed to ensure justice is*

A MARATHON EXPERIENCE

by Judge Diane Morris

"It's time to stop asking questions
(10:50 a.m. November 1, 1998)
And start answering them
(1998 New York City Marathon)"

These lines were written on the pairs of black cotton gloves handed out to entrants of the New York City Marathon in front of the New York City Public Library where city buses gobbled us up to transport us an hour away to Staten Island for the official start.

I assumed that the question the writer intended was, "can I do it?" and another which I was permitted to ask in an offhand, nonchalant, and artificially brave way, was "what's 26.2 miles, anyway?"

"The New York City Marathon is the world's most spectacular marathon" the brochure says. It covers a scenic course through the city's five boroughs: Staten Island, Brooklyn, Queens, The Bronx and Manhattan.

I decided to enter this marathon in May, 1998 at the urging of my friend, Wendy from Ottawa. I had done the Honolulu Marathon in December, 1997 and was into

marathons again after a fourteen year hiatus. I had completed two marathons in 1983 (Lumsden, Saskatchewan and Saskatoon, Saskatchewan) while I was in good shape and doing a lot of running. A bad knee, combined with slothfulness, make me a marathon walker now.

I paid my \$80.00 US registration fee and along with Wendy, became part of the 800 or so Canadian contingent. Each country has a quota and every year thousands, including 30,000 Americans, are turned away and told to try again.

I flew to New York City on October 30th and met Wendy. The whole city was abuzz with marathon frenzy. Many people had come from great distances . . . Britain, Germany, Japan, etc. to do the run.

On October 31st, we presented ourselves at the Official Registration Area to get our race package - a numbered bib, final



*Judge Morris lives in Regina, SK. When she is not on the bench she is running marathons, climbing mountains, or on safari in the deep recesses of Africa.

assistance in answering the pesky questions that arise periodically with respect to the admissibility of evidence.

But do not despair! This is an opportunity to be re-energized by the challenges presented. Judges are uniquely placed to address the concerns that may arise, and can call upon the assistance of counsel and scientists alike in addressing the problems presented. The traditional principles of criminal law and the long-standing rules of evidence will continue to provide judges with invaluable aids and insights when dealing with this kind of evidence. Time will demonstrate just how wise, thoughtful and helpful our common law predecessors were as we look to past cases for guidance in dealing with modern issues.

Endnotes

1. *Frye v. United States*, 54 App.D.C.46. The so-called "Frye" test arose out of a short case decided in 1923 concerning the admissibility of evidence derived from a systolic blood deception test. This was

what has been described as a crude precursor to the polygraph machine. No citations were given in the case and the central ruling of the court was stated as follows: "Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and 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."

2. The Roscoe Pound Foundation, 1050 31st Street, NW Washington, DC 20007 Library of Congress Card Catalogue Number: 98-67164. This report contains a great review of this area of the law and the controversies it has engendered in the United States trial and appellate courts.
3. *Ibid.*, pp11-12.
4. For example, in *Mohan*, all of the evidence was excluded; in *R. v. G. (J.R.)* (1998) 17 C.R. (5th)399 all of the evidence was excluded; in *R. v. B. (G.)* (1990),56 C.C.C.(3d)200 (SCC) the evidence was admitted; and in the recent case of *R. v. H. (A.)* (1998), 18 C.R. (5th) 336 some of the evidence was admitted and some of the evidence was excluded.

done," *New Scientist*, No. 1800/1801 21/28 December, 1991, p.6.

In response to concerns about 'junk science' finding its way into the courtroom, the United States Supreme Court in *Daubert v Merrell Dow Pharmaceuticals*, 113 S. Ct. 2786 (1993) expressly grounded the admissibility of expert evidence in United States courts in the philosophy of science. This appears to be the first such attempt by a major court to do so and in defining the ground rules *Daubert* draws on the work of Sir Karl Popper, a distinguished philosopher of science.

The Court majority held:

"The trial judge must determine ... whether the reasoning or methodology underlying the testimony is scientifically valid and whether that reasoning or methodology properly can be applied to the facts in issue."

The decision added that a trial judge ought to be able to take account of the "known or potential error rate" associated with applications of a scientific theory, whether it has been subjected to peer review and publication, and - drawing on an amicus brief provided by the Carnegie Commission of Science and Technology (one of 22 amicus briefs submitted) - allowed that judges should consider such methodological issues as reliability, validity, study design, data collection, and replication. In sum, judges must be able to discern good science from bad based upon an understanding of the history, philosophy and sociology of science.

Daubert has, correctly in my view, been characterized by many as a "revolution" in expert evidence law. "Twenty-five years from today, lawyers and judges will

look back to this period of time and see it as a turning point in law's use of science. ...*Daubert* and its progeny reflect the growing realization that in order to do justice in our technological society, judges must be trained in and fully understand the scientific method. The question is no longer whether this is necessarily so, only how, and how long before, it will become so": Faigman, David L., "*Making the Law Safe for Science: A Proposed Rule for the Admission of Expert Testimony*," (1996) 35 *Washburn L.J.* 401.

"*Daubert*... signals a new receptivity to science as a functional component of American jurisprudence. This broader and more emblematic reading of the case will in time overshadow the technical importance of *Daubert* as a new "test" to be used for admitting scientific evidence. We predict that as a consequence of *Daubert*, a number of common practices of science will become common practices of law, [such as] ... the widespread adoption by the judiciary of an "empirical" approach to issues concerned with the legal process. ... An empirical approach, ..., begins with the assumption that direct observation and experience provide the only firm basis for understanding nature": Walker, Laurens & John Monahan, "*Daubert and the Reference Manual: An Essay on the Future of Science in Law*", (1996) 82 *Va. L. Rev.* 837 (1996).

The "Reference Manual" referred to in the title of the last cited article is the "*Reference Manual on Scientific Evidence*", **Federal Judicial Centre**, 1994, West Publishing. This 637 page primer on all major aspects of science and scientific evidence was produced in cooperation with the American Federal Judicial Centre for the express purpose of helping American federal judges deal with scientific evidence, and is yet another example of how seriously the

If a little knowledge is dangerous, where is the man who has so much as to be out of danger?

- T. H. Huxley

American judiciary is taking this issue in the aftermath of Daubert.

Daubert, and a concern about scientific illiteracy in our system of justice, is thus helping to convert the law from a literary culture that is largely ignorant of scientific culture to a new culture, one that will integrate a sophisticated understanding of science into legal decision-making.

There is an interesting intellectual justification for scientific literacy, hinted at by the earlier quotation about how science is liberating: the scientific method and the recognition of basic human rights are related insights that historically arose from the same intellectual struggle.

“The two progeny of the Enlightenment, democracy and the scientific method ... are indeed siblings. Both democracy and the scientific method - empirical experimentation designed to approach objective truth - are closely-related in their preference for intellectual authority over institutional authority, their insistence on universalism and objectivity, and their intellectual skepticism. In science as in democracy, what matters is not who says it but whether it is right. We are all free to reject another’s beliefs, and no dogma is too sacred to challenge”: Farber & Sherry, **Beyond All Reason: The Radical Assault on Truth in American Law** (Oxford University Press, 1997), at pp. 106 - 108.

Many significant historical events, such as the Star Chamber and Galileo’s trial, are landmarks in the historical evolution of both the administration of justice and the growth of science, the intellectual quest for real, as opposed to ordained, knowledge. Law’s concern with human liberty is mirrored by science’s concern for intellectual liberty. Scientific literacy frees the mind from intellectual tyranny

the way basic human rights free the body and soul from physical tyranny. Freedom is in jeopardy when a society ceases to believe in an objective reality discernible by uncorrupted science.

Post-modern thinking like the following is all the rage in certain quarters:

“We are now at the end of the Age of Reason....The idea of free and unfettered science ...is absurd.... Science is a social phenomenon, and like every other social phenomenon is limited by the benefit or injury it confers on the community....The slogan of objective science has been coined by the professorate simply in order to escape from the very necessary supervision by the power of the State.... It follows necessarily that there can only be the science of a particular type of humanity and of a particular age.”

It teaches us a valuable lesson to remember that the speaker in this quotation is a certain Mr. Adolph Hitler: Alan Cromer, **Connected Knowledge: Science, Philosophy, and Education**, Oxford University Press, 1997, at p. 22. Totalitarian states inevitably view real science as a feared opponent and, like the classic fictional example in George Orwell’s “1984”, invariably try to control science and dictate scientific knowledge. This similar treatment of legal rights and science is no coincidence but arises from the necessary interrelationship between legal freedom and scientific freedom.

If the Charter of Rights protects our legal rights, then science can be thought of as a “*Charter of Knowledge*”, guaranteeing a right to know the truth, however pleasant or unpleasant, to the best extent that we can know it at our particular stage of human history. The unfolding of time ensures that many

allegations in the indictment or charges.

- ◆ It is erroneous to state that a trier of fact cannot draw an adverse inference based on an absence of recent complaint. Absence of recent complaint may, or may not, be of significance depending upon the circumstances of the case.

The trial judge often has a very difficult task when trying cases involving opinion evidence. There is no one simple rule or approach that can be used to ensure that justice is done at all times. Each case is fact-specific and must be judged on its own merits and, of necessity, the admissibility and use of evidence will vary according to the circumstances presented by the case. When our courts are asked to admit evidence, particularly from the behavioural sciences, it should come as no surprise that in some instances all of the proffered evidence will be admitted, while in other cases none of the evidence will be admitted, and in some more cases we will have a mixed bag of evidence admitted and rejected.⁴

Hill, J. in R. v. C. (G.) (1997), 8C.R. (5th) 21 did a comprehensive analysis of the Canadian jurisprudence in this area and indicated the factors that ought to be considered in assessing relevance, necessity, and, the balancing of probative value and prejudicial effect. At page 45 of the judgement he listed the factors that he considered to be important in determining the probative value of expert evidence in sexual cases:

- ◆ The force of the diagnostic opinion in terms of strength and quality of the reactive or affirmative behaviours and the temporal nexus of the behaviour to the alleged incident.

- ◆ The currency of the diagnosis to the gathering or recording of foundational facts supporting the expert’s opinion.
- ◆ The presence or contribution of any other seriously traumatic event to the symptomatology exhibited by the complainant.
- ◆ The extent to which the opinion is externally verifiable from the complainant.
- ◆ The age of the child/complainant at the time of the alleged abuse and on the occasion of the trial.
- ◆ The necessity otherwise for the expert’s opinion in the case to explain a reactive behaviour of the complainant about which the triers-of-fact will necessarily be informed i.e. disclosure.

There is no doubt that the task of judging can be difficult and complicated and often, trying. The foundation of good judgment will continue to rest on common sense, scepticism, humanism and historical knowledge. The good judge will continue to be patient, thoughtful, learned and wise, but he/she will also have to be imbued with a healthy dose of skepticism. We often say of things that we can’t quite fathom that “it doesn’t look right, but I can’t quite put my finger on it”. If you feel that way about evidence which is being tendered it probably isn’t right. Retreat to the refuge of your experience and look for assistance amongst the well-established rules of evidence. They have been modified somewhat but are still of great

possibilities does not lend support to either of them.

- ◆ Probably the most valuable way of assessing the credibility of a witness is to examine what the witness says in the box with what the witness has said on other occasions whether on oath or not. Where the inconsistency involves a material matter about which an honest witness is unlikely to be mistaken, the inconsistency can demonstrate a carelessness with the truth.
- ◆ It is not proper for a trial judge to simply choose between the evidence of the complainant and that of the accused and thus reach a conclusion of guilt beyond a reasonable doubt. The totality of the evidence must be examined to determine if there is a reasonable doubt notwithstanding the apparent credibility of the complainant.
- ◆ It is important not to assume that any witness is believable or not believable before the evidence is heard. For example, just because a person complains of being sexually assaulted does not per se that they are to be believed any more than a criminal with a lengthy record is to be automatically disbelieved when he complains of police brutality and criminal assaults upon him. Credibility is determined not by stereotyping but by a careful weighing of situational context, testimonial consistency and demeanour of witnesses who testify in court. The point is that making assumptions about believability will shift the burden of proof to the accused to prove his or her innocence in violation of the first principle of criminal law.

◆ A judge cannot refuse to accept evidence or to ignore evidence if :

(a) the statements of the witness are not, in themselves, improbable or unreasonable;

(b) there is no contradiction of them;

(c) the credibility of the witness has not been attacked by evidence against his or her character;

(d) nothing appears in the course of a witness's evidence, or the evidence of any other witness, tending to throw discredit upon him or her; and,

(e) that there is nothing in the witness's demeanour, while in court during the trial, to suggest untruthfulness.

- ◆ Especially where the Crown's case rests upon one witness or where there are major inconsistencies in the evidence of the main Crown witnesses the trial judge must proceed with great care and consider whether any confirmatory evidence is present on the case or whether it is absent.
- ◆ In difficult, close cases, for the verdict of guilty to be sustainable on appeal, it may be required to have confirmatory evidence which implicates the accused and supports the evidence of the victim. These are the kinds of cases where courts of appeal have found that it is simply unsafe to allow convictions without some independent corroboration of the material

things remain unknown to us, and it is a certainty that in many aspects we will look ignorant to future generation. That is unavoidable. But we should strive to avoid compounding our limitations by self-imposed irrationalities.

A more practical, but still fundamental legal justification for scientific literacy arises from the basic reality of the knowledge enterprise. Junk science violates the fundamental first principle applicable to all evidence: it must have "real probative value":

"For one fact to be relevant to another, there must be a connection or nexus between the two which makes it possible to infer the existence of one from the existence of the other. One fact is not relevant to another if it does not have real probative value with respect to the latter": *R. v. Cloutier* (1979), 48 C.C.C. (2d) 1, 12 C.R. (3d) 10, [1979] 2 S.C.R. 709.

Junk science, self-delusional "clinical experience," opinions derived from bad data or faulty logic, all lack "real probative value" and constitute in a real sense a fraud on the court. It is forensic "snake oil" that can lead to miscarriages of justice or at the least bring the administration of justice into disrepute by demonstrating an embarrassing gullibility. A modern justice system must embrace the lesson learned over the eons of human existence that the use of reason, tests of empirical adequacy, and logical coherence, all which are found in science, are the best means we have for coming to grips with reality and understanding it. Competing systems of belief, based upon imagination, divine inspiration, reading chicken entrails or tea leaves, or whatever, however thrilling, emotionally satisfying, amusing and reassuring, insofar as they make claims to understand and control the

physical world, have historically and inevitably turned out to be snares, delusions and disappointments. Even if a disappointingly large segment of the general populace will not or can not do so, a modern justice system must understand the need for, and be capable of distinguishing between, astronomy and astrology, physics and psychics, science and scientology.

"Junk" versus Real Science

The essence of junk science is that it refuses to follow the rules of science - it disavows the scientific method. Rather than wanting to find out the truth as real scientists do, junk scientists are really engaged in a different enterprise: creating evidence for some supposed "truth" in which they already believe. In real science, the evidence comes first, as procedures are followed to force reality to reveal itself, and from the resulting evidence is teased out the truth (or at least some approximation thereof which becomes more finely developed by later investigators). With junk scientists, whether fueled by ideology and noble intentions or by practical self-interest for fame or money, the "truth" comes first and wittingly or unwittingly procedures are performed to produce evidence for that "truth".

The boundary between real science and junk science can be easily demarcated: See, for example, Stephen S. Carey, **A Beginner's Guide To Scientific Method**, (2d ed., 1997, Wadsworth Publishing Company, <http://WWW.Thomson.com/Wadsworth.html>, is a useful basic introduction to the scientific method.

In real science, procedures are followed that cannot be corrupted by human wishes, desires, preconceptions or

beliefs. The subverting effects of expectations - the experimenter's or the subject's - are beyond doubt. Known variously as "experimenter bias," "confirmation bias," "demand characteristics" depending upon the context, the effects of suggestibility on human beings are pervasive. In junk science the perpetrators often do not even recognize the problem of experimenter bias: that human wishes, desires, preconceptions or beliefs can influence the results - can "tamper with the evidence" - so that evidence is created not of what is true and real, but what the experimenter or investigator believes. Real scientists know that human beings find it hard to believe that what they believe is anything other than absolutely, completely correct and accurate. As Ludwig Wittgenstein said about this aspect of human nature, "If there were a verb meaning 'to believe falsely', it would not have any significant first person, present indicative." Real scientists take steps to guard against this reality. Junk scientists are held captive by their all-too-human certainty that they are right.

In real science procedures are carefully controlled and data is objectively and accurately recorded so that impartial and objective review is possible (peer review) and accurate recounting of the "evidence" is possible (publication). In junk science respect for these principles is absent. Data is not objectively recorded but, for example in some so-called "clinical research" is astonishingly left to the impressionistic memory of the so-called "expert". Real science knows that one's prior expectations or hypotheses constitute a potentially biasing influence on every stage of information gathering and processing. Further, rather than external peer review, junk scientists form their own little

organizations, and cross-cite each other endlessly as if their own echoes can somehow validate the initial yell.

In real science the investigator suppresses his delight at favourable evidence and sets out to put forth explanations for the results other than the one that may be personally favoured. Only after demonstrating that no other explanation can explain the evidence obtained, and only after peer review where no one else can come up with another hypothesis consistent with the results, will the investigators accept their results as proving the hypothesis they favoured. And since chance is always available as an alternative explanation, real scientists are very concerned with replication: with repeated experiments by different investigators providing consistent evidence, an ever-thickening body of evidence, establishing the validity of the results. A basic rule of real science is that the way to test explanations or theories is by replication. Junk scientists do not even consider the possibility of another explanation for their "results": if the data can in any way be viewed as consistent with their desired conclusion, no matter how tortured the interpretation, or how many *ad hoc* assumptions and intellectual patches have to be applied, they loudly and proudly trumpet their "proof" of their chosen hypothesis. Further, in reaching their conclusions junk scientists often commit reasoning errors that would be embarrassing to a first year logic student. And finally, junk scientists, in avoiding alternative explanations, routinely ignore mere chance as an explanation and are rarely troubled by any concern for replication. As a result, junk science often involves drawing enormous conclusions ("childhood sexual abuse causes multiple personality disorder") from ridiculously

require no list of authorities to substantiate.

- ◆ the Crown bears the burden of proof in criminal matters and the standard is proof beyond a reasonable doubt.
- ◆ credibility and reliability are separate and distinct matters and must be considered independently. This means, for example, that the trial judge must not rely too heavily upon the demeanor of the witness (especially the complainant in sexual cases) in reaching a decision with respect to reliability and trustworthiness of the testimony.

Some examples of the latter that immediately come to mind are: similar allegations made by complainants against an accused, pressure by the police on witnesses especially children of tender age or, at the other end of the scale, career criminals who apparently hear incriminating statements made by accused persons. Another example might be evidence of behaviour of a complainant in relation to an accused after an alleged incident of criminal assault.

A useful direction was given by the Ontario Court of Appeal in R. v. Francois (1993), 82 C.C.C. (3d) 441 where Robins J.A. said at pp. 445-446 :

"The complainant's evidence of memory block and flashback was for the jury to evaluate along with her other evidence. This evidence cannot, as is suggested, be rejected as inherently implausible. The mental blocking of traumatic experience such as sexual abuse suffered as a child, from memory, and the later incremental recollection of the abuse through flashbacks are widely recognized psychological processes."

Another example of a wise direction was provided by the British Columbia Court

of Appeal in R. v. C. (R.A.) (1990), 57 C.C.C.(3d)522 where it directed as follows:

"The problem with her evidence, and I think it is a very significant problem, is that these symptoms that she describes can have other causes apart from sexual abuse. The symptoms are consonant with physical abuse and, of course, we know that there was some of that and that is not something that the accused is charged with. The evidence must also be reviewed with reservations because, obviously, some of the problems developed while the boys lived with Mr. and Mrs. C. but a lot of the problems probably originated long before that. So, when, you look at her evidence, I think you are going to weigh it very carefully. It is worthwhile evidence and I think evidence that you need to consider, but you need to consider it with reservation and great caution.

She also, as I say, indicated that it is not uncommon for people who have been sexually abused and perhaps even physically abused to have these memory lapses and so on and that things do come back. So that explains, perhaps, why there are some inconsistencies in the evidence of the boys. Whether it is a satisfactory explanation and explains all the inconsistencies, I think is something that you will have to resolve and I think a lot of it is common sense."

R. v. Moore, [1996] OJ No. 3645 (Ont. Gen. Div.), referred to in **Gold's Annual Review of Criminal Law, 1997**, contains a concise and useful checklist of general principles applying to the admission of evidence, particularly in respect of sexual offences. The list is summarized below:

- ◆ Evidence that is equally consistent with two diametrically opposed

suggest that the majority accepted experimental science as the canonical model of scientific activity. These explicit and implicit assumptions greatly oversimplify the diversity of approaches and methods that characterize contemporary science. They also rest on an idealized conception of the scientific method that pays inadequate attention to the social contexts in which scientific research is conducted, evaluated, and interpreted. Although the experimental method deservedly occupies a position of importance within science, it is not the only technique by which science is done. To be 'scientific', a theory does not necessarily have to be subjected to experimental testing. The Darwinian theory of natural selection is one very widely accepted scientific theory that does not easily lend itself to such tests. Many theories in the human sciences - including psychology, psychiatry, anthropology, and sociology - are also generally accepted as valid although they cannot be tested through conventional experimentation. Moreover, some types of scientific claims, such as theories of disease causation, cannot be experimentally tested for ethical and practical reasons. These examples indicate at the very least that scientific validity cannot be assessed in court in terms of a single, universal set of criteria."

Professor Jasanoff demonstrates convincingly in her writing that "science" is not a fixed body of knowledge and it is not comprised of a set of universally accepted standards. Instead she posits that "science" is an organized social activity. What she means is that "the facts" that scientists discover about the physical and social worlds are not simple reflections of reality; rather, these facts invariably contain a social component because they are produced by human agency, through the institutions and

processes of science." She goes on to say that:

"Observations achieve the status of scientific facts only if they are produced in accordance with prior understandings about the correctness of particular theories, experimental methods, instrumental techniques, validation procedures, statistical analyses, review processes, and the like. These understandings, in turn, are socially derived through continual negotiation and renegotiation among relevant bodies of scientists." ³

All of this suggests that there are very difficult problems in attempting to articulate a broad rule of exclusion/admission with regard to opinion evidence. It seems quite clear that judges cannot look to science itself to solve the problem of deciding whether the evidence is reliable or not. I think that there is simply no substitute for common sense and a healthy dose of scepticism when judging, as simple as that may seem. At the same time, there is no excuse for judges ignoring informed and sophisticated analysis of scientific method or technique in reaching decisions on scientific matters proffered for the court's serious consideration. What will be required as time marches on is for judges to think more carefully and more critically about scientific evidence and if the trend continues as it has been developing for the last two decades, judges will have to constantly revisit the basic rules of the law of evidence.

The biggest problem often facing the trial judge is not whether to admit evidence, but what to do with it after it has been admitted. Fortunately, there are valuable guidelines for the proper use of this type of evidence. Let us start with some fundamental propositions that

small samples ("sample of 9 women attending an MPD clinic").

Finally, real science is falsifiable: it makes predictions that can be tested. This is the hallmark of science. Junk science shares with religion the quality of being "self-sealing", or not falsifiable. By manipulation of concepts or gerrymandering of theory, junk science can make itself consistent with any outcome of the evidence and conversely, any outcome of the evidence is "consistent" with the junk science theory. The incontrovertible is not science, but belongs to the realm of faith, like "God's will," which "proves" itself by anything and everything that may happen.

These are the four danger signals of junk science:

- ◆ data gathering that does not guard against "evidence tampering";
- ◆ a lack of any complete and objective record of the entire process of evidence gathering;
- ◆ the absence of conclusion-drawing that is logical and cognizant of the necessity to examine every possible explanation other than the favoured theory, including mere chance; and,
- ◆ theory and claims that are not testable or falsifiable.

Some methods, such as gazing into a crystal ball, obviously have little scientific merit. These four indicators will assist in recognizing other supposed methods that, in reality, fail to progress significantly beyond crystal ball gazing. Some people, such as clinicians, openly do not use the scientific method. That is, their beliefs have not been subjected to systematic empirical testing or analytical thinking. Their beliefs are based on casual observation, or intuition, or faith, or the authority of past

generations of members of their field exercising their intuition. Masquerading as science, such claims are likely to be defended by "my many years of experience," or "generations of study by my field." To anyone with even a modest understanding of how real knowledge is generated, these "defences" are easily recognized as having many historical precedents, all cases of which, like their contemporary examples, are scientific failures, devoid of any real knowledge except that which chance alone happens to provide.

Grove and Meehl, "*Comparative Efficiency of Informal (Subjective, Impressionistic) and Formal (Mechanical, Algorithmic) Prediction Procedures: The Clinical-Statistical Controversy*," **Psychology, Public Policy and Law**, vol.2 no.2, June 1996 review a robust and indisputable body of consistently replicated research to conclude:

"Empirical comparisons of the accuracy of the two methods [clinical judgment versus objective, statistical or actuarial algorithms; 136 studies over a wide range of predictands] shows that clinical judgment is almost invariably at best merely equal to and much more often inferior to objective procedures.

Clinical experience is only a prestigious synonym for anecdotal evidence when the anecdotes are told by someone with a professional degree and a license to practice a healing art.

It is the same old error of 'men mark where they hit, and not where they miss,' This is not a complicated problem in epistemology or higher mathematics; it is simply the ineradicable tendency of the human mind to select instances for generalizations that it favours. It is the chief source of superstitions.

All policymakers should know that a practitioner who claims not to need any statistical or experimental studies but relies solely on clinical experience as adequate justification, by that very claim is shown to be a nonscientifically minded person whose professional judgments are not to be trusted.”

These four indicators represent the simple reality recognized by the American Supreme Court in Daubert that methodology - the logic of research design, measures, and procedures - is the engine that generates knowledge that is scientific and real.

Expert Evidence In Canada

In theory, the present law in Canada, while not as explicit as Daubert, arguably does demand the same validity from expert evidence. The general rule is that expert evidence is admissible to furnish the court with scientific information which is likely to be outside the experience and knowledge of the judge and jury: R. v. Marquard (1993), 85 C.C.C. (3d) 193 at pp. 224-5, 108 D.L.R. (4th) 47, [1993] 4 S.C.R. 223 (per McLachlin J.); R. v. Beland (1987), 36 C.C.C. (3d) 481 at pp. 493-4, 43 D.L.R. (4th) 641, [1987] 2 S.C.R. 398 (per McIntyre J.); R. v. Abbey (1982), 68 C.C.C. (2d) 394 at p. 409, 138 D.L.R. (3d) 202, [1982] 2 S.C.R. 24 (per Dickson J.); R. v. Burns (1994), 29 C.R.(4th) 113 (S.C.C.); R. v. Mohan (1994), 29 C.R.(4th) 243, 89 C.C.C.(3d) 402 (S.C.C.); R. v. Melaragni (1992), 73 C.C.C.(3d) 348 (Ont.Ct.(G.D.)); R. v. Dieffenbaugh (1993), 80 C.C.C.(3d) 97 (B.C.C.A.); R. v. Pascoe [1997] O.J. No. 88, Ontario Court of Appeal, January 15, 1997.

Admission of expert opinion evidence depends on the application of the following criteria (as set out in Mohan):

- (a) relevance;
- (b) necessity in assisting the trier of fact;
- (c) the absence of any exclusionary rule; and,
- (d) a properly qualified expert.

(a) Relevance

Legal relevance is a threshold requirement for the admission of expert evidence as with all other evidence. Legal relevance is a matter to be decided by a judge as question of law.

The first requirement is logical relevance: the evidence is so related to a fact in issue that it tends to establish it. This is a matter of logic and the rules of proper reasoning: R. v. Cloutier (1979), 48 C.C.C.(2d) 1, 29 C.R.(3d) 10 (S.C.C.); R. v. Corbett (1988), 41 C.C.C. (3d) 385, 64 C.R. (3d) 1 (S.C.C.); R. v. Ferris (1994), 27 C.R.(4th) 141 (Alta.C.A.), affirmed 34 C.R.(4th) 26 (S.C.C.).

Legal relevance requires an additional consideration: a "cost benefit analysis", that is "whether its value is worth what it costs." "Cost" is an inquiry into the impact of the evidence on the trial process. Evidence that is otherwise logically relevant may be excluded on this basis :

- A. if its probative value is overborne by its prejudicial effect;
- B. if it involves an inordinate amount of time which is not commensurate with its value; or,
- C. if it is misleading in the sense that its effect on the trier of fact, particularly a jury, is out of proportion to its reliability.

Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset, pursuant to Rule 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether that reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.

And further:

We recognize that in practice, a gatekeeping role for the judge, no matter how flexible, inevitably on occasion will prevent the jury from learning of authentic insights and innovations. That, nevertheless, is the balance that is struck by Rules of Evidence designed not for the exhaustive search for cosmic understanding but for the particularized resolution of legal disputes.

There will be many considerations that will bear on the inquiry, including whether the theory or technique in question can be (or has been) tested, whether it has been subjected to peer review and publication, its known or potential error rate, and the existence and maintenance of standards controlling its operation, and whether it has attracted widespread acceptance within a relevant scientific community. The court made it quite clear that the inquiry will be a flexible one, and its focus must be solely on principles and methodology, not on the conclusions that they generate.

The court also directed trial judges to bear in mind other applicable rules such as relevance and the potential for possible prejudice outweighing probative value. The court clearly favours relaxing the "Frye" rule and replacing it with the more liberalized formulation from the Federal Rules of Evidence. The court stated that cross-examination,

presentation of contrary evidence, and careful instruction on the burden of proof, would provide adequate means to challenge evidence based on invalid principles. The explicit policy preference is for admission rather than exclusion of new scientific theories or techniques. The implicit message for trial courts is that judges should play a more proactive role and be the gatekeepers and not simply allow virtually all such testimony to reach the jury.

While the court clearly comes down in favour of greater admission of expert evidence, it places a huge responsibility on the trial judge and affords the trial judge much latitude in deciding the issue. The clear direction to trial judges is to "think like scientists" when assessing the validity of scientific evidence. The reaction of the State court judges to this development is ambivalent, to say the least.

Partly this is because these courts are not technically bound by the ruling since it is based on rules that apply only to federal cases. There is, however, a genuine resistance to changing and liberalizing the rule for admission of opinion evidence and a reluctance of state court judges to remove any evidence from the jury's consideration.

Many commentators question the qualifications of a judge to decide as to the validity of experts' opinions. Professor Sheila Jasanoff at page 11 of the Report of the 1997 Forum for State Court Judges on **Scientific Evidence in the Courts: Concepts and Controversies**² observed:

"The Daubert majority seemed to assume that there is a distinct, well-demarcated 'scientific method' and that criteria reflecting this method can be objectively applied to determine the validity of scientific evidence. Further, two of the criteria that the Court proposed - testability and error rate -

opinion into evidence? Should not more emphasis be put on qualifying the opinion rather than qualifying the opinion-giver? Where is the “peril” for the accused? These are some of the legitimate questions that can be asked in response to these general observations concerning expert evidence.

So, what can we say with certainty about the state of the law in Canada with respect to the admission of opinion evidence? The answer is: not a lot! Because the Supreme Court has dealt with this issue on an incremental basis, predictions about future developments and applications of the law will be speculative at best. The Supreme Court has not said specifically what approach our courts should take to expert evidence, where the evidence involves a new method or field of science. But three general approaches can be identified from a review of the jurisprudence:

1. The traditional “Frye”¹ approach from American jurisprudence which provides that the expert opinion is inadmissible unless it is “generally accepted” as reliable in the relevant scientific community;
2. The hybrid Canadian position enunciated in *Mohan* which says that the admissibility of scientific evidence based on a theory which has not yet been widely accepted, or the accuracy of which has not been determined, is now subject to a threshold test of reliability;
3. The new American federal rules standard which entails a preliminary assessment of whether the reasoning underlying the testimony is scientifically valid and whether it can be properly applied to the matter at hand.

Based on the judgements of the Supreme Court of Canada and our trial courts there is good reason to conclude that opinion evidence will be much more carefully scrutinized by our trial courts.

We will also be able to say with some confidence that this type of evidence will be subjected to increasingly sophisticated forms of examination and inquiry than was the case a short time ago. In Canada, there is now an awareness of just how dangerous it can be to admit evidence which has not been sufficiently tested for reliability. One need only consider the sexual abuse cases that have been tried in the past decade and the changing attitude of our jurists to expert opinion evidence on such matters as behavioural characteristics of child abuse victims, genital findings in sexually-abused children, the battered woman syndrome, facilitated communication for abused autistic children, statement validity analysis, and the child sex abuse accommodation syndrome, to see that judges in Canada are becoming much more cautious and careful in their approach to opinion evidence. We will see shortly that this observable trend in Canadian courts mirrors recent developments in the United States where the Supreme Court has stated explicitly what in Canada we have only hinted at in our judgements.

The leading U.S. case on the admissibility of opinion evidence is *Daubert v. Merrill Dow Pharmaceuticals*, 113 S. Ct. 2786 (U.S.S.C.). In it the Supreme Court of the United States decided that the seventy year old rule in *Frye* had been superceded in Federal Court matters by Rule 702 of the Federal Rules of Evidence. It reads as follows:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

The key holdings in the case were set out by Blackmun J. for the majority, as follows:

The reliability versus effect factor has special significance in assessing the admissibility of expert evidence. There is a danger that expert evidence will be misused and will distort the fact-finding process. Dressed up in scientific language which the jury does not easily understand and submitted through a witness of impressive antecedents, this evidence is apt to be accepted by the jury as being virtually infallible and as having more weight than it deserves.

While *Mohan* does not expressly set out as a separate element any requirement of “scientific” support for the evidence, this is implicit in the “relevance” and “reliability” requirements. If the alleged information is not real “science” then it is not in fact reliable or logically relevant and will not assist. There must be valid “science” being testified to, not mere impressionistic or anecdotal beliefs of the witness. The essence of “scientific information” is its objective reality and provability (or more correctly, its falsifiability or testability). It is derived not from subjective beliefs or opinions, no matter how educated, but from knowledge gathered pursuant to the experimental paradigm in accordance with the scientific method.

Expert evidence which advances a novel scientific theory or technique is subjected to special scrutiny to determine whether it meets a basic threshold of reliability and whether it is essential in the sense that the trier of fact will be unable to come to a satisfactory conclusion without the assistance of the expert. The closer the evidence approaches an opinion on an ultimate issue, the stricter the application of this principle. “Novel” refers to scientific evidence that is not yet generally accepted or that deviates from generally accepted standards or procedures.

(b) Necessity in Assisting the Trier of Fact

What is required is that the opinion be necessary in the sense that it provide information “which is likely to be outside the experience and knowledge of a judge or jury”. As in the case of relevance, the need for the evidence is assessed in light of its potential to distort the fact-finding process. As mentioned, the closer the evidence approaches an opinion on an ultimate issue, the stricter the application of this principle.

(c) The Absence of any Exclusionary Rule

Compliance with the foregoing will not ensure the admissibility of expert evidence if it falls afoul of an exclusionary rule of evidence separate and apart from the opinion rule itself.

(d) A Properly Qualified Expert

The evidence must be given by a witness who is shown to have acquired special or peculiar knowledge through study or experience in respect of the matters on which he or she undertakes to testify.

An excellent review of expert evidence law in all Anglo-American jurisdictions is found in a superb article David E. Bernstein, “*Junk Science In The United States And The Commonwealth*”, (1996), 21 *Yale J. Int’l L.* 123. The author there pessimistically concludes that Canadian law regarding the admissibility of expert testimony is in an unsatisfactory state, that we really have no rule at all, with admissibility simply being in the discretion of the trial judge, that *Mohan* is simply based upon its particular facts and further, that Sopinka J. was not enunciating any rule of general application.

The problematic nature of Canadian case law is exemplified in Bernstein's footnote 141 where he writes:

"FN141. The law of British Columbia with regard to scientific evidence is another example of this chaos. In *R. v. Dieffenbaugh*, 80 C.C.C.3d 97 (B.C. Ct. App. 1993), the court considered various possible tests including 'relevancy and helpfulness,' 'trustworthiness,' Charles McCormick's 'relevancy test,' a 'hybrid' test turning on the type of evidence and the context of its use, the Federal Rules of Evidence, and the 'beyond the ken of the jury' test. Ultimately, the court, while not explicitly adopting a particular test, rejected the relevancy test alone 'because the law has long recognized that there will often be cases where relevant evidence will not be admitted in a criminal prosecution where its probative value is outweighed by its prejudicial effect.' 80 C.C.C.3d at 108; accord *R. v. Baptiste*, 88 C.C.C.3d 211 (B.C. App. 1994); see also *R. v. Singh*, 23 W.C.B.2d 558 (B.C. S.C. 1993) (holding that test for admissibility of novel scientific evidence is relevancy, reliability, and helpfulness)."

The issue can be understood as follows: tests for admissibility of expert testimony can be grouped under three rubrics: the conservative, Frye "general acceptance in the scientific community" test (named after the 1923 American case excluding a version of the lie detector), a liberal "relevancy" test focusing mainly on the qualifications of the expert, or a flexible reliability test focusing on whether the expert's testimony is based on proper scientific methodology and reasoning. *Daubert* opted for the last test, while Canadian case law as described by Bernstein has generally opted for the second "relevancy" approach with a flavouring of "reliability." There is no doubt that the Canadian test has always to some extent considered reliability

because, as stated above, "relevancy" is ultimately founded on reliability; junk science is logically relevant to nothing. The only issue is the speed of the increased hybridization that will undoubtedly occur in Canadian law. "General acceptance," like accuracy, is a factor within the reliability element. After an excellent review of the Canadian case law Bernstein concludes:

"The continued uncertainty in Canadian law regarding scientific evidence suggests that Canadian jurisprudence would benefit significantly from a Daubert-like decision that would suggest generally applicable criteria for courts to use when confronted with a challenge to expert scientific testimony. The Canadian Supreme Court should in fact improve on Daubert by giving lower courts more guidance regarding how to apply such criteria in actual cases. Unfortunately, the Canadian Supreme Court appears to favor deciding the admissibility of scientific evidence on a case-by-case basis depending on what it sees as the equities of the situation."

Nevertheless, some vindication of optimism is offered by the increased sensitivity to these issues that has started to appear in the case law at the trial court level. For example, a very scientifically literate judgment is that in *R. v. Olscamp* (1994), 35 C.R. (4th) 37, 95 C.C.C. (3d) 466 (Ont. Gen. Div.). There the accused was charged with sexual abuse. The prosecution tendered a psychologist who, if permitted, would testify that the girl displayed symptoms of a child who had been sexually abused. The defence took issue with the validity of the theory being advanced by the psychologist and a number of articles were put to her in cross-examination. The *voir dire* lasted three days. At the hearing the psychologist conceded that there is no existing valid diagnostic profile of the sexually abused child.

overwhelm the jury and distract them from their task can often be offset by proper instructions.

There is also a concern inherent in the application of this criterion that experts not be permitted to usurp the functions of the trier of fact. Too liberal an approach could result in a trial's becoming nothing more than a contest of experts with the trier of fact acting as referee in deciding which expert to accept.

These concerns were the basis of the rule which excluded expert evidence in respect of the ultimate issue. Although the rule is no longer of general application, the concerns underlying it remain. In light of these concerns, the criteria of relevance and necessity are applied strictly, on occasion, to exclude expert evidence as to an ultimate issue. Expert evidence as to credibility or oath-helping has been excluded on this basis. See *R. v. Marquard*, [1993] 4 S.C.R. 223, per McLachlin J.

The Absence of Any Exclusionary Rule

This is a consideration which requires little elaboration. The rule is that even where all other factors and considerations have been satisfied evidence will still not be admitted in the proceedings if the admission of the evidence would violate another exclusionary rule or legal policy quite apart from the rules of law pertaining to expert opinion evidence.

A Properly Qualified Expert

Quite simply this requirement directs that the evidence must be given by a person who has special or peculiar knowledge about the matters in issue. It is self-evident that when a novel scientific theory or approach is introduced to the court by an expert witness, special care must be taken to

insure that the evidence is properly admitted. Of utmost importance is that the court scrutinize carefully the expert's qualifications, the scientific and experimental basis for propounding the new theory and the reliability of the opinion in light of the methodology used to arrive at the conclusion. The closer the proposed evidence comes to the ultimate issue in the case the stricter these rules have to be applied because of the obvious danger that the evidence will overwhelm the trier of fact and make a reasoned, balanced judgement impossible.

This takes us back to the basic proposition which is: will this evidence help or hinder the trier of fact? Will the evidence distort the process on the whole? Quite often it will happen that the scientific opinion has a superficial attraction that fails to be persuasive because of flaws in the methodology used, the lack of sufficient knowledge, testing and experience by the expert in the area being examined or because the opinion does not really assist the trier of fact in any new or special way. This is particularly so in the social sciences where the witnesses often come perilously close to usurping the judge's role. "You find what you are looking for - even experts do!" The simple truth is that without proper checks and balances the scientific method cannot succeed because it is effectively ignored by those more interested in propounding a certain ideology or point of view. Methods, motives and specific qualifications must be scrutinized before this type of evidence is admitted.

Are we putting the bar too high? What if the expertise is conceded by the other side? Are we putting the requirements for admissibility beyond the pale of what is needed? What if we are not dealing with a new method or technique, can we not receive the

being virtually infallible and as having more weight than it deserves.

Necessity

In assisting the trier of fact “necessity” means that the proposed evidence will provide information which is normally outside the experience and understanding of the judge and/or the jury. Hence, the subject-matter of the evidence must be something about which the ordinary person sitting as judge or jury would not be able to reach a rational and correct decision without the benefit of evidence from a person with special knowledge. Mr. Justice Sopinka summarized the considerations in the following passage:

In *R. v. Abbey, supra*, Dickson J., as he then was, stated, at p. 42:

With respect to matters calling for special knowledge, an expert in the field may draw inferences and state his opinion. An expert’s function is precisely this: to provide the judge and jury with a ready-made inference which the judge and jury, due to the technical nature of the facts, are unable to formulate. “An expert’s opinion is admissible to furnish the Court with scientific information which is likely to be outside the experience and knowledge of a judge or jury. If on the proven facts a judge or jury can form their own conclusions without help, then the opinion of the expert is unnecessary” (*R. v. Turner* (1974), 60 Crim. App. R. 80, at p. 83, per Lawton L.J.)

This pre-condition is often expressed in terms as to whether the evidence would be helpful to the trier of fact. The word “helpful” is not quite appropriate and sets too low a standard. However, I would not judge necessity by too strict a standard. What is required is that the opinion be necessary in the sense that it provide information “which is likely to be outside the experience and

knowledge of a judge or jury”: as quoted by Dickson J. in *R. v. Abbey, supra*. As stated by Dickson J., the evidence must be necessary to enable the trier of fact to appreciate the matters in issue due to their technical nature. In *Kelliher (Village of) v. Smith*, [1931] S.C.R. 672, at p. 684, this Court, quoting from *Beven on Negligence* (4th ed. 1928), at p. 141, stated that in order thence to be admissible, “[t]he subject-matter of the inquiry must be such that ordinary people are unlikely to form a correct judgment about it, if unassisted by persons with special knowledge”. More recently, in *R. v. Lavallee, supra*, the above passages from *Kelliher* and *Abbey* were applied to admit expert evidence as to the state of mind of a “battered” woman. The judgment stressed that this was an area that is not understood by the average person.

As in the case of relevance, discussed above, the need for the evidence is assessed in light of its potential to distort the fact-finding process. As stated by Lawton L.J. in *R. v. Turner*, [1975] Q.B. 834, at p. 841, and approved by Lord Wilberforce in *Director of Public Prosecutions v. Jordan*, [1977] A.C. 699, at p. 718:

“An expert’s opinion is admissible to furnish the court with scientific information which is likely to be outside the experience and knowledge of a judge or jury. If on the proven facts a judge or jury can form their own conclusions without help, then the opinion of an expert is unnecessary. In such a case if it is given dressed up in scientific jargon it may make judgment more difficult. The fact that an expert witness has impressive scientific qualifications does not by that fact alone make his opinion on matters of human nature and behaviour within the limits of normality any more helpful than that of the jurors themselves; but there is a danger that they may think it does.”

The possibility that evidence will

Judge Charron concluded (at p. 44 C.R.):

“The present state of knowledge in the field is such that the soundness and reliability of any expert opinion purporting to characterize behavioural symptoms as ‘consistent with sexual abuse’ cannot be demonstrated. Indeed, if there is any consensus to be found among the experts, it is that there is no valid profile in existence which can enable one to identify a child who has been sexually abused.”

Accordingly, the expert evidence was excluded. Judge Charron noted that (at p. 45 C.R.):

“Expert opinion evidence about the general behavioural and psychological characteristics of child victims of sexual abuse has often been admitted in Canadian criminal trials. The admissibility of this kind of evidence for certain purposes has been confirmed by a number of Canadian Courts of Appeal and by the Supreme Court of Canada: see *R. v. Marquard*; *R. v. B. (R.H.)*; *R. v. B. (G.)*; *R. v. F. (J.E.)*; *Khan v. College of Physicians & Surgeons (Ontario)*; *R. v. R. (S.)*; *R. v. J. (F.E.)*; *R. v. T. (S.)*; *R. v. C. (R.A.)*; *R. v. H. (E.L.)*; *R. v. Beliveau*. [Citations omitted.] It does not appear however that the validity of the very theory being advanced was contested in any of these reported cases. In this case, it was.”

Thus in *Olscamp*, as Judge Charron points out, claimed expertise that other judgments had accepted as gospel turned out, when the adversary was given an opportunity to explore the matter, to be deficient and unscientific, and, in the result, justice was better served.

Further, Justice Charron accepted the necessity of the scientific method in her appreciation that subjective “experience”

and confidence do not assist in locating truth and reality, accepting that so-called “clinical experience or judgment” is scientifically useless, often self-deceptive, and notoriously unreliable, functioning at merely the base level of chance: see *R. v. Olscamp*, at para. 12.

Similarly, *R. v. Taillefer* (1995) 100 C.C.C. (3d) 1, at 21 (lv. to app. denied 45 C.R. (4th) 398 (S.C.C.)) dealt with the issue of hypnotically-refreshed memory evidence by considering appropriately on a *voir dire* the state of scientific knowledge regarding this phenomenon and ruled the evidence should be excluded. *Wolfen v. Shaw* [1998] B.C.J. No. 5 (B.C.S.C., Dillon J.) is a civil case considering these issues, and emphasizing certain aspects of “science” such as publication in peer-reviewed journals. See also the cases cited therein. Another (disappointing) recent reference is *R. v. McIntosh* [1997] O.J. No. 3172. R. J. Delisle, “*The Admissibility of Expert Evidence: A New Caution Based On General Principles*”, 29 C.R. (4th) 267 at 272 suggests that the position in *Mohan* is the same as *Daubert*. Another commentator P. Brad Limpert, “*Beyond the Rule in Mohan: A New Model for Assessing the Reliability of Scientific Evidence*”, 54 **University of Toronto Faculty of Law Review** 65 is critical of some post-Mohan cases as flawed because they advocate assessment of a number of factors that “...form a grocery list that may or may not be applicable and do not provide a structured method for analyzing the reliability and validity of scientific evidence”. This is a strange criticism. It is compliance with the scientific method itself that provides the relevant test, and the reality that the relevant specific elements vary from context to context is to be expected. Limpert’s “insight” is to translate the concept of reliability into

the question “what is the degree of uncertainty in this evidence?” and then catalogue a litany of uncertainties at a theoretical level that offers no assistance in grappling with the down-to-earth details of the scientific method. It is not clear how this is an improvement. It is clear how it is not: reliability is a well-known scientific term; uncertainty is not and will allow an unfortunate blending of elements relevant to reliability and relevance. As well, talking about uncertainty subtly casts the onus to the opponent of the evidence rather than the proponent. There seems no good reason to cast the matter in negative, rather than positive terms, except that to recast the test as “certainty” more clearly exposes the article as merely a (bad) exercise in synonyms.

Practical Suggestions

Olskamp is also interesting because, I submit, it implicitly points the way to practical solutions. Olskamp illustrates how scientific literacy can in fact be used as the basic test to discriminate real experts from junk scientists. Literacy is an appropriate label: science “reads” reality, and the scientific method is the method of discourse. The first issue for any proposed expert: are they scientifically literate? do they know and appreciate the scientific method? are they aware of illogical reasoning? It is true that passing this test does not guarantee an absence of junk science: prominent and knowledgeable scientists can believe in astrology and worse.

But failing the test virtually ensures the presence of junk science. It means the witness is not literate in the discourse of reality. It means the witness’s purported knowledge almost certainly arises from their imagination or their ideology, but not from reality, because they are

illiterate with regard to reading reality. And this test ensures that witnesses allowed to go further will at least be speaking the right language of science, so that their knowledge can be measured by appropriate standards and found wanting or not. Whatever legal test is adopted, the initial content of any *voir dire* should be an exploration of the witness’s scientific literacy.

The second inevitable requirement is equally obvious: reproducibility. A real expert recognizes the need for, and thus ensures the possibility of, each and every step in the exercise from experimental design, through data collection, to analysis and reasoning, being reproduced for examination in the courtroom. An opinion whose basis is in any aspect immune from scrutiny is not scientific, and should not be admitted, because error may be lurking about, impenetrable to detection.

Examples

“Evidence tampering” and wishful thinking:

The subverting effects of expectations, the effects of suggestibility on human beings are ubiquitous and pervasive. For example, in one experiment, the effects of an alcoholic beverage on a test subject were found to be less than the effect of a non-alcoholic beverage which the subject mistakenly believes is alcoholic. “(H)earth rates were not significantly affected by whether subjects had been given alcohol to drink; they were effected (sic) by whether subjects believed they had been given alcohol to drink. Expectations proved more important than changes in blood chemistry”: Scott Plous, **The Psychology of Judgment and Decision-Making** 1993, McGraw-Hill, at p. 17.

to creep into the law of evidence unless constant rigour and vigilance is maintained by trial judges and appellate courts.

I will examine the leading cases in Canada and the United States. It is useful to compare because developments in one jurisdiction tend to have a great influence on what happens in the other. But aside from that consideration, the United States Supreme Court has recently charted a new course which has already generated considerable controversy and discussion in judicial and academic circles.

The definitive statement of the law in Canada concerning expert testimony comes from the Supreme Court of Canada in R. v. Mohan (1994), 29 C.R. (4th) 243. Here the court was unanimous in deciding to allow the Crown appeal and restored the decision of the trial judge. At trial the expert defence evidence of a psychiatrist was excluded. He was prepared to testify that the perpetrator of certain sexual offences alleged by the Crown would be part of a limited and unusual group of individuals and that he did not fall into that narrow class and did not possess the characteristics of that group. Of particular interest and importance to the trial judge was that the psychiatrist did not possess sufficient expertise in the area that he was attempting to testify about, even though he was very experienced and held impressive qualifications in the field of psychiatry. In short he did not satisfy the trial judge’s threshold prescription for admissibility, to wit: that the evidence would be trustworthy and reliable. The Supreme Court agreed saying that expert opinion evidence depends for its admissibility on four factors, namely:

- ◆ **relevance;**
- ◆ **necessity in assisting the trier of fact;**
- ◆ **the absence of any exclusionary rule; and,**
- ◆ **a properly qualified expert.**

Legal relevance

Legal relevance is a matter to be decided by the trial judge as question of law and the requirements are two-fold: logically, is the evidence so related to a fact in issue that it tends to establish it? If this is established then a further inquiry will be held to determine if the other general conditions for admissibility have been met. In this respect, a number of matters will be considered. The court must perform a cost/benefit analysis. As Mr. Justice Sopinka explained :

This further enquiry may be described as a cost benefit analysis, that is “whether its value is worth what it costs”. See McCormick on Evidence (3rd ed. 1984), at p. 544. Cost in this context is not used in its traditional economic sense but rather in terms of its impact on the trial process. Evidence that is otherwise logically relevant may be excluded on this basis, if its probative value is overborne by its prejudicial effect, if it involves an inordinate amount of time which is not commensurate with its value or if it is misleading in the sense that its effect on the trier of fact, particularly a jury, is out of proportion to its reliability....Whether it is treated as an aspect of relevance or an exclusionary rule, the effect is the same. The reliability versus effect factor has special significance in assessing the admissibility of expert evidence.

There is a danger that expert evidence will be misused and will distort the fact-finding process. Dressed up in scientific language which the jury does not easily understand and submitted through a witness of impressive antecedents, this evidence is apt to be accepted by the jury as

trustworthiness and reliability against known and accepted standards.

Our concerns with the uses (and possible abuses) of expert testimony spring in part from the fact that the horizons of scientific knowledge are exploding. The speed of change in the 20th century is stunning. Scientific theory and technique are constantly being rewritten. It is to be expected that this trend will accelerate as we move into the 21st century. The fact that the changes take place so quickly and often involve such a radical paradigm shift means that advances in scientific theory or technique are often entirely unknown. This is the context into which the concerns expressed above fit.

The rapid evolution of technology has had a profound impact on the practice of law. We routinely consider evidence in our courts that would not have been allowed into our courts a few short years ago. But courts have traditionally responded slowly to the changes which technology has wrought by only embracing those which have been found through experience to be expeditious, reliable and trustworthy and balking at those that do not have this character.

Recent attempts by the Supreme Court of Canada to liberate the law of evidence from an arcane and dated approach which was based upon bewildering rules and myriad exceptions illustrates an effort at changing our thinking in this area. The fallout has had a significant effect on the practices that are followed in Canadian courts in the last several decades. But at the same time, the abandonment of the traditional standards has caused some of the confusion regarding the admissibility and proper uses of expert testimony.

I hasten to add the following in fairness to the progressive efforts of the Supreme Court in this respect: the new

principled approach to evidentiary issues is a vastly superior method of analysis by comparison to the old categorization method. The principled approach can and does make rational decision-making on the admissibility of evidence possible. It is critical to understand and apply the wisdom of our common law ancestors in judging in the modern context. The worry that many jurists have is simply this: if we do not know why the old rules were made and applied then we will lack a vital baseline against which to measure the reliability of modern expert evidence. Inevitably our results will be plagued by the inconsistency that is a natural companion of reasoning that is insufficiently grounded in history, experience and logic.

The principled approach is a more flexible and a more complex device for making legal judgements and it is for these very reasons that it is so advantageous to use this method in order to respond to our rapidly changing social and technological environment. The strengths of the new approach are also its greatest weaknesses. The reason for this apparent paradox is that this approach works best only when the evidence is carefully and thoughtfully considered in the unique context of the facts of the case.

In apparent contrast, the old rule and exception method appears mechanical but it was reliable in terms of the result; in addition, this method had the advantage of having been tested over time and found to be generally effective and predictable. In simple terms, the new approach tends to allow much more evidence to be admitted into our trial court proceedings. This is a good result in most cases but only if the evidence is well-grounded in the bedrock of reliability and trustworthiness. The hazard is that the more liberal approach creates a greater potential for noncritical thinking

Any "reference" that depends for its validity upon subjects' retrospective reports is therefore inherently suspect. The answers cannot be trusted to be historically accurate. For example, the evidence for the very existence of premenstrual syndrome depends on retrospective questionnaires wherein female subjects will often recount depression, weepiness and other indicia at the relevant time of the month. However, when the same subjects have recorded their actual daily emotional states in contemporaneous diary entries, any evidence for PMS disappears: Carol Tavris, **The Mismeasure of Woman**, 1992, Simon & Shuster, at p. 145. In one study the evidence was so contrary the researcher wryly concluded she had found evidence for a "premenstrual elation syndrome": *Ibid*, p. 18.

"When clients try to understand why they have behaved maladaptively or why they are distressed, their memories may be affected by their implicit theories about the causes of behaviors and feelings....For example, if an individual believes that stress can cause maladaptive behavior or distress, and if the person behaves maladaptively or experiences distress, then the person's memories may become distorted and the person may be inclined to recall that stressful events occurred."

-- Howard N. Garb, **Studying the Clinician: Judgment Research and Psychological Assessment**, 1998, APA, at p. 86.

Suggestive influences can arise from the very questions asked. Ask people: "how often you get a headache?" and the mean answer may be 1.0 / week. Ask instead: "Do you get headaches frequently, and if so, how often?" and the mean answer will rise to 2.2 / week. Ask instead: "Do you get headaches

occasionally, and if so, how often?" and the mean answer will drop to .5 / week.

Ask: "How many car trips do you take a month: 10, 30, 50, 100?" and the mean answer may be 60. Ask "How many car trips do you take a month: 10, 20, 30, 40?" and the mean answer may be 20.

Asking "How long was the movie?" will produce a mean of 130 minutes. Asking "How short was the movie?" will produce a mean answer of 100 minutes.

Asking people if they would "allow" something (for example, speeches against democracy) will produce a different response than if the question is phrased in terms of whether they would "forbid" something.

"Inaccurate" data does not arise just from tainted responses. It can arise from accurate responses by a "tainted" group of subjects. Studying eating habits by examining subjects only at the local MacDonald's may give accurate information but only about that specific group, not the population at large. With respect to the latter larger group, it will provide faulty conclusions based upon a skewed, non-representative sample.

Good science deals with these problems by ensuring a representative sample of the group to be studied and "blind" subjects (unaware of the nature of the research or the expected answer) and even better, "double blind" research: the experimenters gathering the data are equally in the dark so their expectations will not influence the evidence-gathering exercise.

Law has started to apply these lessons. For example, a line-up identification is a form of experiment. The following recommendations for holding line-ups

will now be self-explanatory (See, for example, Gary L. Wells, Ph.D., and Amy L. Bradfield, "Good, You Identified the Suspect": Feedback to Eyewitnesses Distorts Their Reports of the Witnessing Experience", (1998) 83 *Journal of Applied Psychology*, No. 3):

"The experimental evidence shows the risk of eyewitnesses making false identifications is influenced by methods used in constructing and conducting lineups and photospreads. The empirical evidence and the social and cognitive processes governing these effects indicate that the legal system could impose four simple rules that would greatly reduce the justice system's role in contributing to false identifications:

- 1) Eyewitnesses should be informed that the culprit might not be in the lineup;
- 2) The suspect should not stand out as a distinctive member of the lineup;
- 3) Lineups should be administered by someone who does not know which person is the suspect;
- 4) Witnesses should be asked how certain they are of their choice prior to allowing other information to contaminate their judgment."

Lack of any complete and objective record of the entire process of evidence gathering:

Memory cannot be relied upon to provide accurate data for drawing conclusions. The clinician who recalls "most" of the abused children he saw bed-wet is most likely simply recalling the "hits" and forgetting the "misses", as described above by Grove and Meehl:

"It is the same old error of 'men mark where they hit, and not where they miss,'.... This is not a complicated problem in epistemology or higher mathematics; it is simply the ineradicable tendency of the human mind to select instances for generalizations that it favours. It is the chief source of superstitions."

Objective measurement of data is indisputable for real science:

"When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science." — Lord Kelvin (William Thomson), *Popular Lectures And Addresses* [1891-1894], cited in Schoenburg and McCue, "Controlled Substances", in *The Champion*, National Association of Criminal Defense Counsel (U.S.), July 1997, vol. XXI, no. 6, at p. 38, at f.n. 17, p. 40.

As for the attempt to immunize from real peer review by cliquish cronyism, the case of voice prints - an example of forensic junk science from two decades ago - provides an example. The courts detected the attempted self-validation and referred to it in dealing with this alleged scientific evidence: *People v. Kelly* 130 Cal. Rpt. 144 (S.C. 1976); *R. v. Medvedew* (1978) 43 C.C.C.(2d) 434 (Man. C.A.) at p. 448 per O'Sullivan J.A. dissenting.

Lack of logical conclusion-drawing: awareness of other explanations than the favoured theory:

Here the examples border on the infinite. Research is done in Nome, Alaska to

OPINION EVIDENCE: GUIDELINES FOR ADMISSIBILITY AND PROPER USAGE IN CANADIAN COURTS

by JUDGE TIMOTHY W. WHITE*

In a free and democratic society, like the Canadian community, everyone is entitled to his or her opinion, right? Don't citizens make decisions every day based on what they opine is trustworthy and reliable? Aren't the major political and economic decisions in a democratic state, and even personal choices, made in this way? Shouldn't every litigant have the unfettered right to put forth his/her opinion for due consideration?

What problem might there be in applying the same notions to the reception of opinion evidence in court? Can't we depend on the good judgement and intelligence of the judge (or the jury) to sort the wheat from the chaff? Doesn't the litigant, who has the right to be heard personally or through a legal representative, also have the right to the contribution of a supportive expert? Is it contrary to our fundamental rights for judges to impose limits on the admissibility and the use of new scientific theories or techniques? These are some of the vexing questions that bedevil litigants, litigators and judges alike, when it comes to the thorny subject of opinion evidence.

There are two themes explored in this article:

- ◆ the caution and healthy scepticism which are needed when dealing with the admissibility of new scientific theory or technique.
- ◆ the need for judges to instruct themselves properly, and juries, where applicable, about the uses and limitations of such evidence.

The overriding consideration is that judges have a duty to scrutinize carefully expert scientific evidence and to place reasonable limits on its admissibility and how it is used in criminal trials. This must be done in a manner that is consistent with our fundamental notions of justice and fairness.

The increasing presence of expert witnesses in court in recent years has caused many jurists to take a hard look at the admissibility of opinion evidence. Judges are asking for guidelines to assist them in dealing with the knotty questions which often arise on the tender of this evidence.

The impact of this evidence on the trial process has forced judges and lawyers alike to rethink the old and, generally comforting view, that said, even if the evidence is admitted, it can be dismissed as having very little weight and probative value. This retreat is driven by the realization that much of the opinion evidence being presented to the courts by experts implicitly, and often explicitly and unabashedly, suggests the only rational answers to the key issues and questions arising in the cause. Hence, the courts face a clear and present danger of encroachment on the cherished autonomy. This assault can only be met by increased vigilance and caution by trial and appellate judges in assessing the validity of expert scientific opinion. There is much more recognition of a pressing need to assert greater control over the admissibility of scientific evidence by testing its accuracy,

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IN A LIGHTER VEIN

Sherlock Holmes and Doctor Watson were on a camping and hiking trip. They'd gone to bed and were lying there looking up at the sky. Holmes said, "Watson, look up. What do you see?" "Well, I see thousands of stars." "And what does that mean to you?" "Well, I guess it means we'll have another nice day tomorrow. What does it mean to you, Holmes?" "To me, it means someone has stolen our tent."

A man runs into the vet's office carrying his dog, screaming for help. The vet rushes him back to an examination room and has him put his dog down on the examination table. The vet examines the still, limp body and after a few moments, tells the man that his dog, regrettably, is dead. The man, clearly agitated and not willing to accept this, demands a second opinion. The vet goes into the back room and comes out with a cat and puts the cat down next to the dog's body. The cat sniffs the body, walks from head to tail, poking and sniffing the dog's body and finally looks at the vet and meows. The vet looks at the man and says, "I'm sorry, but the cat thinks that your dog is dead, too." The man is still unwilling to accept that his dog is dead. So the vet brings in a black lab, the lab sniffs the body, walks from head to tail, and finally looks at the vet and barks. The vet looks at the man and says, "I'm sorry, but the lab thinks your dog is dead too." The man, finally resigned to the diagnosis, thanks the vet and asks how much he owes. The vet answers, "\$650." "\$650 to tell me my dog is dead?" exclaims the man. "Well," the vet replies, "I would only have charged you \$50 for my initial diagnosis. The additional \$600 was for the cat scan and lab test."

A sailor meets a pirate in a bar, and they take turns recounting their adventures at sea. Noting the pirate's peg-leg, hook, and eye patch, the sailor asks, "So, how did you end up with the peg-leg?" The pirate replies, "We was caught in a monster storm off the cape and a giant wave swept me overboard. Just as they were pullin' me out, a school of sharks appeared and one of 'em bit me leg off". "Blimey!" said the sailor. "What about the hook?" "Ahhhh..." mused the pirate, "We were boardin' a trader ship, pistols blatin' and swords swingin' this way and that. In the fracas me hand got chopped off." "Zounds!" remarked the sailor. "And how came ye by the eye patch?" "A seagull droppin' fell into me eye", answered the pirate. "You lost your eye to a seagull dropping?" the sailor asked incredulously. "Well..." said the pirate, "it was me first day with the hook."

The last testament of Ol' Fred

Ol' Fred had been a religious man who was in the hospital, near death. The family called their preacher to stand with them. As the preacher stood next to the bed, Ol' Fred's condition appeared to deteriorate and he motioned frantically for something to write on. The pastor lovingly handed him a pen and a piece of paper, and Ol' Fred used his last bit of energy to scribble a note, then he died. The preacher thought it best not to look at the note at that time, so he placed it in his jacket pocket. At the funeral, as he was finishing the message, he realized that he was wearing the same jacket that he was wearing when Ol' Fred died. He said, "You know, Ol' Fred handed me a note just before he died. I haven't looked at it, but knowing Fred, I'm sure there's a word of inspiration there for us all." He opened the note, and read, "Hey, you're standing on my oxygen tube!"

determine the effectiveness of a new anti-depressant. Group A is a control group who receive a placebo and they are seen in January, February and March. Group B is seen over the next three months and receives the experimental drug. Group B shows a decrease in depressive symptoms (assume a reliable and valid symptom checklist). The investigator reports the drug has worked.

Logical? Group A was seen in the dark of an arctic winter. Group B was seen as spring changed into summer and sunlight bathed the northern landscape. Was it the drug, or an obviously cheering change of seasons, that lessened the symptoms of depression?

The complainant waits one year before reporting that the accused raped her. The Crown expert refers to a study where the average delay in reporting was one year. Relevant and probative? Examination of the actual study shows that the study involved 10 women. 9 reported rape immediately, while one waited 10 years before telling anyone. Average: 1 year. Yet not a single woman in the study waited 1 year; the majority reported immediately, and 1 waited 10 years. Does that study assist in the case at all?

A researcher investigating the relationship between dizziness and brain tumors finds as follows:

		Brain Tumor	
		Present	Absent
Dizziness	Present	160	40
	Absent	40	10

Is dizziness associated with brain tumors? Four times as many people with

tumors are dizzy as not. Now consider the following:

		Brain Tumor	
		Present	Absent
Dizziness	Present	160	40
	Absent	40	10

Again, is dizziness associated with brain tumors? This example illustrates the common mistake of drawing conclusions by examining only the affected group. No valid conclusions can be drawn without comparison with a "control" group, a group in which the relevant feature of interest is absent.

An article on airline safety proclaimed that 90% of people who survived airline crashes had researched their escape routes in advance. This was based on a survey of 200 survivors of airline accidents. Seems at first blush to be impressive. But the researcher could not interview people who failed to survive airline crashes. How do we know that they did not research their escape routes as well, or at least 90% of them? In fact, if 95% of them did, does that mean such researching should not be done because it appears to lead to fatal consequences!

People have trouble invoking a mental comparison group in order to give such claims their appropriate due, but with a little practice it becomes easy. When someone claims they can always spot a hairpiece, it is fair to ask them how they would know since by definition they do not know the ones they do not spot!

Real and tragic medical problems reflect some of these issues. Suppose that the life expectancy from the discovery of a tumor is 5 years. The traditional understanding is that earlier detection means better treatment and a better

prognosis. A scientist develops a method of detecting even smaller tumors, patients are treated after the tumor's discovery, and sure enough the average life expectancy proves to be 8 years. A medical success story diagramed as follows, from T = tumor discovery, to D = death?

T _____ 5 years _____ D

T _____ 8 years _____ D

Or is there another grimmer hypothesis that may explain the data. Perhaps it is not the T's that should be lined-up, but the D's:

T _____ 5 years _____ D

T _____ 3 years T2 _____ 5 years _____ D

In other words, it is not life expectancy that is being pushed later, but detection being pushed earlier. Instead of extra years of life the patients are merely being given extra years of knowledge of their condition. To deserve to be called an improvement, the research would have to show that the period from the original T (or T2 in the second case) to D is lengthened. If it is not, consider the ethical, legal and moral issues that swirl around a mere extra period of knowledge.

Sex abuse cases provided a particularly unfortunate example of this type of junk science involving a failure to perform necessary comparisons. So-called experts were giving evidence that certain genital findings were indicative of sex abuse without any comparisons. And when the research was finally done the truth was: things that had been described as symptomatic turned out to be present in the normal population. These so-called "experts" had simply

assumed that "normal" was what they believed it to be and did not bother checking to see if reality corresponded with their preconceived beliefs. As the leading research sardonically quipped, "It took us three years to find a 'normal'."

It is shocking how idiosyncratic views regarding "normal" physical findings were accepted from "experts" who didn't even think to confirm their views by controlled examinations of normal children to develop legitimate standards for comparison: see Nathan and Snedeker, **Satan's Silence: Ritual Abuse and the Making of a Modern American Witchhunt** (1995, Basic Books), at pp. 180-81, 198-99; McCann et al., "*Genital Findings in Prepubertal Girls Selected for Nonabuse: A Descriptive Study*", **Pediatrics** 86, no. 3 (Sept. 1990): pp. 428-39; McCann et al., "*Perianal Findings in Prepubertal Girls Selected for Nonabuse: A Descriptive Study*", **Child Abuse and Neglect** 13, (1989): pp. 179-93.

Neglect of base rate is another common reasoning error. If a drug test is 95% accurate, should only drug users be afraid of it? What about false positives? This is not lab error, but limitations in the test itself, and it can recur repeatedly, so repeated testing is no cure. Is it fair comment to say: so the test is not perfect, but 95% accuracy is very high?

If the incidence of drug use in the population is 5%, and we test someone at random, and he tests positive, what do you think the chances are that he is a user? 95%? Absolutely not. Only fifty-fifty!

Consider a population of 10,000 people. With a 5% rate of incidence, 9,500 are nonusers and 500 (5%) are users. For the 9,500 nonusers 95% accurate

do what it wants. Informed public debate regarding the appropriate roles and responsibilities of the three branches of government should be encouraged and all sides should be heard and respected. Public education is critical and we must each do our part to inform the public of our respective roles in the Canadian Constitutional framework. The Education Kit being prepared by the Judges' Forum at the CBA will assist us in that public education. The C.A.P.C.J. believes it is necessary to commence a direct dialogue between Judges and politicians. Through such discussions, we can begin to mend the distrust and remove the systemic stresses. Fostering education, understanding and minimizing future confrontations will restore the public's confidence in the administration of justice in Canada. Let the education process and the dialogue begin: Judges' lives and The Rule of Law are at stake.

serons les messagers qui diront à l'autorité législative qu'elle ne peut pas agir à sa guise. On devrait encourager un débat éclairé au sujet des responsabilités et des rôles respectifs des trois pouvoirs de l'État, et chacune des parties devrait se faire entendre et respecter. L'éducation du public est d'une importance capitale et chacun de nous doit faire sa part pour informer le public de nos rôles respectifs tels que définis par la Constitution canadienne. La trousse d'information que prépare le Forum des juges à l'ABC nous aidera dans cette sensibilisation du public. L'A.C.J.C.P. croit qu'il est nécessaire d'engager un dialogue entre les juges et les politiciens. Grâce à de tels échanges, nous pourrions commencer à dissiper la méfiance et à éliminer les sources de stress systémiques. En promouvant l'éducation et la compréhension, et en réduisant au minimum les situations de confrontation futures, on rétablira la confiance du public vis-à-vis de l'administration de la justice au Canada. Que le processus d'éducation et de dialogue commence : il y va de la vie des juges et de la suprématie du droit.

— "It isn't what they say about you, it's what they whisper."
—Errol Flynn

— "There is a coherent plan in the universe, though I don't know what it's a plan for."
—Sir Fred Hoyle, English astronomer and author.

PRESIDENT'S REPORT / MESSAGE DE LA PRÉSIDENTE

by The Honourable Judge Cheryl L. Daniel / par madame la juge Cheryl L. Daniel
President of the C.A.P.C.J. / Présidente de l'A.C.J.C.P.

While we struggle from within to maintain and enhance Judicial resources, much is occurring externally to place additional strain on an already stressed Judicial system. Increasingly, political and editorial figures engage in sometimes vitriolic, public criticism of Judges and their decisions, often making demands for discipline, removal or election of Judges. Some believe Judges should do what politicians tell them to do. They attempt to influence and manipulate public opinion against Judges and the Justice system. This 'Judge-bashing' is especially alarming when it comes from Politicians who wield considerable financial and administrative power over Provincial Courts and who have extensive media access. It has now reached critical mass: Canadian Judges are receiving death threats. When Judges are threatened or pressured, the very essence of The Rule of Law is jeopardized.



As Judges, we know our role in the enforcement of The Rule of Law may bring us into conflict with the principles of parliamentary supremacy. On occasion, we will be the messengers telling the Legislative Branch it cannot

Pendant que nous nous battons de l'intérieur pour préserver et mettre en valeur les ressources judiciaires, à l'extérieur il se déroule trop d'événements qui en rajoutent aux contraintes d'un système judiciaire déjà soumis à une forte pression. De plus en plus, des personnalités du monde politique et médiatique se livrent publiquement à une critique parfois acerbe des juges et de leurs décisions, réclamant souvent que les juges soient sanctionnés, destitués, ou élus. Certains estiment que les juges devraient exécuter les ordres des politiciens. Ils essaient d'influencer et de manipuler l'opinion publique en vue de la dresser contre les juges et le système judiciaire. Une telle campagne de dénigrement dont sont victimes les juges est particulièrement inquiétante quand elle est orchestrée par des politiciens qui exercent un énorme pouvoir financier et administratif sur les cours provinciales et qui disposent d'un vaste réseau d'accès aux médias. Cette campagne a maintenant atteint une masse critique : les juges Canadiens reçoivent des menaces de mort. Quand les juges font l'objet de menaces et de pression, l'essence même de la suprématie du droit est minée.

En tant que juges, nous savons que notre rôle dans la mise en pratique de la suprématie du droit peut nous placer dans une situation de conflit par rapport aux principes de la souveraineté du Parlement. De temps à autre, nous

means the test will identify 9,025 negatives but it will also be wrong 5% of the time and thus identify 475 (5%) false positives. For the 500 users, 95% accurate equals 475 (95%) true positives and 25 (5%) false negatives. Thus amongst 10,000 people this test will show 950 positive test results which in fact consist of 475 true users and 475 false positives: nonusers falsely shown as users. The subject could be one of the 475 true or one of the 475 false, thus the description "fifty-fifty" chances. A positive test's meaning is not knowable without knowing not just the test's error rate but also the base rate: the rate at which the phenomenon to be tested for occurs in the general population. 95% represents the probability that, if (given) you have what is being tested for, the test will be positive. It is not the probability: given a positive test result, what are the chances you have what is being tested for. The latter is a different probability, but it is extremely common to confuse the two.

Similarly, if a test to detect a disease whose prevalence is 1/1000 has a false positive rate of 5%, what is the chance that a person found to have a positive result actually has the disease, assuming no other knowledge. A survey of 60 Harvard Medical School staff and students yielded the result that half said 95%. The average answer was 56%. Only 11 gave the correct answer of 2%.

Assume 90% of abused children bed-wet and only 20% of non-abused children bed-wet. If a child bed-wets is it indicative of anything? Consider 100 abused children and 100 not abused children:

		Bed Wetting	
		Yes	No
Abuse	Abused	90	10
	Not Abused	20	80

The incidence seems significantly different. Does this mean that if a child bed-wets we can infer abuse? No. You must consider the base rate to determine probability: if bed-wets, then abused.

Assume a base rate of 10%; i.e. 10% of children selected at random would be abused. Now consider a population of 100 children where we do not know whether any particular individual child is abused or not. 10% will be abused, equals 10 children; 90 will be not abused. Of the 10 abused, 90% or 9 will bed-wet; of the 90 not abused, 20% or 18 will bed-wet. So of the 100, 9 plus 18 equals 27 will bed-wet, but of these only 9 out of 27 will be abused, and 18 of 27 will be not abused. So with respect to a given child who bed-wets, we do not know whether the child is one of the 9 abused or the 18 not abused, so the odds are 2:1 that the child is not abused.

In short, there is all the difference in the world between the probabilities: "Given the child was abused they will bed-wet", which is 90%, and "Given the child bed-wets they were abused", which is 33%. Because of the base rate concept, even a high success rate in the context of a small sub-population will give a smaller absolute number than the smaller failure rate for the large balance of the population, making the detection of the target group in a particular instance problematic.

The confusion of causation and correlation is another common mistake.

Testing generally shows that students that sit in the last row of a class do more poorly than students that sit in the front row. Could education be improved by abolishing the last row and creating a lengthy front row where everyone would sit? Or is it just that the factors that lead to higher marks, such as motivation, interest, concern for note-taking, would also correlate with sitting in the first, rather than the last row.

Fallacious backwards reasoning is another common mistake. Post-traumatic Stress Disorder is an example. Assuming there is a clinical disorder PTSD that can be recognized as the cause of behavioural changes (for example, the man suffered war trauma; he now cannot sleep; the sleeplessness is caused by his PTSD), reasoning backwards is completely fallacious: he cannot sleep at nights, therefore he has PTSD.

This reasoning backwards is the logical fallacy of affirming the consequent. There is all the difference in the world between the two claims: "Given the cause, the result is the following" versus - "Given what could be a result (if the cause were present), therefore the cause is present". The reasoning is fallacious because there is no way to logically eliminate any of the other possible causes.

Ignorance of not only logic, but also science itself can be found. There is a phenomenon called "regression to the mean." The performance of any human activity generally groups on a bell curve, with a few really great performances, a few really bad ones, and most grouped around the mean (or most likely amount of success). This applies to flying airplanes, golf games, whatever. Suppose a group of children take a

reading test. A company, eager to prove its new reading course which it plans to market to parents and school boards, says: we will prove our reading program works. We will take your 10 worst students, give them our course, and then retest them to see if their reading has improved. They do, they do, they do, and it does. Should a parent spend money on this teaching program for their child? Hint 1: regression to the mean. Hint 2: if they had given the course to the 10 best students on the previous test, would the program have been shown to be a failure because the 10 best would have gone down in performance?

A story is told that the Israeli Air Force flight instructors stopped complimenting pilots in training on good flights because they noticed that whenever they did so, the next training flight was not as good, but when they berated the pilots after a bad training flight the next flight showed improvement. A little knowledge about regression to the mean would have allowed the (irrelevant) compliments to keep flowing. Regression to the mean is why it is easier to think that criticism works while flattery does not: criticism is given on an occasion when simple chance means improvement will take place, while flattery is given on an occasion when by simple chance deterioration is predicted.

Theory and claims that are not testable or falsifiable:

The scientific method in general and Daubert in particular bode ill for psychiatry and psychology. Freudian psychiatry was Popper's specific example of a theory that was unfalsifiable and hence not science. Given a set of events (data) and a large enough set of possible explanatory variables one can always devise a theory

- 4 The earliest reported American case is *Luco v. United States* 64 U.S. (23 How.) 515, 16 L. Ed. 545 (1859) – photographs of original documents used in appellate court.
- 5 All references in square brackets are to chapters or sections in *Visual Evidence: A Practitioners Manual*, *supra*, footnote 1.
- 6 *Benson & Hedges (Can.) Inc. v. Ross* (1986), 18 CPC (2d) 266, 174 A.P.R. 38, 58 Nfld. & P.E.I.R. 38 (P.E.I. S.C.).
- 7 [1986] 5 W.W.R. 180, 49 Sask. R. 105 (Q.B.).
- 8 Judicial Notice is a doctrine which "allows" the court to accept the truth of a fact or law without requiring formal proof by a party. Generally, facts which are so notorious as to be common knowledge or capable of being readily and indisputably demonstrated as true may be judicially noticed." Quoted from Cudmore, *Civil Evidence Handbook*, (Toronto, Carswell, 1987), para. 5.1.
- 9 (1994), 159 A.R. 345 (Alta. Prov. Ct.).
- 10 *R. v. Nikolovski* [1996], 3 S.C.R. 1197, 111 C.C.C. (3d) 403, 31 O.R. (3d) 480 (headnote only), 141 D.L.R. (4th) 647, 3 C.R. (5th) 362, 96 O.A.C. 1, 204 N.R. 333 (S.C.C.).
- 11 *R. v. Dix* (1998), 16 C.R. (5th) 157, 1998 CanRepAlta 348 (Alta. Q.B.).
- 12 References are to sections of the *Criminal Code*
- 13 *R. v. Taylor* (1983), 10 W.C.B. 303, 4 C.R.D. 425.60-08 (Ont. Prov. Ct.).
- 14 *R. v. Duarte and Sanelli* [1990] 1 S.C.R. 30, 71 O.R. (2d) 575, 74 C.R. (3d) 1, 45 C.R.R. 278, 65 D.L.R. (4th) 240, 103 N.R. 86; and *R. v. Wong*



"Progress always involves risk; you can't steal second base and keep your foot on first."

—Frederick Wilcox



"You know, many a man realizes late in life that if when he was a boy he had known what he knows now, instead of being what he is he might be what he won't; but how few boys stop to think that they knew what they don't know instead of being what they will be, they wouldn't be?"

—Stephen Leacock, 1910

- (v) Prejudicial effect
- sympathy arousing pictures
 - gruesome pictures
 - over-emphasis
 - innuendo of suspicion

Does the picture's probative value outweigh its prejudicial effect?

If answer is "yes" – admit
 If answer is "no" – exercise judicial discretion and reject

b. Weight (factors affecting)

- Veracity of the authenticating witness?
- Kind, form, degree, and nature of any distortion?
- Quality of reproduction & degree of clarity?
- The length of time accused appears on videotape?

B. Effect of the *Charter of Rights and Freedoms*?

- Section 7
 - ◆ security of the person = 'right to privacy'
 - ◆ Test - "Was video surveillance used as an investigative aid to monitor a scene of suspected criminal activity"?¹³
- Section 8
 - ◆ protection against unreasonable search or seizure
 - ◆ Test - "Did accused have a reasonable expectation of privacy in the circumstances?"¹⁴

Endnotes

¹ This article is based on a paper delivered at the Annual Convention of the Canadian Association of Provincial Court Judges in Calgary, Alberta on October 9, 1998. Portions of this article were extracted from Goldstein, E., *Visual Evidence: A Practitioner's Manual* (Toronto: Carswell, 1991), © 1991 Thomson Canada Limited, One Corporate Plaza, 2075 Kennedy Road, Scarborough, Ontario, M1T 3V4, Toll Free 1-800-387-5164. (Toronto 416 609-3800). Website: www.carswell.com.

² Barrister and Solicitor, Province of Ontario. Address inquiries to: 45 Redondo Drive, Thornhill, Ontario Canada, L4J 7S7; Ph: (905) 709-3936; Fax: (905) 709-3844. email: elgold@shaw.wave.ca webpage: www.tor.shaw.wave.ca/~elgold/

³ *Pitts v. Mueller*, (November 22, 1989, S.C.O.), unreported decision of Lovekin, J.

retrospectively predicting the events to any desired level of accuracy. The problem is this *ad hoc* theory will not work on any new sample of cases. But if it is amended and new concepts added on an *ad hoc* basis to cover each new piece of data, a masterpiece of junk science can be created. This is an accurate description of Freudian psychiatry.

Freudian theory uses a convoluted conceptual structure that explains all human behavior after the fact. Adherents to Freudian psychoanalytic theory offer authoritative sounding explanations for all human behaviors, from individual quirks and slips of the tongue to large-scale social phenomena such as religion. The theories and concepts used by psychiatrists postulate all manner of internal processes and hidden events that cannot be falsified because they are not testable. It is unscientific because nothing can count against the theory. There is no point at which it is subject to falsification. This type of theory provides a *post hoc* explanation for every possible event; however, it is incapable of predicting any particular event. A successful scientific theory, by contrast, predicts outcomes from a discrete set of events with an ascertainable degree of reliability. It is also the case that to the limited extent that it has been possible to squeeze a prediction out of Freudian theory and subject it to empirical tests, it has failed dramatically.

Examples of Junk Science Relevant to Criminal Law:

Psychiatric and Psychological Testimony

As already indicated, this evidence is extremely problematic in light of *Daubert* and any strict application of the scientific method. In a related vein, the status of

the Diagnostic and Statistical Manual of the American Psychiatric Association (now DSM IV) has to be reconsidered. It is important to understand that, notwithstanding its pretensions, it is not a work of science. It is a nosology: a compendium of arbitrary names and its validity and reliability or lack thereof is shocking: Stuart A. Kirk and Herb Kutchins, **The Selling of DSM: The Rhetoric of Science in Psychiatry**, Aldine de Gruyter, 1992; Herb Kutchins and Stuart A. Kirk, **Making Us Crazy; DSM: The Psychiatric Bible and the Creation of Mental Disorders**, The Free Press, 1997.

"(DSM) ... is no more than a distillate of the prejudices and power play of a group of aging American academics, of no interest to most Europeans and only passing relevance to some Australasians." — Pathe and Mullen, "The Dangerousness of the DSM-III-R", (1993) 1:1 *Journal of Law and Medicine* 48.

Even the popular press has seen the psychiatric emperor to be naked:

"Here, on a staggering scale, are gathered together all the known mental disturbances of humankind, the illnesses of mind and spirit that cry out for the therapeutic touch of — are you ready for this? — the very people who wrote the book. ... Nor did the tumbrels roll when the psychiatric profession went on to discover (and make a bundle from) two entirely new nation-threatening epidemics for which no empirical proof exists: chronic depression (based on the readily observable fact that a whole lot of people, including people with serious or potentially fatal diseases, don't feel so hot about their lives) and suppressed memory." — L.J. Davis, "The Encyclopedia of Insanity: A psychiatric handbook lists

a madness for everyone", in Harper's Magazine, February, 1997, pp. 61-66, discussing the DSM-IV and its role in turning normal human experiences into pathologies.

One of the DSM's recent creations, PTSD (Post Traumatic Stress Disorder) has also been examined and exposed in Allan Young, **The Harmony of Illusions: Inventing Post-Traumatic Stress Disorder**, (Princeton University Press, 1997), a devastating critique. Prof. Young's book documents PTSD as simply another intellectually and scientifically bankrupt episode in the DSM-IV's ignoble existence. Introduced in the early 1980's to guarantee generous disability payments and pensions to Vietnam war veterans, psychiatry's habitual symptomatic mushiness and diagnostic generosity turned it into the disorder *de jour* for every complaint, and turned every complaint into a trauma, a situation that continues with only slight improvement today (and only for fiscal reasons: as the economy got worse, insurance companies and governments got skeptical).

As a recent objective assessment concludes:

"Many of the disputes in the area of clinical assessment will ultimately be resolved by the use of the scientific method. After all, by collecting and analyzing data, we as social scientists try not to be blinded by our preconceptions and theories. History has shown there is no more generally useful method for arriving at reliable knowledge about the world. Thus, the final word should belong to, and will belong to, the scientific method."

— Howard N. Garb, **Studying the Clinician: Judgment Research and Psychological Assessment**, 1998, APA, at p. 258.

Battered Woman Syndrome

Faigman and Wright, "*The Battered Woman Syndrome in the Age of Science*" (1997), 39 **Ariz. L. Rev.** 67 says all that can and should be said on this topic. That article begins with an appropriately scathing denunciation of Lenore Walker's book, **The Battered Woman** (New York: Harper Collins, 1980), which book figured so prominently in Justice Wilson's judgment in *R. v. Lavallee*, [1990] 4 W.W.R. 1, 76 C.R. (3d) 329, 55 C.C.C. (3d) 97, [1990] 1 S.C.R. 852, 108 N.R. 321, 67 Man. R. (2d) 1 which introduced this subject into Canadian law.

"The battered woman syndrome illustrates all that is wrong with the law's use of science. The working hypothesis of the battered woman syndrome was first introduced in Lenore Walker's 1979 book, **The Battered Woman**. When it made its debut, this hypothesis had little more to support it beyond the clinical impressions of a single researcher. Five years later, Walker published a second book that promised a more thorough investigation of the hypothesis. However, this book contains little more than a patchwork of pseudo-scientific methods employed to confirm a hypothesis that its author and participating researchers never seriously doubted. Indeed, the 1984 book would provide an excellent case study for psychology graduate students on how not to conduct empirical research. Yet, largely based upon the same political ideology driving the researchers, judges have welcomed the battered woman syndrome into their courts. Because the law is driven by precedent, it quickly petrified around the original conception of the defense. Increasingly, observers are realizing that the evidence purportedly supporting the battered woman syndrome is without empirical foundation, and, perhaps more

(a) s. 491.2 - 'photograph' of property seized and returned admitted in lieu of producing that property in court PROVIDED that photograph is accompanied by a 'certificate' and 'affidavit or solemn declaration'

(b) s. 487.01 (1), (4), & (5) Video Search Warrant

(c) s. 709 to 714 Evidence on commission

(d) s. 715.1 – Videotaped Evidence of Complainant or Witness

2. Canada *Evidence Act* ss. 9, 10, and 11

prior inconsistent statements recorded on videotape – cross examination by reference to a videotape

3. Common Law

a. Criteria for Admission

(i) Relevance of the contents of the picture (i.e., material to an issue before the court) ?

(ii) Truth and accuracy of the reproduction?

(iii) Fairness and absence of intention to mislead?

(iv) Verification under oath by a capable witness (i.e., Who is the authenticating witness)?

● eye witness

- ◆ cameraperson
- ◆ bystander

● non-eye witness

- ◆ qualified witness
- ◆ expert witness

The evidence of the tape is of such clarity and strength that it was certainly open to the trial judge to conclude that the accused before her was the person depicted on the tape. The trial judge was aware of the difficulties and frailties of identification evidence and acknowledged them in her reasons. Nonetheless, she was entitled on the evidence before her to conclude beyond a reasonable doubt that the accused was guilty. There was no need for corroboration of this tape.

There was no suggestion that the tape had been tampered with or that it did not represent the commission of the crime. Indeed there was quite properly no objection to its admission. The videotape can and should speak for itself. It provided the convincing evidence upon which the trial judge could properly base her finding of fact that the accused was the person shown in the tape. The trial judge did not err in finding beyond a reasonable doubt that the accused was guilty of the robbery.

Nikolovski (S.C.C.) [s. 22.3(b)]

IV. VIDEO CONFERENCING (e.g., 'VIDEO LINKS')

See 1998 Alberta case of *R. v. Dix*¹¹ wherein the Alberta Court of Queen's Bench heard an application for leave to adduce the testimony of a witness by videoconference.

A. Testimony outside the courtroom via CCTV [s. 25.2]

1. Sexual Offence Cases – s. 486 (2.1), (2.2)¹²
2. Ontario *Evidence Act* – s. 18.4

B. Judicial Interim Release [s. 25.3]

1. "Show cause" Hearings – s. 515 (2.2)

C. Accused to be present at trial – s. 650 [s. 25.4]

D. Disposition Hearings s. 672.5(13) [s.25.5]

V. JUDGES' CHECKLIST:

ADMISSIBILITY AND WEIGHT OF PICTURES (i.e., videotapes, motion picture films and photographs)

A. What is the source of the court's jurisdiction?

1. *Criminal Code* sections

troubling, that the syndrome itself is inimical to the political ideology originally supporting it. In short, in the law's hasty effort to use science to further good policy, it is now obvious that the battered woman syndrome is not good science nor does it generate good policy."

As another author more generously puts it:

"[T]he largely unrestrained admissibility of BWS [battered woman syndrome] cannot be explained solely on the basis of evidentiary doctrine and scientific validity. Instead, it involves politics and reflects a normative judgment typically associated with changes in criminal liability rather than evidentiary admissibility." — Mosteller, *Syndromes and Politics In Criminal Trials and Evidence Law*, (1996) 46 *Duke L. J.* no. 3.

E.M.D.R.

A clear candidate for the science hall of infamy is EMDR: "Eye Movement Desensitization Reprocessing." For our purposes it is enough to know that it is supposed to cure trauma by the "therapist" causing rapid back and forth eye movements and was discovered by one Shapiro in the last decade or so. To those who track the currents of junk science EMDR is not unknown, having already been debunked: Lilienfeld, *"EMDR Treatment: Less Than Meets the Eye"*, (Jan./Feb. 1996) vol. 20 *Skeptical Inquirer* pp. 25 - 31. But it has been kept alive by an American-based organization whose members believe in it and train therapists to do it (surprise: for a fee) and by therapists who use it on customers (sorry, clients) (again, surprise: for a fee). The intellectually masochistic can visit the web-site of all this incredible intellectual

activity at <http://www.emdr.com>. There are level one EMDR therapists and also apparently level two therapists (who have taken more courses? for more fees?) and therefore can "help" clients better (for better fees?).

Now, we criminal lawyers could in the ordinary course have gone blithely about our business without regard to this piece of nonsense or the silly people that are entitled to the exercise of their constitutional right to waste their money as they see fit, except that some measure of alert is apparently called for. A recent Toronto newspaper account of E.M.D.R. had, as the first person quoted in this item a psychiatrist Harvey Armstrong, who has regularly been tendered by the Crown as an expert witness in sex abuse cases. Armstrong, according to the article, has taken two levels of training in what he calls a "marvellous new tool" and has used it on his patients. The article carries on with what can only be characterized as "bad news - terrible news", noting that only a "handful" of Toronto area therapists have had the training (still a handful too many) but "a training program for the first level of expertise is planned for Toronto in October [1997]."

This is the type of "research" quoted in support:

"Study shows successes

In the study, the authors randomly assigned 80 subjects, 37 with post-traumatic stress disorder, to EMDR treatment. The study was specifically designed to control for bias. They randomly assigned patients to one of two groups. The first group was treated with three 90-minute EMDR sessions with one of five randomly assigned therapists. The second group waited 30 days, was reassessed, then

received the same EMDR treatment. Patients in the first group showed signs of significant improvement in all nine dependent variables immediately after treatment, and those improvements remained or increased 90 days later.

A subsequent study indicated the improvements lasted for 15 months, Tinker said. Patients in the second group showed no improvement during the 30 days before EMDR treatment - ruling out spontaneous improvement over time - but did improve after the EMDR treatment."

What is wrong with this "research"? Even aside from any lack of information about the test subjects, why would any rational observer know immediately that if EMDR's supporters think studies such as these provide any evidence whatsoever for EMDR's efficacy their judgment and knowledge cannot be relied upon.

Here's the hint. I am pleased to announce that over the weekend I have discovered a new and better form of treatment. It is called Alan D. Gold's EMDR: "Ear Movement Desensitization Reprocessing." Instead of moving your eyes back and forth, the "therapist" moves your ears back and forth, very hard and painfully, after explaining, of course, that the greater the pain the greater the effectiveness, because we all know that the better a treatment, the more painful it is, right?

Does anyone doubt that if my Ear MDR were used in the above study instead of Eye MDR there would not have been improvement? Of course, it is the effect of the power of suggestion, the placebo effect, and medicine men and witch doctors and healers from the most primitive to the best Harvard-educated have used it since human nature was invented.

This research taken at face value and given full credit (that is, assuming the test subjects were properly selected and they really did improve by some objective measurement and not just report improvement as subjects in such tests are wont to do) shows that doing something achieves more improvement than doing nothing. Giving a sugar pill (doing something) and saying it is medicine achieves cures better than not giving the placebo. It in no way shows the efficacy of doing some particular something (moving the eyes versus moving the ears) because this research does not test between different somethings. These are not real scientists honestly considering alternative possible explanations: these are advocacy researchers eager to "prove" the particular theory that is putting bread on their tables.

The fact that this obvious flaw in the research does not even occur to Shapiro and her cohorts is a classic example of why valid research to develop real knowledge must be methodologically sound and properly carried out. The fact that someone could proclaim it as a "marvellous new tool" without requiring validating studies and research, because it appears successful with patients, is astonishing in light of the substantial and incontrovertible knowledge that exists about the power of suggestion and the placebo effect and the other aspects of human nature that confound our subjective experience and make it totally inadequate as a guide to scientific knowledge. Such an attitude is also ignorant of all the medicines and treatments that litter the historical graveyard of medicine, treatments that seemed to work miracles but upon proper, methodologically sound investigation turned out to be ineffectual and valueless. However cruel and

be true if the trier of fact has reviewed the tape on several occasions and stopped it to study the pertinent frames.

Although triers of fact are entitled to reach a conclusion as to identification based solely on videotape evidence, they must exercise care in doing so. For example, when a jury is asked to identify an accused in this manner, it is essential that clear directions be given to them as to how they are to approach this task. They should be instructed to consider carefully whether the video is of sufficient clarity and quality and shows the accused for a sufficient time to enable them to conclude that identification has been proven beyond a reasonable doubt. If it is the only evidence adduced as to identity, the jury should be reminded of this. Further, they should be told once again of the importance that, in order to convict on the basis of the videotape alone, they must be satisfied beyond a reasonable doubt that it identifies the accused.

The jury or trial judge sitting alone must be able to review the videotape during their deliberations. However, the viewing equipment used at that time should be the same or similar to that used during the trial. I would think that very often triers of fact will want to review the tape on more than one occasion.

A trial judge sitting alone must be subject to the same cautions and directions as a jury in considering videotape evidence of identification. It would be helpful if, after reviewing the tape, the trial judge indicated that he or she was impressed with its clarity and quality to the extent that a finding of identity could be based upon it. This courtesy would permit Crown or particularly defence counsel to call, for example, expert evidence as to the quality of the tape or evidence as to any changes in appearance of the accused between the taking of the videotape and the trial and to prepare submissions pertaining to identification based on the tape.

...

I viewed the tape and it is indeed of excellent quality and great clarity. The accused is depicted for a significant period of time. At one point, it is almost as though there was a close-up of the accused taken specifically for identification purposes. There is certainly more than adequate evidence on the tape itself from which the trial judge could determine whether or not the person before her was the one who committed the robbery. The fact that the store clerk could not identify the accused is not of great significance. When the tape is viewed, it is easy to appreciate that the clerk might not have been able to properly focus upon the identity of the robber. The violent and savagely menacing jab made by the robber with a large knife directed towards the clerk suggests that self-preservation, not identification, may very reasonably have been the clerk's prime concern at the time of the robbery. Yet, the tape remained cool, collected, unbiased and accurate. It provides as clear a picture of the robbery today as it did when the traumatic events took place.

I am mindful of G.D. Nokes' comment in his article that "common knowledge differs with time and place". Ten years ago it might have been that video cassette recorders and video cameras were strange devices to the person of ordinary intelligence. Such is not the case now. We are surrounded by video tapes in all manner of shops. They are very often available for purchase in much frequented locations such as grocery stores. Video cameras are to be seen in many business establishments such as banks. Video cassette recorders are well known to the general public. It is common knowledge that VCRs are capable of recording from televisions or cameras. Many people may need their adolescent children to help them programme the family VCR but they are well aware of the concept of timed recording.

I am satisfied that the evidence of the ability of an unmanned video camera and VCR to record events at a specified time and of the product thereby created can be properly supplied by judicial notice. They are matters well within the fund of general information known to reasonably well-informed persons in the community."

III. IDENTIFICATION EVIDENCE [s. 22.3]

Can a videotape alone provide the necessary evidence to enable the trier of fact to identify the accused as the perpetrator of the crime? The answer, according to the Supreme Court of Canada is a definite "YES" !

Per Cory, J. (S.C.C.): ¹⁰

Once it is established that a videotape has not been altered or changed, and that it depicts the scene of a crime, then it becomes admissible and relevant evidence. Not only is the tape (or photograph) real evidence in the sense that that term has been used in earlier cases, but it is to a certain extent, testimonial evidence as well. It can and should be used by a trier of fact in determining whether a crime has been committed and whether the accused before the court committed the crime. It may indeed be a silent, trustworthy, unemotional, unbiased and accurate witness who has complete and instant recall of events. It may provide such strong and convincing evidence that of itself it will demonstrate clearly either the innocence or guilt of the accused.

The weight to be accorded that evidence can be assessed from a viewing of the videotape. The **degree of clarity** and **quality of the tape**, and to a lesser extent **the length of time during which the accused appears on the videotape**, will all go towards establishing the weight which a trier of fact may properly place upon the evidence. The time of depiction may not be significant for even if there are but a few frames which clearly show the perpetrator that may be sufficient to identify the accused. Particularly will this

unfortunate, the truth is that Lorenzo's oil turned out to be valueless. Reality, notwithstanding human hopes and wishes, is as likely as not to fail to provide a Hollywood ending.

A Quicklaw search of Canadian case law turned up no references to EMDR. Hopefully, that situation will remain. There is one brief mention in passing of EMDR in an Australian civil case (*Skoblar v. Comcare*, March 15, 1996, AAT No. 10744 in Quicklaw's AADM database). Protection is now offered by another Australian case, *Tillot et al. v. The Queen*, Court of Criminal Appeal, NSW, September 1, 1995, overruling on this point the lower court at (1993), 69 A. Crim. R. 544, and holding that evidence based upon EMDR is to be treated like evidence obtained by hypnosis, and is not admissible without proof first upon a *voir dire* that it represents a scientifically proved phenomenon and the evidence can be safely admitted as reliable. With such a sensible and real threshold, the criminal court room would appear safe from EMDR.

Facilitated Communication

Facilitated Communication is a supposed way for autistic children to communicate via a facilitator and a computer terminal. Originally developed for use with subjects whose cognitive abilities were unimpaired and undoubted, but whose communicative ability was impaired, it got transferred to use with subjects whose very cognitive abilities were unproved without the difference and its implications being respected. FC was initially developed to assist persons with cerebral palsy, who have normal cognitive abilities but often have poor motor and speech control, preventing them from writing and

speaking effectively. It was then extended to autistic children with the argument that a statement from one person (the autistic child) is merely being transmitted to another by the use of a facilitator. And soon allegations of abuse started to arise from, supposedly, the autistic children.

FC was developed in Australia in the 1970's and imported to the U.S. in the late 1980's by Dr. Douglas Biklen, who eventually became associated with Syracuse University in New York. There Dr. Biklen established a following, with the result that New York appears, at least at this time, to be the state where FC is most widely practised. Not surprisingly, most of the published legal case law addressing FC has come out of New York, generally unsuccessfully, though two years ago a Kansas Court accepted such evidence.

However, simple controlled experiments have shown that where the child and the facilitator do not have the same knowledge, it is always the facilitator's knowledge that is reported. FC seems incapable of producing communication that is unknown to the facilitator. A 1995 article in the **American Psychologist** demonstrating the results of controlled research has probably debunked FC once and for all: Jacobson et al., "A History of Facilitated Communication: Science, Pseudoscience and Antiscience" (1995), 50 **American Psychologist** 750: controlled research established responses are from the facilitators, not the disabled. This is a landmark article that has wisdom and usefulness even beyond its particular subject-matter. See also Green, "Facilitated Communication: Mental Miracle or Slight of Hand?" **Skeptic**, 1994, vol. 2, no. 3, p. 68.

It is not unfair to call FC a forensic Ouija board because it is the same small muscle movements involved that account for the channeller's movements on the Ouija board.

On January 21st, 1996 a Toronto newspaper carried a front page article titled "Autism 'miracle' a nightmare for family." Through "facilitated communication", a couple's autistic son allegedly accused them both of repeated sexual assault. They were both arrested and have spent a considerable amount of money defending themselves. The charges were dropped the day before the scheduled trial when tests at the Clarke Institute of Psychiatry revealed that the boy couldn't count beyond three, despite supposedly claiming to have been assaulted nine times, and is unaware of his own or others' sex. Tests showed that he could not describe objects that he had seen but which had not been seen by his "facilitators." The couple have filed an \$8.5 million suit against York Region police, the York Region Catholic Separate School Board and Christian Horizons, Inc., operator of the group home where their son lived.

Statement Validity Analysis

Statement Validity Analysis (by which true and false statements are supposedly discriminated by content; what if the speaker believes something false?) was appropriately rejected in *R. v. Jmieff* (1995), 94 C.C.C. (3d) 157 (B.C.C.A.), where a new trial was ordered. The Crown adduced a supposed "expert" who used S.V.A., and the appeal court held that S.V.A. was "not established to be scientifically valid, in accordance with the authorities on the admissibility of normal scientific evidence." This judgment was misinterpreted in the later trial decision

in *R. v. S.C.H.*, [1995] B.C.J. No. 237 (B.C.S.C.). Yuille, "The Systematic Assessment of Children's Testimony", (1988) 29:3 **Canadian Psychology** 247 is by the expert witness rejected in *Jmieff*. It describes S.V.A. and optimistically looks forward to S.V.A.'s validation (for which there was absolutely no evidence in 1988). As shown by *Jmieff* and the literature to the present, a decade later such validation remains nothing more than the fondest hopes of S.V.A.'s supporters.

Other references are: Anson et al., "Child Sexual Abuse Allegations: Reliability of Criteria-Based Content Analysis", (1993) 17 **Law & Human Behavior** 331; Wells and Loftus, "Commentary: Is This Child Fabricating? Reactions To A New Assessment Technique", in **The Suggestibility of Children's Recollections** (Doris ed., 1991, American Psychological Assoc.), at page 168; Rogers, "Review of the Current Status of the Use of Statement Validity Analysis Procedures in Sex Abuse Cases in the United States", (1990) 2 **Issues in Child Abuse Accusations** 69; Jones and McGraw, "Reliable and Fictitious Accounts of Sexual Abuse to Children", (1987) 2 **J. of Interpersonal Violence** 27. Beware of Honts, "Assessing Children's Credibility: Scientific and Legal Issues in 1994", (1994) 70 **North Dakota Law Review** 879: this article must be read skeptically because Honts is an unabashed supporter (and teacher) of this technique.

The Cognitive Interview

This is an interviewing technique whose developers and supporters claim improves the information

(b) Hearsay [s. 8.3]

"Written or oral statements, or communicative conduct made by persons who are not testifying are inadmissible if such statements or conduct are tendered either as proof of their truth or as proof of assertions implicit therein."

Sopinka & Lederman *The Law of Evidence in Civil Cases*

"...hearsay evidence of statements made by persons who are not available to give evidence at trial ought generally to be admissible, where the circumstances under which the statements were made satisfy the criteria of *necessity* and *reliability* set out in *Khan*."

Smith (S.C.C.)

"The videotaped statement with its complete and comprehensive record of the questions posed, the answers given and the demeanour of the witness, will often serve as a complete answer to the issues of reliability and voluntariness of the statement."

R. v. B. (K.G.)

B. Weight [s. 2.4]

Factors affecting Weight

- (a) Veracity of the authenticating witness;
- (b) Kind, form, degree, and nature of any distortion;
- (c) Quality of reproduction & degree of clarity; and,
- (d) The length of time accused appears on videotape.

[*Nikolovski* s. 22.3(b)]

C. Judicial Notice of the Operation of Video Equipment

In the 1994 Alberta case of *R. v. Vandale*, the Alberta Provincial Court held that a judge can take judicial notice⁸ of "the ability of an unmanned video camera and VCR to record events at a specified time and of the product thereby created." In *Vandale*, there was no evidence presented to the court as to how a video camera and VCR operate together, nor did the trial Judge have evidence as to how the system described performed its recording function.

Per Fradsham, J. (Alta. Prov. Ct.):⁹

"Do reasonably well-informed persons in the community know of the existence of video cameras and VCR's and how they are utilized? Remember that I am not speaking of the intricacies of their technical workings. Nor am I speaking of an ability to install or programme such devices. Rather, the question is whether people of ordinary intelligence are aware that a VCR, when connected to an operating video camera, is capable of being programmed to record at a specified time onto a cassette tape and that the recording does not need further developing for playback.

a trial judge to conduct a *voir dire* to determine whether or not they should be received in evidence.”

5. Objections to Admission

Technical

(a) video editing

- (i) in-camera editing, accomplished by switching the camera ‘on’ and ‘off’ or using the ‘pause’ control results in gaps in the tape which may render it inadmissible. [*Miller, Caughlin*, s. 7.2(a)]
- (ii) when? – before, or at, trial? Trial judge preferred to view the original unedited version (of the surveillance motion picture film) and then decide which portions (under-exposed or poorly-exposed) of it were to be deleted.

[see *Niznick v. Johnson, Cheema v. Ross*, s. 7.2(a)]

- (b) audio editing – videotape with edited soundtrack may not be admissible because of a failure to reproduce the entire conversation.

[*Pere Jean Gregoire de la Trinite, Chattha*, s. 7.2(b)]

Where sound filtering techniques are used, trial judge should see and hear original (source) videotape(s) in addition to “filtered” copy. [*Tookey (No.1)*]

(c) tape and film speed distortion

- (i) fast motion [s. 7.4(a)]
 - film [*Army & Navy Department Store v. R.W.D.S.U.*]
- (ii) slow motion [s. 7.4(b)]
 - tape [*Maloney, Oosterhof*]
- (iii) stop motion/freeze frame [s. 7.4(c)]
 - tape [*Williams*]

(d) colour distortion [s. 7.5]

(e) optical distortion [s. 7.6]

(f) other forms of distortion [s. 7.7]

Non-Technical

(a) Prejudicial Effect [s. 8.2]

- (i) sympathy arousing pictures (*Draper v. Jacklyn*)
- (ii) gruesome pictures (*Dilabbio, Bannister, Bonds*)
- (iii) over-emphasis (*Gallant, Conkie, Iutzi*)
- (iv) innuendo of suspicion (*Lynch*)

received from witnesses. A recent reference, Kebbell and Wagstaff, “*Hypnotic Interviewing: The Best way to Interview Eyewitnesses?*” (1998), 16 **Behavioral Sciences and the Law** 115, touts C.I. as the better alternative to hypnosis: “less risk of memory distortion” and “better public image than hypnosis” [sic].

The article is in fact a self-interested plea for clinicians to take over police interviews because they know better than the police how to question and listen [Is there nothing these clinicians cannot do better than everyone else?] so all it says must be assessed against that self-serving agenda. But the article’s description of C.I., both in its original version and its new improved version raises concerns: C.I. includes in part asking the interviewee to use imagery and also to imagine themselves viewing the scene from the perspective of other participants and imagining “what they would have seen”! Such activities surely raise dangers of confabulation.

Especially ironic is the description of the problem C.I. was supposed to solve: bad police questioning. C.I. was developed because studies showed police questioners: 1) frequently interrupted witnesses as they attempt to answer questions, leading to poor concentration and a conditioned response towards abrupt answers; 2) asked closed questions rather than open-ended ones that gave the witness a chance to exhaust their recollection; 3) phrased questions badly, with inappropriate language and judgmental comments (“what a stupid thing to do” is not going to get a witness’s cooperation). Why one needs expensive training at weekend workshops for police to learn to ask simple questions, listen to the answers,

let the witnesses speak uninterrupted and not interfere with the sought-after communication is not self-evident.

Kebbell and Wagstaff’s claim an improvement of 35% with C.I. (though it is unclear how this is measured), but since most of the “studies” seem to be by C.I.’s creators who are selling the product to police forces, the claimed improvement seems to belong more to the world of advertising than science.

C.I. has been mentioned in passing in one case where it is also touted as a better alternative to hypnotically-refreshed memory: *R. v. Savoy*, [1997] B.C.J. No. 2747 (B.C.S.C.) at para. 17. Bekerian and Dennett, “*The Cognitive Interview Technique: Reviving The Issues*”, (1993) 7 **Applied Cognitive Psychology** 275-297 concluded that CI can produce more errors, does not always positively affect recall, and is still a long way from being an acceptable, general technique. It can be highly suggestive with children: Ceci and Bruck, **Jeopardy In The Courtroom: A Scientific Analysis of Children’s Testimony** (1995, Am. Psych. Assoc.), at p. 213. See also Alan D. Gold’s Netletter Issue No. 4, September 16, 1996, on Quicklaw, database GOLD, for other references regarding the Cognitive Interview.

Physical Evidence in Sex Abuse Cases

Reference has already been made to Crown experts in sex abuse cases who were prepared to state unscientifically that any physical finding they considered abnormal was the product of supposed sex abuse.

“[E]vidence obtained during a medical examination of an alleged victim is subject to debate among experts. This

uncertainty stems from investigators' disagreement as to what constitutes 'normal' childhood anatomy, and is exacerbated further by disagreement as to what constitutes 'abnormal' anatomy. Even when evaluators agree that a particular physical characteristic is abnormal, they disagree as to whether that characteristic is caused by sexual abuse. Physical abnormalities may also be due to causes other than sexual abuse." Becker, *Child sexual abuse allegations against a lesbian or gay parent in a custody or visitation dispute: battling the overt and insidious bias of experts and judges*, (1996) 74 **Denv. U. L. Rev.** 75, text accompanying fns. 166-169.

In fact, base rate studies of nonabused children indicate that many of the findings often used to support a diagnosis of abuse are found with a high enough frequency in normals that they do not support an opinion that abuse occurred: McCann, J., Voris, J., & Simon, M. (1992). *Genital injuries resulting from sexual abuse: A longitudinal study*. **Pediatrics**, 89, 307-310; McCann, J., Voris, J., Simon, M., & Wells, R. (1990). *Comparison of genital examination techniques in prepubertal girls*. **Pediatrics**, 85(2), 182-187; McCann, J., Voris, J., Simon, M., & Wells, R. (1989). *Perianal findings in prepubertal children selected for nonabuse: A descriptive study*. **Child Abuse & Neglect**, 13(2), 179-183; McCann, J., Wells, R., Simon, M., & Voris, J. (1990). *Genital findings in prepubertal girls selected for nonabuse: A descriptive study*. **Pediatrics**, 86(3), 428-439.

For example, Cantwell, in 1983, stated that an enlarged vaginal opening as a single finding correlates with the reported history of sexual abuse in approximately 75% of 45 cases and she

defined an enlarged opening as one exceeding 4 mm: Cantwell, H. B. (1983). *Vaginal inspection as it relates to child sexual abuse in girls under thirteen*. **Child Abuse and Neglect**, 7, 171-176. Incredibly, this pronouncement was accepted notwithstanding that 4 mm. seems too small to bear any relationship to anything that might be involved in a sexual assault. How does 4 mm makes sense, if a finger is 20 mm and a penis is 25 to 40 mm? Since that time, baseline studies have shown that this ridiculous conclusion cannot be supported. Further, the position the examination is done in will affect the results of the examination. Emans, S. J., Woods, E.R., Flagg, N. J., & Freeman, A. (1987). *Genital findings in sexually abused, symptomatic and asymptomatic girls*, **Pediatrics**, 79, 78-785; McCann, J., Wells, R., Simon, M., & Voris, J. (1990). *Genital findings in prepubertal girls selected for nonabuse: A descriptive study*. **Pediatrics**, 86(3), 428-439; McCann, J., Voris, J., Simon, M., & Wells, R. (1990). *Comparison of genital examination techniques in prepubertal girls*. **Pediatrics**, 85(2), 182-187.

An absent hymen means does not mean probable sexual intercourse. Paradise examined the significance of hymenal tissue and concluded that attempting to use physical findings of the hymenal tissue will produce 65% false positives in cases of penile penetration and 73% false positives in cases of digital penetration. There is no evidence supporting the conclusion that hymenal tissue or the absence thereof can be used to conclude a high probability of sexual intercourse: Paradise, J. E. (1989). *Predictive accuracy and the diagnosis of sexual abuse: A big issue about a little tissue*. **Child Abuse & Neglect**, 13 (2), 169-176.

- (b) a person present when the photograph or film was taken or videotape recorded (e.g., bystander);
- (c) a person qualified to state that the representation is accurate (e.g., security guard watching video monitor); or,
- (d) an expert witness (e.g., security manager).

Witnesses in categories one and two, who see the event as it is being photographed, filmed or recorded, are eye-witnesses. An eye-witness testifies to two things: (a) what he saw, from memory, and (b) whether what he sees in a courtroom in the photograph (or on the video monitor) is the same as what his memory tells him he saw at the scene.

Witnesses in categories three and four are not eye-witnesses, but can still authenticate a photograph, film, or videotape either because of their familiarity with its subject matter or their knowledge of the operation of the equipment that produced it.

(Schaffner)

In *R. v. Peterson*, the Court held that a person could authenticate a videotape recorded from a monitor if that person watched the event (on the monitor) simultaneous with its actual occurrence.

Per Higgins, D.C.J. (s. 13.2):

"If evidence is advanced that equipment to transmit what is seen by a closed-circuit camera, is functioning reliably and that its location is established, then what is seen by a witness watching a monitor in another location simultaneously, is as admissible as would be the naked eye evidence of a witness actually present, but seeing only in a tunnel-visioned fashion what the lens of the camera was transmitting to the monitor screen or onto the recorded tape. ŷ [s]uch evidence would be admissible but then eventually probative having in mind its weight by reasons of the tunnel-visioned component referred to."

4. The Requirement of a *Voir Dire*

Per Macdonald, J.A. (NSSC, App. Div.) in *Smith* [s. 2.3(c)]:

"The real objection raised by counsel for the appellant (accused) to these photographs is that they were received in evidence without a *voir dire* being held to determine their admissibility. By the time they were received in evidence the written statement given by the appellant had been ruled admissible and under all the circumstances it is my opinion that there was no need to conduct a *voir dire* to determine whether they were admissible.

To my mind they would do no more than assist the jury in appreciating the evidence including the statement of Mr. Smith. I can visualize situations where photographs would be of such a kind and nature that it would be incumbent on

(b) "Silent Witness" theory [ss. 2.2(b)]

"Picture" speaks for itself and is substantive evidence of what it shows. Authentication can be provided by "qualified witness" or "expert witness".

"The issue is whether the tapes are capable of being real and demonstrative evidence to prove the scenes they depict as distinct from evidence that merely illustrates the testimony of a sworn witness. [T]he limitations of the (videotape recording) machine, as carefully spelled out in evidence do not render that which is in fact recorded a less than reliable record of the alleged reality. If the tape is relevant, material, and reliable it has actual probative value." *Taylor* (Ont. Prov. Ct.) [See c. 2, 13]

Some of the factors to be considered by the trial judge when determining the admissibility of videotape evidence recorded by an automatic surveillance camera include:

1. the equipment used (e.g., surveillance camera and VCR);
2. the location of the equipment;
3. whether the equipment was operating properly;
4. how the videotape matches the detailed cash register tape;
5. the authenticating witness' previous experience with this or similar equipment; and,
6. whether the chain of custody requirement has been met.

[See *Caughlin, Leaney, Schaffner, Lahay* s. 2.2 (b)]

Note - a search warrant is a pre-requisite to the recording of surveillance videotapes by peace officers. See s. 487.01(4) and (5) of the *Criminal Code*.

2. Criteria for admission [s. 2.3] (*Creemer & Cormier, Maloney*)
 - (a) Relevancy (material to an issue before the court)
 - (b) Truth and Accuracy (absence of distortion)
 - (c) Fairness (absence of intention to mislead)
 - (d) Verification on oath by capable witness (authentication)
 - (e) Probative value outweighs prejudicial effect
(*Draper v. Jacklyn, R. v. Wray*)

"This can be proved by anybody who is able to attest to those qualities...." (*Lorde and Johnson*)

3. The Authenticating Witness

The capable witness who verifies on oath the photograph, motion picture film or videotape can be:

- (a) the camera operator (e.g., photographer, videographer)

Indicator Evidence in Sex Abuse Cases

In *R. v. Burns* (1994), 29 C.R.(4th) 113 (S.C.C.): the Court held that a Dr. Maddess was correctly allowed to testify that the complainant was sexually abused and explain why he held that opinion. He also explained some of the symptoms displayed in the behaviour of sexually abused children, which, without expert testimony the Court said, may be difficult if not impossible to understand.

Unfortunately it does not appear the Court was made aware, through proper expert testimony, that there are no "symptoms displayed in the behaviour of sexually abused children," which need explaining or otherwise. The symptoms are anything and everything, or even nothing, since a significant percentage (probably a majority, since the majority of cases are fondling and other non-intrusive, minor acts) display no symptoms. A court's judgment can be only as good as the evidence on which it is based and without proper expert evidence to expose the invalidity of evidence such as that in *Burns*, such judgments will unfortunately follow.

Similarly, a clinical psychologist who "specialized" in treatment of young victims of sex abuse testified that "there were several behavioral characteristics experienced by [such victims]. These include bed-wetting, nightmares and anxiety. He also testified these problems may be caused by other circumstances in the child's life." The evidence was held admissible: *R. v. B.(G.)* [1990] 2 S.C.R. 3, 56 C.C.C. (3d) 161 (S.C.C.).

This decision is disappointing from a logical and scientific point of view. The lack of replicability - the fact that the supposed data locked in the "expert's" head was immune from examination and

criticism should have immediately disqualified the evidence. Further, issues of selection bias (his specializing in sex abuse victims will skew his perceptions and the lack of a comparison group will leave him open to fallacious reasoning) appears to have gone unnoticed. The Court seems to have been prepared to accept the witness's "good faith" as a guarantee of the worth of his evidence. But as has been seen, issues of junk science have nothing to do with good faith, but with scientifically illiterate persons, such as clinicians, oblivious of the extent to which their data is flawed and their reasoning is bad and their conclusions and opinions are worthless.

As well, is it realistic to expect the jury or judge to seriously contemplate "other [hypothetical and theoretical] circumstances" when the explanation stares them plainly in the face in the indictment? Is the evidence really probative of anything if such characteristics are common in children generally and have a multitude of sources? Is the evidence really probative if the characteristics are really only indicative of a stress or anxiety situation, which would seem to include the making of a false accusation, or the believing in a false accusation, or whatever unknown common cause might explain both the characteristics and the false accusation? Is it not obvious that a therapist who "specialized" in treatment of young victims of sex abuse is not seeing "normal" children and therefore will have no control group or comparison group regarding what he observes in his clients and will overestimate the incidence and importance of such factors by a self-fulfilling prophecy? Is the court not missing the logical fallacy in the witness's testimony: the witness sees children (assumedly) in fact abused and notes certain characteristics (though

because he expects to see them he may “overestimate” them). The court’s job, however, is to reason the other way: was this child in fact abused, and the witness’s observations provide no logical basis whatsoever from reasoning from characteristics backwards to cause, and is, in fact, the fallacy of affirming the consequent: *R. v. Olscamp* (1995), 95 C.C.C. (3d) 466 (Ont. G.D., Charron J.). Gambrell, E. (1990), **Critical Thinking in Clinical Practice**, San Francisco. Josey-Bass

The fact is that there is no scientifically quantifiable data that establishes a causal relationship between any of the behaviors on the various lists and a prior experience of sexual abuse. There is no scientifically quantifiable data that demonstrates a rate of any of these behaviors in a sample advanced as sexually abused that exceeds the base rate of those behaviors in the non-sexually abused population.

“Experts have identified ... age-inappropriate sexual behavior ... as a primary predictor of sexual abuse.” One of the drawbacks to making this link is defining “abnormal” sexual activities or knowledge. For example, masturbation is common in children; thus, the issue arises as to when masturbation is so excessive as to indicate sexual abuse. Moreover, a child’s heightened sexual activity may result from stimulus other than sexual abuse, such as clandestinely observing parents or others engaging in sexual activity. In addition, highly sexualized behavior is sometimes seen in children who are not thought to have been abused: Becker, *Child sexual abuse allegations against a lesbian or gay parent in a custody or visitation dispute: battling the overt and insidious bias of experts and judges*, (1996) 74 **Denv. U. L. Rev.** 75, text accompanying fns. 158 - 165.

Even if there were such normative data, logically one would really need the rate of those behaviors in a non-sexually abused population who is claiming to have been sexually abused (because that is the actual comparison group). The behaviors, where valid and existing, may be at most stressor responses which can be associated with many, many stressor experiences other than abuse, including whatever stressors might lead to an inaccurate allegation. To offer nondiscriminatory evidence suggesting through an expert that it can be used to make a discrimination is to generate great confusion, misperception, and damage the ability of a jury to reach the most rational decision possible: Arkes, H. R. & Harkness, A. R. (1983). *Estimates of contingency between two dichotomous variables*. **Journal of Experimental Psychology: General**, 112(1), 117-135.; Bell, B. E., & Loftus, E. F. (1989). *Trivial persuasion in the courtroom: The power of (a few) minor details*. **Journal of Personality and Social Psychology**, 56(5), 669-679; Cutler, B. L., Dexter, H. R., & Penrod, S. D. (1989). *Expert testimony and jury decision making: An empirical analysis*. **Behavioral Sciences & the Law**, 7(2), 215-225; Faigman, D. L., & Baglioni, A. J. (1988). *Bayes’ theorem in the trial process: Instructing jurors on the value of statistical evidence*. **Law and Human Behavior**, 12(1), 1-17; Faust, D. (1986). *Research on human judgment and its application to clinical practice*. **Professional Psychology: Research and Practice**, 17(5), 420 & 430; Faust, D. (1989). *Data integration in legal evaluations: Can clinicians deliver on their premises?* **Behavioral Sciences and the Law**, 7(4), 469-483; Saks, M. J., & Kidd, R. F. (1980-81). *Human information processing and adjudication: Trial by heuristics*. **Law & Society Review**, 15(1), 123-159.

Motion Picture Films – civil – *Montreal Tramways Ltd. v. Beaugard* (1939), 67 Que. K.B. 578 (Que. S.C. App. Div.) – surveillance films of suspected malingering plaintiff not admitted.

Motion Picture Films – criminal – *R. v. Kissick et al.* (October 18, 1950, Man. Q.B.), unreported decision of Montague, J. – RCMP surveillance motion picture of drug trafficking not admitted.

Videotapes – civil – *Teno v. Arnold* (1975), 7 O.R. (2d) 276, 55 D.L.R. (3d) 57 (Ont. H.C.) – day-in-the-life documentary recorded on videotape admitted to show disabilities suffered by infant plaintiff.

Videotapes – criminal – *R. v. Jette* (January 25, 1972, B.C. Prov. Ct.), Court Records Centre Box No. F21998, unreported decision of Johnson, J. – Crime-in-progress videotape of assault tendered in evidence. Accused and others picketing grocery store. Store manager tells them to leave. Accused “body-checks” manager sending him crashing into a ‘meat counter’. Manager injured. Videotaped admitted. Accused convicted of common assault.

II. COMMON LAW RULES

A. Admissibility and Weight [Chapter 2, section 2.3] ⁵

1. There are two theoretical bases for the admissibility of visual evidence: [s. 2.2]
 - (a) “Illustrative or Pictorial Testimony” theory [ss. 2.2(a)] holds that a “Picture” can only be used to support, corroborate or explain testimony of witnesses; to supply relevant detail (*minutiae*) in the appearance of objects described in oral testimony; to reveal steps taken by witnesses to arrive at their opinions; and, to affect the credibility attached to a witness’ testimony. ⁶

In *Simpson Timber Co. (Sask.) v. Bonville* ⁷ the court held:

“The videotape can be received only as a non-verbal expression of the testimony of a witness competent to the facts represented. It is indifferent by whom it is made, providing it represent to the eye what the witness declares was the real appearance of things at the time he or she saw it and he or she states that it accurately depicts what it purports to show.”

The testimony of an eye-witness (camera operator or bystander) is required to “verify under oath” (i.e., authenticate) the picture when the court uses the “Illustrative or Pictorial Testimony” theory.

“VISUAL EVIDENCE IN PROVINCIAL COURTS”¹

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“...we are highly suspicious of change. Change in itself is not necessarily good or bad. It stands on its own. We can see no reason why this new technology (videotape evidence) should not be employed in the Judicial Process which is a search for the truth by any and all means. No one would now suggest the abolition of the Breathalyser or fingerprints or other scientific tests. If there are abuses in any specific cases they will have to be considered and dealt with as they arise.”³



I. INTRODUCTION – HISTORY AND BACKGROUND INFORMATION

‘Visual Evidence’ is evidence admitted in civil and criminal courts in the form of videotapes, photographs, motion picture films, illustrations, drawings, and computer animations and simulations.

Earliest reported cases:

Visual evidence has been admitted in Commonwealth courts, in various forms, for many years.⁴

- A. England - *R. v. United Kingdom Electric Telegraph Co.* (1862), 3 F. & F. 73 N.P. – Photographs admitted to show the position of telegraph posts allegedly obstructing a highway.
- B. Australia – *R. v. Fannon* (1922) S.R. (N.S.W.) 427 (N.S.W. Ct. of Cr. App.) – Photographs admitted to identify accused persons.
- C. New Zealand – *R. v. Cartman* [1940] N.Z.L.R. 725 (Auckland, Sup. Ct.) – Photographs admitted to show murder victims.
- D. Canada - **Over 1,100 visual evidence cases (January 1999).**

Photographs—civil—*Re Cochran’s Trusts* (1919), 47 D.L.R. 1 (S.C.C.)—enlarged photographs of documents admitted by Supreme Court of Canada;

Photographs - criminal—*R. v. O’Donnell* (1936), 2 D.L.R. 517 (Ont. C.A.) – photographs of body of rape/murder victim taken at murder scene admitted.

Use of concepts or phrases such as “often,” “most commonly,” “not unusual,” and “are likely” imply some quantification and some data. If there is no quantification but only reliance upon personal experience and non-systematic personal observations this is not science but personal speculation. It is not proper nor is it acceptable in the scientific community to use clinical experience or clinical observations to support such claims. There is over forty years of research demonstrating that clinical observations and experience are unreliable and cannot be used as anything other than a possible source for hypotheses which then must be carefully examined by a quantified approach: See generally *R. v. Olscamp* (1995), 95 C.C.C. (3d) 466 (Ont. G.D., Charron J.). Einhorn, H. J., & Hogarth, R. M. (1978). *Confidence in judgment: Persistence of the illusion of validity. Psychological Review*, 85(5), 395-416; Brehmer, B. (1980). *In one word: Not from experience. Acta Psychologica*, 45, 223-241; Dawes, R. M. (1989). *Experience and validity of clinical judgment: The illusory correlation. Behavioral Sciences & the Law*, 7(4), 457-467; Dawes, R. M., Faust, D., & Meehl, P. E. (1989). *Clinical versus actuarial judgment. Science*, 243, 1668-1674; Stanovich, K. E. (1992) **How to Think Straight About Psychology**. New York. Harper Collins; Turk, D. C., & Salovey, P. (1985). *Cognitive structures, cognitive processes, and cognitive-behavior modification: II. Judgments and inferences of the clinician. Cognitive Therapy and Research*, 9(1), 19-33; Herbert, V. (1977). *Acquiring new information while retaining old ethics. Science*, 198, 690-693.

For all these reasons behavioural symptoms are now generally recognized

as having no probative value because they are not even logically, much less legally relevant, and their assumed diagnosticity (the implicit assumption the offence was committed and who else but the accused is a candidate to have done it) makes such evidence highly prejudicial: *R. v. Olscamp* (1995), 95 C.C.C. (3d) 466 (Ont. G.D., Charron J.); *R. v. W.(S.)* (1996), 47 C.R.(4th) 355 (Ont.Gen.Div.); *R. v. Mathieu* (1994), 90 C.C.C.(3d) 415 (Que.C.A.); *Regina v. G.G.* (1995), 97 C.C.C. (3d) 362 (Ont.C.A.); expert witness testifying that certain observed behavioural characteristics consistent with sexual abuse but also consistent with absence of sexual abuse (a truism if there ever was one!). In reversing the conviction Laskin J.A. for the Court noted that “evidence equally consistent with either of two diametrically opposed possibilities cannot support either possibility”. An excellent article that reviews the current state of expert knowledge in this area is Kendall-Tackett, Williams and Finkelhor, “*Impact of Sexual Abuse on Children: A review and synthesis of recent empirical studies*” (1993), 113 **Psychological Bulletin** 164. See also: Ceci and Bruck, **Jeopardy In The Courtroom: A Scientific Analysis of Children’s Testimony** (1995, Am. Psych. Assoc.), at p. 279. In the less emotional context of head trauma the lack of causal evidentiary connection between test result and cause was obvious to a court: *Wolfin v. Shaw*, [1998] B.C.J. No. 5 (B.C.S.C., Dillon J.), at para. 25.

Specific mention should be made of the logical problems with evidence couched in terms of some circumstance or other being “consistent” with abuse. This is a meaningless statement because everything is consistent with abuse, and in fact as seen, virtually everything is also consistent with “no abuse,” and nothing

is inconsistent with abuse. Such evidence is logically valueless. It is an unnoticed "corruption" of the permissible evidence: "consistent only with abuse," or "more consistent with abuse," both of which pronouncements are probative. The corruption is forced by the reality that there is in fact nothing that fits either permissible category.

Indicator Evidence in Arson Cases

The same mistakes have apparently been made in arson cases. "Conventional Wisdom: The Lessons of Oakland," by John J. Lentini, C.F.I., David M. Smith, C.F.I. and Dr. Richard W. Henderson, C.F.I. is an important article for anyone concerned about the state of scientific knowledge in arson investigations.

As a commentator has written: "How can you tell if a fire was caused by arson? For years, fire investigators were taught to look for key "indicators"".

Crazed glass, melted copper wiring, and melted steel were all said to indicate an unusually hot fire, consistent with the use of accelerants. Uneven burn patterns were said to reflect multiple ignition points, another indicator of arson. This conventional wisdom of fire investigation appears in textbooks and provided a "scientific" basis for expert testimony in thousands of cases.

In their provocative article, John Lentini and his colleagues argue that the conventional wisdom of fire investigators is simply wrong. Their analysis of 50 homes burned in the 1991 Oakland Hills fire (a wild fire) showed a high frequency of traditional "arson indicators" where arson clearly had not occurred. Lentini and colleagues suggest that fire investigators have not realized the error

in their conventional wisdom because there have been few careful, empirical studies of the results of "naturally occurring" fires.

Syndrome Evidence in Sex Abuse Cases

A grouping of supposed behavioural indicators has been taken one foolish step further to become the infamous Child Sex Abuse Accommodation Syndrome. The concept of sexual abuse accommodation syndrome does not meet any of the requirements for expert evidence. The concept was advanced by Roland Summit, M. D., not as an aid to understanding nor as a determinant of fact but rather, by his own description, as a "consciousness raising experience" for mental health professionals to sensitize them to what Summit believed was a tendency to minimize or be unaware of the prevalence of sexual abuse. He maintains he never intended the concept to be used to make any diagnosis or determination of fact and that people who attempt to use it in that fashion are misusing his concept. There is no factual basis for this concept at all. There is no scientific quantifiable evidence to support it. It is only a speculative, subjective, and personal conceptualization. It cannot add to the common understanding of the jury. It is not generally accepted in the scientific community. It has no scientific merit: Corwin, D. L. (1988). *Early diagnosis of child sexual abuse: Diminishing the lasting effects*, in G. E. Wyatt & G. J. Powell (Eds.), **Lasting Effects of Child Abuse**, (pp. 251-269). Newberry Park, CA: Sage Publications.

More recent cases in Canada and the United States are uniform in rejecting this evidence whether directly referred to or whether put forth in disguise by

1999 ANNUAL CONFERENCE OF CANADIAN ASSOCIATION OF PROVINCIAL COURT JUDGES QUEBEC CITY, QUEBEC OCTOBER 27-31, 1999

The Twenty-Sixth Annual Conference of the CAPCJ will be held in Quebec City, Quebec, on the dates given above. The chairperson for the conference is the Honourable Judge Michel Babin. Judge Babin may be contacted as follows:

Juge Michel Babin
Palais de Justice, #R-205
300, boulevard Jean-Lesage
Quebec, QB G1K 8K6
Tel: (418) 649-3557
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UP AND COMING EVENTS...

INTERNATIONAL ASSOCIATION OF WOMEN JUDGES - ARGENTINA 2000

The Fifth Biennial Conference of the International Association of Women Judges [I.A.W.J.] will take place in Argentina from May 17th to 20th, 2000. The theme of the conference is "Women On the Edge". Speak to your Chief Judge about leaving room in his or her budget for a delegate from your Provincial Court.

.....

HISTORY WILL BE MADE IN EDMONTON ON AUGUST 24, 1999 - JUDGES' DAY

On August 24th, history will be made in Edmonton. All levels of court will join together for Judges' Day. This is a joint meeting sponsored by the **Judges Forum** of the Canadian Bar Association, together with the Canadian Judges Conference. It will be held in conjunction with the Annual Meeting of the Canadian Bar Association. Judges' Day will be co-chaired by **Mr. Justice Philip Clarke** of the Court of Queen's Bench of Alberta with **Judge Sandra Hunt McDonald** of the Provincial Court of Alberta. As this is the first ever joint meeting and is considered as a pilot project, judges from all levels of the courts are encouraged to attend the meeting and make it the first of many.

A panel discussion is planned for the morning on the topic of judicial independence. One of the features of this part of the agenda will be the viewing of a video on judicial independence which was prepared by the Judges Forum. An opportunity will be provided for lively debate and dialogue. After, a debate is planned on the topic **Judicial Independence: Pros and Cons of the Relationship of Judiciary and Government**. Lunch will follow. **The Honourable Ann McLellan**, Minister of Justice, is the guest speaker at this luncheon. After lunch there will be an information session with Judge Cheryl Daniel, President of the CAPCJ, for the Provincial Court judges who are in attendance. As well, the Annual General Meeting of the Canadian Judges Conference will take place.

Fees for those Provincial Court Judges who cannot recover them from a third party will be waived. If, however, you wish to attend the luncheon a ticket will have to be purchased.

All Provincial Court Judges who may be in Edmonton for the Annual Meeting of the Canadian Bar Association are encouraged to attend. If you require any additional information, it may be obtained from **Richard Ellis** of the C. B. A. National Office, by calling **toll free at 1-800-267-8860**.

avoiding specific mention of Summit or C.S.A.A.S.: R. v. Olscamp (1995), 95 C.C.C. (3d) 466 (Ont. G.D., Charron J.); R. v. Mathieu (1994), 90 C.C.C.(3d) 415 (Que.C.A.); State v. Bolin, 922 S.W.2d 870 (Sup.Ct Tenn. 1996); Hadden v. State (Florida), February 6, 1997, Florida Supreme Court (good review of literature and discussion of issues); People v. Leon, 263 Cal. Rptr. 77 (CalApp. 2 Dist. 1989) (a case in which Summit testified as a witness); State v. Ballard, 855 S.W.2d 557 (Tenn., 1993); State v. Cressey, 628 A.2d 696 (NH SupCt, 7/15/93); State v. Dunkle, 602 A.2d 830 (Pa Sup Ct, 1992); R. v. Meisner, [1992] N.S.J. No. 112 (N.S.C.A.).

In State v. J.Q., 617 A.2d 1196, (NJ SupCt, 1993), the misuse of the "child abuse syndrome" to try to prove child abuse was blocked by the court. The court correctly understood the misleading nature of the rubric "syndrome" and appreciated that it is not a diagnostic device; it assumes the presence of abuse and purports to describe the reaction. However, the court did hold that evidence based upon the "Child Sexual Abuse Accommodation Syndrome" was admissible in response to, and to assist jurors in evaluating, a specific defence claim about a lack of complaint to a parent or other authority figure, by explaining the common occurrence of such features as delay in reporting or continued acceptance of abuse in these cases. In other words, to the extent that such hypothetical reactions constitute an alternative explanation for behaviour in a particular case, it is relevant to refute the defense's exculpatory explanation of the same behaviour. The court accepted the analysis in Myers, "Expert Testimony in Child Abuse Litigation", 68 **Neb.L.R.** 1 (1989), at 67-8. Similar decisions were reached in R. v. C.(R.A.) [1990] B.C.J.

No. 1366, 57 C.C.C.(3d) 522 (B.C.C.A.) and R. v. F.E.J. [1989] O.J. No. 2724, 53 C.C.C.(3d) 64 (Ont.C.A.) ('recantation common').

This "myth-refuting" use of Summit's supposed "research" is as unfortunate from a scientific point of view as its diagnostic use, and equally invalid, even if it has been severely limited by courts intuitively appreciating its lack of probative value and high prejudicial effect: People vs. Harlan (1990) 222 Cal.App.3d 439, 271 Cal.Rptr. 653: the myth must be identified, the testimony must be limited to dispel this myth, and the jury must be admonished that the expert testimony is not intended and should not be used to determine whether the victim's molestation claim is true; People vs. Sanchez (1989) 208 Cal.App.3d 721, 256 Cal.Rptr. 446; People vs. Bowker (1988) 203 Cal.App.3d 385-395, 249 Cal.Rptr. 886, 892: the court held that "at a minimum the evidence must be targeted to a specific 'myth' or 'misconception' suggested by the evidence. ... It is the People's burden to identify the myth or misconception the evidence is designed to rebut. Where there is no danger of jury confusion, there is simply no need for the expert testimony."

In J.Q., at p. 1203, the court refers uncritically to Summit's article, and states: "Dr. Summit undertook a scientific study of child-abuse victims" and later "He tested the validity of his theory over a four-year period of his own practice," referring to p. 180 of Summit's original article. In fact both those statements are false and the court was misled by Summit's claims in his article. In various cross-examinations in court proceedings in the United States, Summit has admitted clearly that his article was not "a scientific study", and

was certainly not validated by his own practice, because in fact he has no practice involving abused children. Summit's article is not a systematic review of a large number of cases; rather, it is simply an impressionistic collection of second-hand "observations", a purported summary of many discussions with other clinicians and adult abuse victims. There is even considerable doubt that it is descriptively correct. There was no validation whatsoever. His misuse of the term "syndrome" is a glaring symptom of his scientific illiteracy.

In *J.Q.*, at p. 1206, the court concluded: "...that CSAAS...describes behavioral traits commonly found in child-abuse victims.... The most pointed criticism of the theory is that the same traits may equally appear as a result of other disorders." In fact, whether or not such traits are "commonly found" can not be determined from Summit's article, but must be accepted as an article of faith. There is simply no reliable data to support such a conclusion that any traits are "commonly" found. In fact, as data emerges it contradicts Summit's anecdotal suppositions.

For example, there is no pattern regarding disclosure: some children immediately disclose and some do not: Ceci and Bruck, **Jeopardy In The Courtroom: A Scientific Analysis of Children's Testimony** (1995, Am. Psych. Assoc.): "No profile accounts for a sizable portion of these children's behaviour".

Regarding threats studies show the likelihood of disclosure is unrelated to threats by an offender. "When the offender used aggressive methods to gain the child's compliance, children were equally as likely to disclose

immediately or not at all": Ceci and Bruck, **Jeopardy In The Courtroom: A Scientific Analysis of Children's Testimony** (1995, Am. Psych. Assoc.)

Summit's "pattern" has not been borne out by unbiased researchers:

Jones, "Editorial: Gradual Disclosure by Sexual Assault Victims - A Sacred Cow?" (1997) **Child Abuse and Neglect** Vol 20 No 9 pp 879-880: "Bradley and Wood's study of the process of disclosure by child victims of sexual abuse challenges some deeply held assumptions, and, we hope, will prove of interest to front line practitioners. One commonly held view is that most accounts of sexual abuse gradually unfold over a period of time. It is considered that few children realize the full story on one occasion, and that there is often a struggle by the child to overcome fear and reveal sensitive information. First interviews may be characterized by initial reluctance, after which the process of gradual disclosure sometimes follows. The work by Bradley and Wood calls this view into question, because the authors found that the majority of their 234 cases made partial or full disclosures during the initial investigative interview. The authors were looking for evidence that a developmental sequence of unfolding revelation of abuse was to be found, using a sourcing system specifically designed to reveal this process, if it were to have been present. Despite this they did not find gradual disclosure."

...This study is important because the gradual unfolding concept has become part of the folklore among some groups....Meanwhile, practitioners may well conclude that we simply do not have sufficient information to be categorical when answering the question "how do children tell?" and that the idea of gradual unfolding disclosure being the norm has not stood up to Bradley and Wood's scrutiny."

"How Do Children Tell? The Disclosure process in Child Sexual Abuse", by April Bradley and James M Wood, Dept of Psychology, the University of Texas at El Paso, TX USA, (1997) **Child Abuse and Neglect** Vol 20 No 9: "Children's disclosure of sexual abuse has been described as a quasi-developmental process that includes stages of denial, reluctance, disclosure, recantation and reaffirmation (Sorenson and Snow, 1991, Summit, 1983). It has been reported that nearly 75 per cent of sexual abuse victims initially deny abuse, and that nearly 25 per cent eventually recant their allegations (Sorenson and Snow 1991). The present study examined disclosures in 234 sexual abuse cases validated by Protective Services in El Paso, Texas. Denial of abuse occurred in 6 per cent of cases, and recantation in 4 per cent of cases in which a child had already disclosed abuse. Four of the eight victims who recanted appeared to do so in response to pressure from a caretaker. The Child Sexual Abuse Accommodation Syndrome described by Summit (1983) seems to be infrequent among the types of cases seen by child protection agencies. The present findings do not support the view that disclosure is a quasi-developmental process that follows sequential stages."

There are many other possible criticisms the court should have noted that invalidate the Summit article for even the highly limited purpose the court allows: Note, "The Unreliability of Expert Testimony on the Typical Characteristics of Sexual Abuse Victims" (1985) 74 **Geo.L.J.** 429.

To have an expert tell a jury that abused victims demonstrate such conduct as an aid to preventing an unfair inference, while superficially plausible, does not

withstand logical analysis. The fact that some (unknown) number of real victims may behave that way does nothing other than claim it as a theoretical possibility. A judge can tell a jury that "false" victims - whether knowingly untruthful or factually mistaken - would also likely demonstrate such behaviours? And if so - if the evidence is consistent with either hypothesis, how does it assist the jury and how is it admissible: in *Regina v. G.G.* (1995), 97 C.C.C. (3d) 362 (Ont.C.A.) an expert witness testifying that certain observed behavioural characteristics consistent with sexual abuse but also consistent with absence of sexual abuse (a truism if there ever was one!). In reversing the conviction *Laskin J.A.* for the Court noted that 'evidence equally consistent with either of two diametrically opposed possibilities cannot support either possibility'.

Conclusion

To conclude, it would appear that we will be seeing more and more experts in our courtrooms claiming all manner of expertise and offering all manner of opinion. Scientific literacy is essential for the judicial gatekeeping function to ensure that only worthy expert opinion is allowed to be admitted. Understanding the unique role of the scientific method for ensuring the basic fundamental right to valid and scientific expert evidence is essential in seeing that true justice gets done and in preventing our courtroom evidentiary discourse from being swamped with quackery and dumbed down to the intellectual level of a television talk show.

June, 1998