File No. 65381

C A N A D A

IN THE PROVINCIAL COURT OF BRITISH COLUMBIA

(BEFORE THE HONOURABLE JUDGE F. HOWARD)

SURREY, B. C.

1996 MARCH 13

REGINA

V

VICTOR EUGENE CAINE and SHANE MICHAEL FREDERICKS

PROCEEDINGS AT

TRIAL

APPEARANCES:

T.A. DOHM for the Federal Crown

M.J. HEWITT

A. CHAN

J.W. CONROY for the Defence

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MR. DOHM: Recalling the matter of Regina versus Caine. Continuing, Your Honour. Appearing for the Crown today are T. Dohm, Anita Chan, and Michael Hewitt.

THE COURT: Thank you.

MR. CONROY: John Conroy continuing for the applicant, I guess it is. We're ready to continue with Professor Boyd. Would you take the stand, Professor, please?

THE CLERK: Is he to be resworn, Your Honour?

THE COURT: Yes.

THE CLERK: Please take the Bible in your right hand.

NEIL BOYD, a witness, called on behalf of the Defence, being duly sworn testifies as follows:

THE CLERK: Please state your name to the court.

A Neil Boyd, B-o-y-d.

EXAMINATION-IN-CHIEF BY MR. CONROY, continuing:

Q Now, I think last time we had completed going through the Crown's Brandeis Brief and so we were at the stage of taking you through our Brandeis Brief.

A I think that's right.

Q And let me do this—I think Professor Beyerstein walked off with my copy yesterday in his briefcase.

MR. CONROY: Here's an additional copy that I had made, Your Honour, of that. Now, the only difference to the other Brandeis Briefs is that I haven't included the books or the fax pages of the books. They are still listed in the index—

THE COURT: All right.

MR. CONROY: -- but you have all the articles and I'm—I'm going to see what I can do in terms of copies of the books as we go along.

Q So you have the exhibit in front of you, Professor.

THE COURT: What exhibit number is this?

MR. CONROY: I'm sorry.

MR. DOHM: Eighteen.

THE COURT: Eighteen.

MR. CONROY:

Q All right. The first article is one by you, "The Question Of Marihuana Control", and I think that should read, "Is De Minimis Appropriate?" Your Honour.

A Yes.

Q And that was an article that you prepared for the Criminal Law Quarterly in 1982?

A That's correct.

Q Tell us essentially what that's about.

A That's raising the question, I suppose. There's obviously a bit of sarcasm in the question, "Is De Minimis Appropriate?" Your Honour, but it—but it's an article that deals with the issue of marihuana control and relates evidence concerning Washington, Oregon, and Canada, and the various -- their various histories in relation to marihuana use and marihuana control in—

Q If I'm—

A -- in relation to the development of—of law. The course of law in those jurisdictions.

Q If my memory serves me, Oregon was the—one of the states that had effectively decriminalized it in the sense that they had created a—a very minimal penalty like a traffic ticket type of thing for possession.

A That's correct. I thought that Oregon was particularly interesting because it was the first state in the United States to decriminalize possession.

Q I think we touched on this in your evidence earlier in terms of what impact did that have on neighbouring states. Did we have a flocking of people to Oregon from Washington or from British Columbia and affect some rates of use, and this sort of thing?

A No. I think that what's most interesting about the effects of decriminalization in relation to rates of use is that—that the rates of use that seem to go up and down in the United States quite independent of the state of the law in the given jurisdiction that—so that the changes we see in Canada—well, in the United States as in Canada are changes that take us from very low—very low rate of use in the early 1960's through to a—a kind of peak in 1979, 1980, and

a—and a very low point again in 1987, and then in the 1990's some increases in—in rates of use, and these changes are—appear to be quite independent of the state of the law in a given jurisdiction.

Q Okay. Anything else we should note in that article, in particular?

A No, I don't think so.

Q Okay. The second one then is also by you. "The Origins Of Canadian Narcotics Legislation", an article for the Dalhousie Law Journal. Now, that was 1984, wasn't it?

A That's correct.

Q And I take it that's simply the history. That article deals with the history of narcotics legislation, as the name indicates.

A That's right. There was a—that was a much more involved piece of research in—in terms of what was required. There was a lot of archival retrieval. I had always been interested in this selective criminalization of mind-active substances that first occurred in 1908 and was curious about the logic of—of the law given that the legislation in question was introduced by the Minister of Labour; that by all accounts, including Bruce MacFarlane's in—in "Drug Offences In Canada", First and Second Editions, there was this mix of—of racism and of—of ultimately as well a labour problem on the west coast of Canada.

That was something that I explored in a lot more detail in trying to understand how these opium-smoking—opium factories and opium-smoking dens had—had existed for some forty years without particular concern by the public in British Columbia; that from 1870 to 1910, there were opium factories in Vancouver, Victoria, and New Westminster; that by all accounts, when I looked at the newspapers of the day, The Vancouver Province and The Victoria Times Columnist, it didn't seem to be a particular concern to the public.

So my -- my focus in—in that particular article is one of trying to understand where the interest and impetus for this legislation originated.

Q I think you went through that in some detail in your evidence earlier. The next one is Michael Bryan's article. That should be "Cannabis In Canada - A Decade Of Indecision", and I think you have gone through that in some detail already—

A Yes.

Q -- too. That was the one that also dealt with S-19 in the Senate and those historical developments. I don't know if we need to do anything further on that one. The next one, Erickson and Fischer, "Canadian Cannabis Policy - The Impact Of Criminalization - Current Reality, Future Policy Options". Are you familiar with that one?

A I'm not sure that I'm familiar with that one. I have -- I know Pat Erickson and Benedict Fischer quite well and I—I heard Pat Erickson—I have read a lot of her material, her work, and I heard her speak on a—on a subject that was almost identically titled to the conference in Germany last fall.

Q I think this was what she presented at the conference. If you would turn to Tab 5 -- or 4, sorry, it appears this is the paper.

A That's right. Yeah. Well, yes. So, --

Q Okay. Anything—any comment on that?

A Well, I think that—that what Patricia Erickson's work demonstrates, particularly her book "Cannabis Criminals", is that the social effects of—of punishment in relation to—in relation to cannabis use seem to be relatively insignificant, that is, insofar as deterrence is concerned. She found that a year later that something like ninety-five percent of those convicted of cannabis possession were still using cannabis and when she asked users about why—those who had stopped using cannabis over a much longer period of time when she did that kind of study, she found that the reasons for—for stopping really had nothing to do with the law.

It had to do with issues such as public health, their concerns about the health consequences of use, and so I think what her work establishes fairly clearly is that there is very little deterrent effect in relation to conviction for cannabis possession.

Q Okay.

A That is, we look at what the people are doing a year after a conviction. It's pretty much what they were doing prior to conviction in relation to cannabis.

Q Articles 5, Gruber and Pope, "Cannabis Psychotic Disorder: Does It Exist?" I take it that doesn't fall within your area of expertise. That's more—

A No. I have read that particular article. I am familiar with its findings, and it's an article that I think makes good sense.

Q And similarly the next one, Cowry (phonetic), "Attributes Of Heavy Versus Occasion Marihuana Smokers In A College Population".

A Right.

Q Essentially, a health survey related article. Next, Nadelmann, "The Harm Reduction Approach To Drug Control".

A Yeah. I'm familiar with a lot of Ethan Nadelmann's work, and I think I have read that particular article.

Q Any—any comment on that?

A Well, I guess the harm reduction movement is—is a movement that—that is particularly interesting in that it has a strong international component. If—if you look at—at the authors of that particular article, Peter Cowan (phonetic) has been working in the Netherlands for twenty years, Alex Wodak in Australia for a similar length of time, and Ethan Nadelmann for the past decade in—in the U.S. and so I think what's interesting about harm reduction is that there is an emerging international kind of cooperation and interest in a very different model for responding to the problems that drugs present than that of criminalization.

And so what harm reduction does is to look not only at the harm that is produced by drug use and drug abuse, but also at the harm that is produced by drug law, and attempts to strike a balance between the harms that the drugs can produce and the harms that the law can produce, and often concluding, particularly in relation to cannabis, that—that taking the criminal law out of—out of the realm of cannabis use, cannabis possession will have beneficial consequences in terms of—of reducing the harm to—to those individuals who consume and will not have—will not in any sense aggravate harm by—by increasing use in—in the jurisdictions affected.

Q In Exhibit 13, the Report On The Health Of British Columbians Annual Report For 1995, there appeared a statement at Page 24 that came out during Dr. Peck's evidence, who said,

"In 1987, the Canadian government adopted harm reduction as the framework for Canada's national drug strategy."

He goes on to say,

"The primary concept underlying the harm reduction approach is to reduce the negative consequences associated with drug use rather than the traditional focus on reducing the prevalence of drug use."

Does that succinctly summarize the—the harm reduction—

A I think that's part of it, to reduce the harmful consequences associated with drug use, but also to reduce the harmful consequences of drug law. I think that that's—and I think it's fair to say that there are many different variations of—of meaning in relation to harm reduction; that there are people who are very strongly in support of use of the criminal law insofar as cannabis possession is concerned who would nonetheless call themselves adherents of a harm reduction model.

So harm reduction has become such a difficult concept to—to pin down and such an attractive concept politically because it—it makes the point of what we're concerned about is—is trying to help people in some way to reduce the harm that flows from drugs that flows from law, and I think in some—in some quarters, there's not so much—there's very little if any talk about reducing the harm that flows from law and a good deal more talk about reducing the harm that flows from drugs, and so what harm reduction means in practice I think is open to debate.

At the sixth—sorry, the Fifth International Conference On Harm Reduction in Toronto in 1994, there was a lot of debate about the, quote, coopting of the concept of—of harm reduction and the extent to which the meaning of harm reduction is now so amorphous that it's kind of like trying to pin Jello to the wall to make sense of—of what it's all about.

Q In my—in the Crown's Brandeis Brief at Tab 27 was reproduced the speech of the then Minister of Health, Diane Marleau, February 18th, 1994 in relation to C-7, and she too makes reference to Canada's Drug Strategy 1987 launched in 1987 to reduce harm caused by alcohol and other drugs to individual families and communities, but then goes on to say that C-7 is the enforcement aspect of—of the law. Is there an inconsistency in having that sort of approach under C-7 with the harm reduction approach, or not?

A Well, again I think it depends on what one means by "harm reduction". From my perspective, there is a—is an inconsistency in—in talking about harm reduction and continuing to build upon the six hundred thousand criminal records that have been issued to date for possession of marihuana in this country.

I—I don't think that any particular good, in fact, a good deal of harm has—has come about as a consequence of those six hundred thousand criminal convictions and so, you know, certainly C-7 does not propose to end that particular practice and so, from my perspective and in that light, it is inconsistent.

Q Certainly in relation in that you're speaking in terms of simple possession and use as opposed to some of the other—

A I'm not—I'm only speaking of simple possession.

Q All right. The next, Article 8, Eugene Oscapella, "Witch Hunts And Chemical McCarthyism: The Criminal Law In The Twentieth Century Canadian Drug Policy".

A I have read that.

Q Any comment on that?

A No. I—I essentially agree with the position. I don't know.

Q In part of his paper, he deals with the concept of use of the principle of restraint in relation to the criminal law. Do you remember that?

A Yeah.

Q Bearing in mind your knowledge in terms of this—the enforcement in relation to simple possession and the use of different policy options, is it your view—do you agree with him in terms of the—what's your position on that issue? Is it—are we complying with the principle of restraint in relation to simple possession of marihuana?

A No. I think if we look—certainly if dealing with that notion of restraint, I think it's probably best summarized in the law reform paper called "Our Criminal Law Post" in 1976 and it sets out that—that particular working paper sets out the difficulties, if you like, in terms of limits of the criminal sanction and—and makes an argument about restraint as a—a particularly important if not crucial principle in relation to the criminal law; that—that society should keep that—that powerful sword, I think they use that kind of imagery, achieved as a—as long as is possible, and I think in relation to cannabis that that's a particularly important point.

Q The next article is by Shedler and Block, and again a survey. Health-related study. I understand you're familiar with it—

A I'm not—

Q -- but it's not in your area.

A Actually, I'm not familiar with that particular study. I don't—I don't recall.

Q Number 10 is Smith, "Prohibition Isn't Working. Some Legislation Will Help", a recent article in the British Medical Journal.

A I have seen that. Yes.

Q And any comment on that?

A I think it's interesting to see this—this kind of approach when you look at the—the editorial from Lancet, which is—is recent. When you

look at that article from the British Medical Journal, you get the sense that there's a renewed interest in—in this problem and in trying to cope with this problem in a -- in a better way than we have to date, and I think it's—I endorse the positions that are taken in both of those articles.

Q The Lancet one is at Tab 12, isn't it?

A Yes.

Q Zimmer and Morgan at Tab 11. I think we have dealt with it to some extent in your earlier evidence as well as at Tab 13, the Canadian Bar submission on the original Bill C-7 version.

A Right. I have seen that.

Q The remaining matters are books, and if I could just take you through them fairly quickly—fourteen, the book by Able, "Marihuana: The First Twelve Thousand Years". My understanding is that essentially is—deals with the uses of marihuana in other cultures for many, many years up until the present.

A Right. I think it—it puts in context the use of marihuana. It makes it clear that this is not a relatively recent activity, and I think the value of the book is it gives a—a useful cultural and historical backdrop to marihuana consumption globally.

Q The next one is the publication by the International Prohibitionist League called "Questioning Prohibition". You're familiar with that?

A Yes. I haven't read the entire thing, but I—I am familiar with it.

Q Any comment on that?

A I think it has a—as I recall, some of the articles, I have a bit of difficulty with in—in terms of the positions that they are advocating, but—but generally, I think it's a -- it's a very helpful, useful kind of document because it questions the logic of prohibition, although I may not endorse the—all of the positions taken within that volume.

Q Sixteen is your book, "High Society", and we have filed a copy of that as a separate exhibit. If my memory serves me, you have explained to us already what you were attempting to do in that book.

A I think I have.

Q Any further comment you want to make at all about it?

A No exposé. It's just that really one chapter deals specifically with cannabis, the chapter "Illegal Smile", and I suppose that speaks for itself.

Q Seventeen is the book "Cannabis Criminals" by Patricia Erickson you referred to a moment ago—

A Yes.

Q -- and as I recall, simply indicating the continued use by people notwithstanding the law.

A Yeah. It also has very good descriptions of users, and of their context of use, their reasons for using it. I think it's a—again a good kind of background piece in the way that "Marihuana: The First Twelve Thousand Years" is a good background piece.

Q Next, Grinspoon and Beckle (phonetic), "Marihuana: The Forbidden Medicine". If I understand that correctly, it is simply a treatise on all the different uses that marihuana can be made in relation to medical—

A I think what it does is to—to invert the logic with which we typically approach marihuana and suggest that, in fact, this is a drug that can be seen as having significant benefits in—in relation to medical use, medical consumption, at the same time acknowledging, I think, that it's a difficult line to draw, that between medical and non-medical use, at least in some circumstances.

Q And then 19 and 20 are the two LeDain reports, the first one being "The Cannabis Report" and the second "The Final Report", and I think we went over those earlier in your evidence in terms of what the basic conclusions were.

A I think that's right. Yeah.

Q And then finally, 21, Weil and Rosenchuk (phonetic), "The Morphine Undertaking: Mind-Active Drugs". Any comment on that one?

A I think that that's probably the best chapter I have seen on the subject of marihuana in terms of providing a balanced viewpoint of the health consequences of use. It—the entire book is really one that I would recommend for parents or teenagers. I think it provides a—a very sound analysis of—of the problems and of the reputation, if you like, as well of various drugs, and certainly Andrew Weil is extremely well qualified to—to write about this subject. He's a graduate of Harvard Medical School. He has consulted and written widely on the subject of drug use and drug abuse and has—has, in fact, travelled the world as a student, as a researcher looking at drug use in a wide range of cultures. South America, et cetera, et cetera.

Q The chapter you say that is—

A I think it's—

Q -- that you think is the best—

A I think Chapter 9, which deals with marihuana, is a particularly good summary of—of marihuana and its effects, of the problems of marihuana, of the evidence in relation to health effects concerning marihuana.

Q I see the book was published in 1983. It is fair to say then for any update in terms of medical or health issues, we would go to something like either the Australian Commission—the recent Australian Commission Reports or the Morgan and Zimmer Scientific Review?

MR. DOHM: Objection. I am just curious as to whether that question and any answer that might follow would be within the expertise with which the professor has been qualified. He is now being asked to give an opinion on which is the most up-to-date medical evidence on the health aspects of cannabis and I—I recall Professor Boyd telling us he's a lawyer, which may qualify him to answer nearly anything, but it shouldn't—it shouldn't, in the context of—

THE COURT: Or nothing at all.

MR. DOHM: -- of being a witness.

MR. CONROY: Well, Professor Boyd has commented on a book, and a chapter, and told us that he thought that this was a particularly good chapter for showing a balanced view between the harmful effects of marihuana and the harmful effects of the laws, I understand, and all I asked him was not what the most up-to-date medical health book was. I asked him, if we wanted to go for an update or to search or find an update on the medical question, where would we go. Would we go to the Australian report or the Morgan and Zimmer report?

In my respectful submission, this witness, as a lawyer and director of a criminology department at Simon Fraser University, can at least tell us where he would go if he wanted to read materials on the medical aspects of marihuana. That doesn't mean that he is expressing an opinion on health or medical aspects. He is simply telling us where he would go and look for that information.

THE COURT: I will allow him to tell me where he would go for such updated information—

MR. CONROY: Thank you.

THE COURT: -- in his capacity.

A Well, what I would do is to go to the tenth floor of the library, use the Medline Data Base on the M.C.J.R.S. data bases and search 1994 and 1995, all articles. I would probably put something like "marihuana/health" enmesh and see what turned up. In fact, I have done that recently because I like to keep up to date with respect to the issue of health effects, and there are something like ninety-one

citations for 1995, and I read the abstracts, and then I would go and pull the articles that were—that seemed to me to be most relevant.

I think I might just add too in relation to this notion of qualification about the health effects of cannabis, I—I feel that I do know a lot about this issue, but because my professional credentials don't—you know, I'm not a medical doctor and I'm not a physiological psychologist. It seems more appropriate that people having those credentials give evidence, you know, independent of the issue as to whether, in fact, I know as much or as little as—as any of these people might know.

MR. CONROY:

Q When you look at—when you conduct your studies into this topic in terms of the law or the effects of the law, do you do that in isolation from the information about the medical aspects or the harm involved?

A No. I—I mean, I take that to be a serious issue. I take health effects—it seems to me that—that that's really the crux of the argument today, and so for me it's a question of trying to situate health effects of cannabis within the broader context of—of health effects of other kinds of dangerous commodities, if you like.

Q Is it fair to say that when you read the medical literature, you don't look at it with a view to analyzing it from a medical doctor's point of view as to whether it's valid or not. You simply read it in order to inform yourself as to what they're saying and then to take that in relation to the area of your expertise.

A I think that's true, although I also have training in social science methodology, so I think that probably the crucial thing that I look to when I will look at the research is—is the extent to which the methodology can support the findings that—or the inferences that are drawn within the specific article, and I think that—I think anybody who is involved in criminology from an interdisciplinary or multi-disciplinary perspective sees that kind of task as particularly important to try to understand the—the relevance of what is written and—and to try to understand whether, in fact, the researcher is able to make the case that he or she is making in relation to a particular point.

Q So if you read a book like "Chocolate To Morphine: Undertaking Mind-Active Drugs", and you saw within some of the chapters some information on the health consequences and you saw that the book was published in 1983, apart from going to the computer, and the Medline and the Internet, would you also have regard to the Australian Commission Report or—or/and the Morgan-Zimmer materials?

A Sure, to the extent that—yeah. I mean, any of that material shows up, but I—I guess I'm trying to respond to the question of how I—how I would keep myself up to date or how I would inform myself with

respect to health effects. I would use the procedure that I outlined earlier.

Q Okay. All right. I would like to then turn to a number of topics and have you comment for me, first of all, on whether the topic—or what your view is on the topic and, secondly, whether there have been any changes, to the best of your knowledge, in terms of information of one kind or another since 1991. Now, the first topic I would like you to consider is the issue of whether cannabis users receive lower grades in school than non-users. Are you familiar with some of the evidence put forward in relation to that issue?

A Yes.

Q And what is your knowledge or understanding on that point?

A That there are some correlations between cannabis use and lower grades in school. I think it's really important in this context though to make clear that there's no causal relationship and, in fact, that there is evidence to suggest the absence of causal relationship. That is to say, if we—if we believe that—do we really seriously believe that exposure to cannabis will lead to lower grades in school.

We have the example, I suppose, that I like to use is the survey that we took in 1977 at the graduating class of Osgoode Hall Law School when we found that eighty-five percent of the class had used marihuana. Seventy percent indicated that they intended to continue use beyond graduation.

I guess my point here is that you have, in that population of very academically successful students, people who had an average of 4.1 grade-point average and prior to admission to law school, you have—

THE COURT: How do you get a 4.1?

A There—sorry.

THE COURT: Isn't that like a hundred and ten percent?

A No. At one time, at least in '74, the scale went up to about 4.33, so they tried to make the (indiscernible).

MR. CONROY:

Q The typical—

A A-plus, I think, was a 4.33.

Q The critical issue, as I understand it, in reading materials of this kind on this topic is to bear in mind that they are indicating a correlation and not causation. Is that fair?

A I think that's right—

Q Okay.

A -- but that particular study is often—or that set of studies has often been cited for the proposition that if you're a person who is using marihuana that you're -- in some sense, that's likely to lead to lower grades in school.

Q There could be exactly the opposite because you are—

A Well, there's one study on adolescent drug use that suggests that the best adjusted of high-school students are those not who have never used, but those who have just occasional experimental use and, of course, the outlawries are the people who have extremely heavy use but similarly, I mean, people who have never used seem to be less well adjusted psychologically than the people who have experimentally used.

Q Okay. The next topic is—and I think you have—there is no need to go back over what you have said on this before, but the issue of any evidence showing that the law relating to possession deters use. I think you have told us—

A Yeah. I guess the point there that's crucial is that people will look at studies on the impact of decriminalization and they will say, well, it doesn't -- it doesn't prove anything in the sense that the study proves that decriminalization does not appear to have an effect, but decriminalization may have an effect that is not captured by that study.

In other words, there is a kind of equivocation in many of these pieces of research about what the study shows and I—I think it's important to make the point that—that the onus, particularly when we're talking about a power such as the criminal law is on the stake to establish that—that the—the legislation in question has—has some value. Some impact.

Q And is there any evidence to indicate it does?

A I don't think so. Not—I mean insofar as decriminalization of possession is concerned, no. I don't know what we could say about other kinds of regimes and which of legalization or promotion would be permitted.

Q Next, I would like you to comment on Eric Single's (phonetic) study on the impact of decriminalization and your understanding of that.

A Again, that point is very similar to the point I was just making, that there are those who would say that his—his study is very equivocal; that it doesn't lead to any conclusion in favour of decriminalization or against decriminalization.

My personal communications with Eric Single suggest that that's not the interpretation that he would place on it insofar as his position is ultimately that he favours some form of decriminalization of possession.

Q Okay. Are you aware of Dr. Callant's (phonetic) position on marihuana?

A Yes.

Q And do you have any comment on Dr. Callant's position?

A I think his position is an interesting one. He is not philosophically opposed to—to decriminalization, he's not philosophically opposed to legalization of marihuana, and for him the question is one of whether removal of the criminal sanction would have significantly adverse health effects so as to suggest that that kind of move would be unwise, and I think that that really captures the nature of the problem: one of situating the health effects of marihuana consumption within a context of—of more general health problems that flow from certain kinds of behaviours.

And so I think that's appropriate then to think about where marihuana fits in relation, for example, to the consumption of fats and sugars, in relation to if you—if you think of the context of dangerous commodities in relation to such substances, there's guns and how do we compare guns and marihuana? We choose to regulate guns. We choose to prohibit marihuana. From the standpoint of public health, does that really make any sense? I don't think so.

So I think that's really, I guess, the nub of the question for me where—where the health risks of marihuana sit relative to other health risks that exist for the general population.

Q And then, correct me if I'm wrong, the focus then is on the different options that are—are available to regulate or control the use of the substances.

A Yeah. For example, I guess we—we know that—that excess consumption of fat kills people; that it leads to heart disease. We know that—that failure to exercise regularly also contributes to significant health problems.

So what strategies do we employ to—do we think of using the criminal law in response to the risks that are created by the absence of exercise or the risks that are created by excess consumption of fats and sugars, and we choose not to do that, and that seems -- so—so I think it's fair then to ask the question, "Why do we choose to use the criminal law in relation to something like the possession of cannabis, which seems in and of itself to be much more innocuous than some of these other behaviours?"

Q Are you familiar at all with the opinions of a Professor Clayton, who's a sociologist?

A Only insofar as they were expressed in the Hemmault (phonetic) case.

Q Okay. Could you comment then on your understanding in terms of rights of use in relation to your understanding of his position on the topic?

A I think that—that again this relates to a point I -- I made earlier that if we talk about rates of use over time, we see this—this growth from 1960 peaking in 1980 and—and dropping off in 1987.

I think when we look to it—and this is work that has been done by a wide range of people: Lloyd Johnson, at the University of Michigan and others, and—and Professor Clayton. If you look at the daily use category, the people that arguably we're most concerned about in terms of the possibilities of abuse—in the United States, in 1979/80, you had about eleven percent of the—of the population of eighteen to twenty-nine, I believe. I think—I think that was the—the age group in that category of daily use. By 1987, that daily use figure had fallen to 3.3 percent.

You know, it's quite a—quite a striking reduction in daily use and—and I think that we haven't—we haven't seen, as far as I know, in any—in any Canadian courtroom, any—any indication of what's happened since and what's happened since is, of course, that we have this increase again in the 1990's in relation to cannabis consumption, but—but it's not, of course, just Canada. It's the United States, it's—it's virtually every western culture of which I am aware of which has provided any kind of data. So there's—there's this upsurge in—in use.

I have not seen any data to indicate whether or not there has been a—a similar kind of increase in -- in daily use, but that wouldn't surprise me, and again the point I would make is that all of these changes are occurring—very significant changes are occurring quite independent of—of the state of the law.

Q Any comment on rates of use in Alaska where they have decriminalized? Any comment on—

A It's—it's often said—well, I know that Professor Clayton has made the argument that—that, in fact, Alaska, which was one of the states to decriminalize during the 1970's, has suggested that Alaska has relatively high rates of use when compared with other states. It's also the case that the Yukon and the Northwest—Yukon and the Northwest Territories have relatively high rates of use on a per capita basis when contrasted with provinces.

So I suspect that that has a good deal—I suspect that those relatively high rates of use have a good deal more to do with the culture of the north than they do with the state of law in Alaska or, in our case, in the Yukon or in the Northwest Territories and I think that that point of view is buttressed by the finding that when you look at all the decriminalized states and compare them to the states in which criminalization exists, you don't see any consistent pattern in relation to legal change.

Q Just while we're on that topic, I had produced to you earlier some materials that were provided to me by Dana Larson (phonetic) that consisted of some letters from various Ministers of Justice and then attempts by him to follow up and obtain the background data and amongst that data that he received back, there was some materials to do with the different rates of use, and so on, in the United States. Do you have those materials with you, or not?

A I don't.

MR. CONROY: I gave my friend a set. Here's another set. Here's a set for the court. I thought we had an extra one.

MR. DOHM: Your Honour, I have discussed this material with my learned friend and I have told him I will not require him to prove the origin of any of it or the continuity. There is no issue there.

THE COURT: All right. Thank you.

MR. CONROY: Now, I—I did have an extra copy, but because Professor Boyd didn't bring the extra set I gave him, I don't know if we need to mark this—

MR. DOHM: We have two copies.

MR. CONROY: Do you? Perhaps we could mark one then as the exhibit and have the extra one for the court so the court can mark it.

THE COURT: All right. This will be Exhibit—

THE CLERK: Twenty-two.

MR. CONROY: Twenty-two.

THE COURT: The entire package?

MR. CONROY: Yes.

EXHIBIT 22 - PACKAGE OF EIGHT LETTERS WITH

ATTACHMENTS RE CANNABIS MARIHUANA

DECRIMINALIZATION

MR. CONROY:

Q Now, the—just to take you through this fairly quickly until we get to the pertinent point, the first—excuse me. The first document is a letter to a Mr. Dundas from Kim Campbell, obviously responding to a request as to the minister's position on—on cannabis, and then the minister setting out her position in—in 1992 in relation to the question. Fair enough?

The second document is to a Leslie Christensen (phonetic) of February, 1993, from Pierre Blais when he was Minister of Justice, and it is essentially the exact, same letter as—

A Yeah.

Q -- the letter of 1992 from Kim Campbell, only this one is copied to the Minister of Health—

A Mm-hm.

Q -- Ben—Benoit. Well, I'm not sure about that, but it's copied, in any event, on its face to Benoit Bouchard. Is that right?

A Yes. I think he was the Minister of Health.

Q Okay. Then the next one is to Dana Larson and it's June 30th, 1994, and it's from Allan Roche of the Ministry of Justice, and it's the same letter again, isn't it?

A That's correct.

Q It would indicate that the position of the Minister of Justice, even though different ministers, was identical in both '92, '93, and '94 --

A Yes.

Q -- at least as far as the letter is concerned.

A That's right.

Q Then we have a letter from Mr. Larson—or to Mr. Larson, sorry, from Allan Roche responding further to a query from Mr. Larson about the United Nations agreements and public opinion surveys, and that's copied to Diane Marleau, who we know is Minister of Health, and it clearly indicates that it's within her area and so he's referring him there.

Then we have a further letter of February 24th, 1995 to Mr. Larson from Diane Marleau providing him with information that he has requested and copying it to the Minister of Justice. Right?

A Yes.

Q Then we have another letter to Mr. Larson, and this is the 27th of December, 1995 from Diane Marleau again relating to his search for the public opinion surveys.

A That's correct.

Q And then we have a letter to Mr. Larson of November 9th, 1995, which is apparently from a representative of the government, Ann Brennan, to do with the access to information and privacy, obviously Mr. Larson's attempts to try and get at this information. That's the basis for the minister's letters.

A That's correct. Yes. The questions that he asked are set out in that letter.

Q We then have a January 4th, 1996 further letter to Mr. Larson from Mr. Schryle (phonetic), who is the director of the Information, Access and Coordination Division, and he appears to say that Mr. Larson was misinformed in that no such surveys exist. Okay?

And then Mr. Larson, not being one to give up, continues on January 11th, 1996. He gets a further letter from Ann Brennan which attaches some further information that is indicated as part of the basis for the earlier opinions expressed, and to that seems to be attached, as indicated in the body of the letter, some twelve pages of sort of miscellaneous information from various sources. It seems to be United Nations sources, in particular.

That then—in amongst that package, there is also some—a face page, anyway, from the hearing before the Subcommittee On Health And The Environment, A Committee of Interstate and Foreign Commerce, The House of Representatives, it looks like back in March of '79, if I'm reading my copy correctly.

Then that's followed by some questions and answers on cannabis that presumably somebody drafted which would be answered by others, and finally we get to a document that's got the number thirty-nine in the little box up in the top right corner. It seems to be an answer to one of the questions posed in those earlier lists, and this one is, "Can increases in cannabis use be attributed to reduced penalties for possession of the drug?" and this one comments specifically on the U.S. experiences, doesn't it?

A Mm-hm.

Q Now, just before you—you comment on that, I'll just complete going through the paperwork. There is then a letter of May 26, 1980 that's attached for some reason to do with the cannabis questions and answers, and that's followed by a further apparent answer to one of the questions posed earlier, Question Number 27: "Has cannabis use increased since decriminalization?" and that also deals specifically with some of the U.S. state experiences, and then finally there is a face page for the Health Canada Report, "Cannabis, Alcohol And Other Drugs Survey - Preview 1995" and then there's a document—one page attached to that that appears to say at the top, "Cannabis, Alcohol And Other Drugs Survey - 1994" with a brief reference on the page to cannabis—

A Mm-hm.

Q -- in terms of rates of use. So could you—the documents that you could—can you comment on are the—the two answers to the questions, I think are the ones that deal with these—the use question, number -- the one with Number 39 on the top right corner and the one with twenty-seven.

A Well, I think the page numbered thirty-nine indicates that increases in marihuana—marihuana use in states that had decriminalized possession of small amounts, taken as a group, were equal to or less than increases observed in the rest of the country where decriminalization was not taking place, and I think that's consistent with the point that I have been making in relation to—to use; that there does not seem to be a relationship to the state of—of the law in a given jurisdiction.

The other question—the results seem to be somewhat equivocal, and again I would take that to mean that—well, I can say two things about that. I suppose first that you need to look at a relatively significant period of time over which there are changes in marihuana use, and they're talking about three U.S. states, and some inconsistency in relation to—to the effects of the law.

Q And it just deals with Oregon, California and Maine, apparently. Is that—

A That's right, and the last statement, "The American data indicated that the increases in marihuana use are most rapid among states which maintain relatively severe penalties for possession of small amounts."

I am—I am somewhat sceptical, actually, about that finding because my—I'm not sure that given the numbers that we could draw that—that inference. I think again the most important point remains that there is no relationship of—of any consequence. It seems to me that that—that may be—that may not be a valid inference to draw in relation to a small number of states. There may be other factors at work, I guess is what I'm suggesting.

One of the things that is most interesting about the package is specifically that the—that the series of letters has no empirical foundation, and finally after two years the government essentially admits, via the Access To Information Act, that—that the claims it is making—that the claims that had been made had no empirical foundation.

Q But certainly the—there is the comment about the public survey from the eighties—

A Right.

Q -- which doesn't seem to exist, but also the first comment in the second paragraph of the minister's letter indicates that decriminalizing cannabis would most certainly result in a greater use of the drug by Canadians, thereby increasing the health and safety hazards associated with it. Part of the information in the package doesn't seem to support that.

A I think that's correct.

Q All right.

A I might also say about this kind of issue as to what Canadians favour that much depends upon the nature of the question asked. It's a little bit like the referendum question in October in Quebec. The kind of response that you're going to get is going to depend, to a great extent, on how you structure the question what you're asking Canadians to make a choice about or in relation to.

Q Okay. Now, finally, again I'm coming back to the opinions of Professor Clayton. The topic I want you to comment on is the—the stepping-stone theory focusing on research by Alexander and involving the drug distribution systems.

A Well, the stepping-stone theory is—is a theory that gets trotted out again and again, particularly in popular culture to describe the dangers of—of marihuana to say that, you know, if you use marihuana, it's a stepping stone to much more dangerous drugs.

I guess first I would make the point that the stepping stone really isn't marihuana, but—but alcohol or tobacco. These are the drugs that people first use, and so we might—we might think in those terms, but—but originally the stepping-stone theory, as it was first evolved in—in the fifties and sixties suggested that the use of a drug such as marihuana inevitably led to the use of drugs such as cocaine or—or heroin and—and now it's been refined because it's clear that there is—that is quite absurd.

I mean, there is no connection of that kind and so it said that, well, you know, if a person uses marihuana, it's more likely that that person

will use cocaine or heroin and on—on some level, there is some validity to that in the sense that if a person violates the criminal law in relation to drug taking, that is, if a person uses a drug such as cannabis, it is probably statistically more likely that that person will use a drug such as cocaine or a drug such as heroin, but the—the point that's most important to make is—is to look at surveys of use, and I can give you two examples.

One is the survey that we conducted of—of marihuana use at Osgoode Hall Law School, and again I'm—I'm not relying on a survey of use of other drugs, but as part of that culture, I can say that the use of any drug—any other illicit drug aside from marihuana within the context of—of the school was extremely rare. We have though, in the context of Simon Fraser University, data that had been collected by Bruce Alexander over the past twenty years detailing the extent to which first-year students have had experience with different kinds of licit and illicit drugs, and the numbers with respect to marihuana, I think have varied from in the twenty to thirty percent range, but the numbers with respect to other drugs such as cocaine and heroin have been no more than one or, at most, two percent.

So, I mean, it seems that, you know, the step from marihuana to other drugs that—that I think pose greater health risks than marihuana—it's a pretty—it's a pretty substantial step and the only connection that makes any sense is a probabilistic one which says that, you know, if you have—if you have committed this act or if you have engaged in this act of breaking the criminal—breaking the Narcotic Control Act—Section 3(1) of The Narcotic Control Act. You have violated that with respect to cannabis.

Probably if you—I mean, it seems clear if you look at all the people who have done that and then compare them with a group of people who have never used cannabis, you're going to find more users of cocaine, for example, in the group that has used cannabis than in the group that has never used cannabis, and so if you can conclude from that reality that marihuana is a stepping stone to other drugs, it seems to me you have a finding that really doesn't mean a whole lot.

I think it's important to note that that—that theory was originally set out as a—as a theory that had some basis in pharmacology, or at least that was implied because the—the assumption was that inevitably if you started with marihuana, you would end up on cocaine or heroin and, of course, that—that assumes a lack of rationality that simply doesn't exist with respect to most people who use cannabis.

Q I read that there is some research that suggests that people substitute alcohol for marihuana in the sense that they would otherwise smoke marihuana, but because it's illegal, they—they consume more alcohol. Are you familiar with any of those studies?

A There are some—some studies that suggest that where you have greater cannabis use, you often have less alcohol use and if you—the

authors of these studies suggest that if—if we think about this from a public health perspective, if people are drinking less alcohol and—and more likely to smoke cannabis, this actually has positive health benefits insofar as alcohol has a slipperier slope and is a more dangerous drug than cannabis in the context in which it is used, at least in most cultures with most people.

Q But are there any research that you're familiar with that suggests tough laws in relation to marihuana actually increased drinking?

A Well, yeah, there—there is a—I can't recall the author's name, but there is—there is a piece of research that—that makes a suggestion like that, and I guess the logic of the position is that if—but the people—I mean, this goes back to Weil's work that began with a natural mind and it's a point of view that's also represented in "Chocolate To Morphine".

The—the human being seemed to have perhaps not a biological, but certainly a desire to alter consciousness that—that doesn't vary much from one culture to the next and—and so given that human beings have this desire to alter consciousness, the—if they are presented with a limited set of choices, they will nonetheless proceed to alter consciousness with that limited set of choices, and so that it seems from a public health perspective and from a harm reduction perspective, the issue is one of—of presenting human beings with choices that will—that will do the least harm given that there seems to be an almost universal desire to—to alter consciousness.

MR. CONROY: Okay. Would you answer any questions that my friend might have, please?

CROSS-EXAMINATION BY MR. DOHM:

Q Well, bear with me, please, Professor, as I fumble through my notes here. One thing you might tell me is about the Osgoode Hall study. Did you conduct that yourself?

A There were five of us.

Q There were five of you, and that was reported in the Toronto Globe & Mail, I gather.

A That's right.

Q That's the one I saw in some reference that I think you gave us.

A Yes. I think so.

Q You talked about Erickson's work on the deterrent effect of a conviction—

A Mm-hm.

Q -- and you advised us that her study shows that people who were convicted of using cannabis were still using it a year later. All that really tells us is that the prohibition has very little deterrent effect upon those who have decided to use cannabis.

A That's correct.

Q It tells us nothing about those who have not decided to use cannabis—

A That's right.

Q -- and it tells us nothing about those who have decided not to use cannabis as far as their reasons for the decision.

A Yes. That's right.

Q So we can't take studies like the Erickson study and say that they have no deterrent effect on the population generally.

A I think that's right.

Q Today, you were referred to a work by Professor Abel and as I understood your evidence, what you told us was that cannabis use is not per se a relatively recent activity. Do I—do I understand you correctly?

A That's correct.

Q But you agree with me that cannabis use, while not relatively recent, is also—is, on the other hand, of a relatively recent phenomenon when it comes to a widespread use in Western society.

A Well, there—in Western society, but I guess it's—in some societies and some cultures, there has been historically widespread use, but certainly in North America, no, there has—widespread use is a relatively recent phenomenon.

Q I understand that in—in North America, that phenomenon started sometime in the sixties.

A There was—

Q Is that—

A Well, I think that we—we don't have very good documentation of use in the fifties. There were certainly people who did use marihuana relatively consistently through—I imagine we can go back to the twenties in Mexican migrants. We can go back to the fifties, The Beat Generation, and musicians, and I suspect that—that there—and it seems from all—all accounts that I am familiar with that there was relatively widespread use within a very small population of users.

So what we really have is a—is a shift from a small percentage of relatively marginal people within the population using prior to 1966/67 to a—to essentially a very substantial increase in use in the late sixties and early seventies that cut across a—a wide range of—of individuals in terms of socio-economic descriptives.

Q I take it that you agree with me then that it became widespread in the sixties.

A Well, in relation to North America, certainly. Yes. Yes.

Q Did you have an opportunity to review the Adellap (phonetic) Report since this case started or in preparation for giving your evidence?

A No. I think I have seen the Adellap, but I haven't recently. I—

Q That's a report done by—

A Edward—

Q Do you know Professor Adellap?

A I don't think I have met him. I know of him, but—

Q He's a man who works in Toronto—

A At the Addiction Research—

Q -- or Ottawa, I think.

A -- Foundation? I'm—I'm very familiar with the name Adellap and I—I recall, at some point, reading material by Adellap, but I—I would have to refresh my memory. I certainly haven't read that report recently.

Q His study showed a pretty dramatic increase in the use of cannabis in adolescents over the past few years. You have nothing to offer that would contradict that, I take it.

A No. Again, of course, these—these rates of use among adolescents are not as high as the rates of use that existed in '79 and '80.

Q I would like to direct your attention to the material which is now marked as Exhibit 22. I think it's still in front of you. This material consisted of a lot of correspondence to Mr. Larson.

A The defence Brandeis Brief? No. Sorry. This—this. Yeah. The correspondence to—

Q There are some studies, in fact, that you commented on. They look like questions and answers.

A Yeah. Mm-hm. Right.

Q Now, as a social scientist, you will agree that it is impossible for you to look at that material and tell whether or not there is any validity to even a word of it.

A You are right.

Q Thank you.

A Now, you—yes. You need to look at—at the study specifically in order to—to draw any inferences.

Q We have a number of different concepts mixed up here when we talk about this problem. You talked about availability. You talked about the deterrent effect. You talked about the law. Consider the justifications for the law, and they all become quite readily mixed into some kind of an amalgam. Do you agree with me that it's hard to deal with these topics independently?

A I'm not quite sure what you mean.

Q Well, does it make sense to talk about availability leading to increase in use if you don't look at other factors outside of availability? You have to look at social factors—

A Sure. I mean, for example, with—I guess what you're saying is with tobacco, it—it doesn't matter to forty, fifty percent of the population now how available tobacco becomes. They have reasons quite separate from availability which are going to lead them to have no interest in—in using tobacco.

Q We got into the situation that we're in with tobacco now because, one could argue, it was available and we only learned about the problems associated with it after it had become widespread. Is that right? Do you agree with me there?

A I think that—that if we look back to tobacco, really the—the so-called epidemic, you know, of lung cancer and heart disease didn't begin until the 1920's with the invention of the modern cigarette because part of that time, people had to—to roll their own cigarettes

and—and what the modern cigarette made possible was more or less continuous smoking of cigarettes and, of course, that—that in turn then led to this epidemic of—of lung cancer and heart disease.

I think that the matter is complicated by the fact that we allowed the tobacco companies to—to lead evidence that was essentially dishonest and misleading information in relation to the—the harms posed by tobacco and we have, I think, evidence that the tobacco companies were aware of the dangers of their product much earlier than the date at which they—and, well, in fact, I mean, they still argue the point of—of the harmfulness of tobacco.

Q So what I take from that then is that we had a promoter of tobacco promoting it heavily and on the other side of the coin, we had—

A We still have. Yeah.

Q You had various governments not taking action to regulate it. Would that be a fair description of the situation as you see it in the—

A And I—

Q -- there?

A Yeah, I think we could argue that that—that situation persists today albeit to a much more limited extent than was the case during the 1950's, although it exists today in a—in much the same form within the developing world.

Q When talking about tobacco, you did give an answer that confused me a little. I am going to ask you to clarify it for me. You indicated that—you were talking about tobacco availability and rates of use, and my notes indicate that you stated that there are fewer Canadian smokers now than there were thirty years ago even though tobacco is now more available than it was thirty years ago. Do I have a—a correct assessment of what you were trying to say there?

A I think so. I think I—I had prefaced that remark by saying as a consequence of increased urbanization and access to all forms of—of commodities has been increased, and so it's reasonable to assume that it's -- that it's more easy for people to gain access to tobacco.

Certainly there is no—than was the case thirty years ago, certainly there is no suggestion or no evidence that I'm aware of that would indicate any move in the opposite direction. That might be a more careful way of stating it.

Q All right. The point that you were trying to make is that you didn't have to get into the pick-up truck on Saturday and drive all the way to town to get it. Is that—

A Yeah. I mean, essentially. Yeah, and—and granted that is, to some extent, speculative, but the more important point that I was making was that we have—you know, this is really quite a success in relation to the—the so-called—you know, the War On Drugs.

We have—here we have used aggressive public education and cut in half the percentage of tobacco consumers within the space of thirty years without—without availability in any sense leading to the kinds of increases that we would expect.

Q That conclusion was a little bit speculative though, you admitted, in the course of your answer.

A Well, in—yeah. The conclusion that we have increased availability. I think that one could—

THE COURT: There are twenty-four-hour convenience stores that make it more readily available.

MR. DOHM: I suppose that that is a matter which any court could take judicial notice of.

THE COURT: Even non-smoking courts?

MR. DOHM:

Q Perhaps you could help me out with another thing too. The term "decriminalization" is used. It's used—it's been used a lot here, but I don't frankly understand what people mean by "decriminalization". Do you know what the definition—the definition is of "decriminalization"?

A There is—there isn't a definition is, I think, the most honest answer because if you look at, for example, those eleven states that have, quote, decriminalized and you start examining closely just what they have done, there is—there is a range of different approaches.

For example, you may or may not require a court appearance or you may—typically, they have not, in all those circumstances I—as I recall, had any kind of criminal recordkeeping provision and they have not -- they have eliminated the possibility of gaol, but—but so many different interpretations exist as to what goes into—to decriminalization. I think the key point is—is ultimately whether or not the—in relation to the decriminalization of possession is the offence one for which a—there will be a criminal record, and I think—I mean, then you could talk about a range of possibilities that go along with decriminalization.

Other people argue that decriminalization means taking the criminal law entirely out of the business of cannabis use and distribution and—and they draw a firm line between decriminalization and legalization saying that legalization would amount to promotion of cannabis and say, you know, we have made this mistake with tobacco and alcohol

allowing people to promote essentially quite dangerous commodities. We ought not to make the same mistake with respect to tobacco—I'm sorry—with respect to cannabis and, therefore, so the argument goes it's not a wise thing to be in favour of legalization and I suppose, to some extent, I would count myself among those people.

I don't think that any drug should be—should be advertised in the way that—certainly in the way that tobacco and alcohol have been and—and so for that reason, it seems to me that to speak of decriminalization is—is more useful than to speak of legalization, but, you know, as you suggest, there—this is a very problematic area in terms of what is meant by "decriminalization". Different people have—have different definitions of—of what is meant, and that's fair enough.

Q So your definition though of "decriminalization" does not include legalization. Is that right?

A That's right.

Q But you're not able to say what another might mean by that term "decriminalization".

A That's right.

Q You are a professor of criminology and I would expect that part of your work would be to study the effects of a variety of laws. Is that—is that a fair guess?

A Yes. Yes.

Q Would you not agree with me that in many instances a law, the fact that something is required or prohibited, is a factor in the conduct of the citizen?

A Yes.

Q One example which we will all agree with probably is the requirement that we file a tax return and pay our taxes.

A Yes.

Q There would be very few people who would voluntarily line up at the end of each year to make a contribution without that statute. Right?

A Right. Without the possibility of a tax return, at least. Yes.

Q And similarly, there are a variety of prohibitions to be found in statutes which do affect the behaviour of individuals.

A Yes. I suppose. Yeah.

Q Now, --

A Probably not in quite the way we believe at times, or at least in the way that the public believes, particularly in relation to violent crime, but, yes.

Q No, I'm not trying to suggest that the mere existence of a statute prohibiting robbery is going to ban robbery. It's not going to end robbery.

A No. I—no. Yeah. I appreciate that. I guess it does—

Q It may have an effect on the decision-making of the potential robber.

A Okay. Fair enough. I'll—yeah.

Q There was some discussion of South Australia's move towards decriminalization. Do you know what South Australia did in the way of decriminalization?

A No, I don't have the specifics. I—that is something I have been meaning to—I have just read two or three different abstract services with respect to an article by Donnelly (phonetic). I haven't read the article.

Q Do you know if they have modified their law at all or whether they are simply considering it?

A I assume that there has been a change because the study in question talks about the impact of—of a change and—and provides evidence in relation to that impact.

Q I am going to go on a little bit of a detour here now, Professor.

THE COURT: Would you—

MR. DOHM: Is this—

THE COURT: Noting the time, would you like to—

MR. DOHM: Do you want me to detour right out of the courtroom for a break here?

THE COURT: I don't mean to be rushing you.

MR. DOHM: No. This is a fine time. Thank you.

THE COURT: All right. We'll take the morning adjournment.

(WITNESS STOOD DOWN)

(PROCEEDINGS ADJOURNED)

(PROCEEDINGS RECONVENED)

NEIL BOYD, recalled, testifies as follows:

CROSS-EXAMINATION BY MR. DOHM, continuing:

Q When we broke, Professor Boyd, I was just going to go on a detour and that detour is to go into your work in the field of international law as it relates to treaties, and I just wanted to ask you what courses of study you have taken on international law insofar as they relate to treaties.

A I haven't taken any courses.

Q Okay. Have you ever done any work that would assist you in forming opinions on the effect of the breach of a treaty among nations?

A No. I can be quite succinct. My knowledge is confined to a reading of the—the conventions and to—attempting to understand, on the basis of what has been written in those conventions and what is the common practice in various jurisdictions, to get some sense of how the two meshers fail to mesh, and I think that that's really the sum of it.

Q That's a pretty succinct answer and we can end that detour then. Thank you. You described in your evidence-in-chief a few days ago—a few days ago, I'm sorry, it was in November—a study that was done about how people came to be caught in possession of marihuana. Do you remember that?

A Yes.

Q And in that evidence, you indicated to us that people would report to the investigators, the people doing the study, how they were caught.

A Yes, I think so. Yeah.

Q Okay, and some of them gave responses such as they lit a joint in a restaurant—

A That’s right.

Q -- and others would say, "We were stopped by the police. Police noticed. Police noticed a smell of marihuana in the car." Do you recall saying that?

A Yes.

Q And you indicated to us that that last one was very common.

A As I recall, the—the student who conducted the research, I think—I think that’s correct and in terms of what we were interested in doing was—was looking at the context in which arrests are made for possession of cannabis.

Q Right, and one of the common contexts in which possession arrests were made was—

A Yes.

Q -- people driving cars.

A Yeah. I don’t know if it was the most common, but it was certainly one that came up again and again. I can’t recall how common it was.

Q Would it surprise you at all if you described it in your—if I told you that you described it in your earlier evidence as "very common"?

A No, it wouldn’t surprise me, but again I’m—I guess what I’m looking at here is I—is the suggestion of whether that is the majority or minority, and I don’t -- if it happens twenty or thirty percent of the time, it just means it’s still very common. If it happens sixty percent of the time, it’s arguably the same.

Q It’s not—it’s not rare, in any event.

A Certainly not rare. No.

Q What are the symptoms that one is impaired in such a way that one would be impaired in the operation of a motor vehicle by cannabis?

A Well, I suppose, you know, there—there is a sequence of behaviours that police officers typically request in order to establish impairment by alcohol and I suppose one could argue that—that a similar kind of standard could apply in relation to cannabis.

If, on the other hand, what you’re asking is what—what indices are there that one could look to to establish whether or not somebody is under the influence of cannabis, eyes are slightly red. I suppose if you could monitor heart rate, heart rate is slightly increased, but I’m not sure that that’s what you’re getting at.

Q Okay. The first part of your answer, if I can put it that way, was basically speculative. You think that there are probably some symptoms like one would look for in driving by—

A No, no, no. I was—I was suggesting that the standard that we use in defining whether or not a person is impaired—I don't think that there is a—a separate standard for cannabis.

Q But I was asking for symptoms, not necessarily the standard, but what symptoms would a policeman look for, Professor, if he had stopped a car and he had some suspicion that the person may be impaired by cannabis? What symptoms would he look for?

MR. CONROY: Can I just say is my friend saying the officer had reasonable grounds to stop the vehicle in the first place so that there is some additional factor, I take it, that the officer saw initially that led to the stopping of the vehicle?

MR. DOHM: I am making no such suggestion at all, Your Honour. I wouldn't wish to argue every Section 24(2) application that might ever come before the court in this application.

THE COURT: It could be a care and control situation where there is—

MR. CONROY: Well, are we talking about a roadblock then, or something like that?

MR. DOHM: What's—what is the relevance though?

MR. CONROY: Well, I think the relevance is that like with alcohol, there has to be something that is seen and observed by the officer before he stops the vehicle. Usually, it's erratic driving and I would assume that would be the same for alcohol as marihuana.

MR. DOHM: Well, why don't we—if we have to have some assumption, we can assume that the—there is a broken taillight on the car.

MR. CONROY: All right, so it's a stop under The Motor Vehicle Act.

THE COURT: All right, and the question—

MR. DOHM:

Q The question is what symptoms would a policeman look for to determine whether or not the driver might be impaired by cannabis?

A Well, in—in the situation as described, I would think anything that would suggest to the officer that the person is—is incapable of driving or is likely to drive in a—in a manner that's dangerous to the public, that is, in some significant manner, impaired by—by cannabis. Now, certainly the—the consequences of cannabis, quote, intoxication are

quite different from the consequences of alcohol intoxication and—and are much more subtle insofar as detection is concerned.

Q Would it be fair to say then that it may be more difficult—substantially more difficult for a police officer to identify the fact that a driver is impaired by cannabis than it is for him to identify that the driver is impaired by alcohol?

A I'm not aware of technology and, you know, of work in that area and whether or not there are—to my knowledge—I mean, from what you're suggesting, I would have to say that it—that given that the—that intoxication by alcohol, the consequences are relatively obvious and much more severe, yes, it would be—it's much easier to—to determine whether a person is intoxicated by alcohol than intoxicated—than to determine whether or not a person is intoxicated by cannabis, and I think that that goes to the—the extent and nature of the intoxication by alcohol as opposed to the extent and nature of intoxication by cannabis.

Q I think that you just told me that it is more difficult to identify cannabis intoxication than alcohol intoxication. Is that correct?

A To my knowledge, yes.

Q Okay. Thanks. We have no special device like a breathalyzer test that would work for cannabis, do we?

A Well, I think—I mean, if one really wanted to stop all cannabis use, I suppose it's detectable in hair up to thirty days and—and that's a relatively unintrusive measure, and I suppose that police could be empowered to take hair samples randomly from members of the population and to create extremely severe terms of imprisonment.

I mean, I can imagine the context in—in which a—you know, it's possible to—to ensure that—that this kind of activity doesn't take place. China closed its borders for twenty years and was relatively successful.

Q All right. The question though was we have no device like a breathalyzer machine which will tell us a level of intoxication—

A That's correct.

Q -- for a cannabis user.

A That's correct.

Q The test that you described in your earlier response to the same question was one that would tell about the presence of cannabis.

A I guess we have the standard of impairment in the Code independent of—and you're right. We don't have anything like the .08 test with respect to the breathalyzer.

Q Are you familiar with a place called The Robson Street Recovery Centre? Have you ever heard of that?

A No.

Q You referred us to a number of articles—or you were actually referred to a number of articles earlier dealing with the consequences of a conviction for possession of cannabis and you are familiar with a large body of that literature, I take it.

A Yes.

Q Do those authors, such as Erickson, mention in their material that this is a full mens rea offence? Do they take that into account?

A I would be surprised if she presumed anything different.

Q But you're not aware that they have taken it into account?

A I—I know Pat Erickson. I have spoken with her. I know she has a knowledge of basic principles of criminal law, that she would be aware that a coincidence of mens rea and actus reus is necessary to support a—a criminal conviction.

Q So the writers do acknowledge then, in your view, that this offence is one that a person commits by choice.

A Sure. Yeah.

Q And no doubt you will agree with me that most offences have some type of negative consequences for the people who are convicted of having committed them.

A Yes.

Q It's hard to think of one that doesn't, isn't it?

A It's kind of definition on "offence".

Q And the ones that we think of offhand, one of those that has the least offences is your everyday small possession of cannabis marihuana.

A Yes.

Q In the material that Crown has filed, and I don't think you need to bother to even look at it, Professor, under Tab 29 titled "Horizons 1994", there is a research publication from the Health Promotion Directorate of Health Canada and the Canadian Centre On Substance Abuse. In that, there is a phrase which I will read to you and tell me if I don't get it across to you so that you understand it. It deals—the heading is, "Public Attitudes Towards Drug Policy" and the entire paragraph is one sentence and it reads,

"The 1990 Health Promotion Survey found that a slight majority, 54 percent of Canadians, believe possession of marihuana should be a criminal offence and 35 percent believe it should not."

Okay? Fifty-four and thirty-five. Do you have any data that could refute that statement?

A There are a number of different surveys that have been conducted asking different kinds of questions. For example, whether imprisonment is—is something that a majority would favour and—and I have seen surveys that draw a distinction between decriminalization and a lessening of penalties, and I—I have seen a survey that has a majority in favour of either decriminalization or a lessening of penalties in relation to possession, but I guess the point that I would make about—about such a finding is that—that from my perspective that of course that's very different from the kind of response that you would get with respect to any Criminal Code offence dealing with offences against persons or—or property, that it's a—that what we have here is a slim majority who—who favour the continuation of this kind of criminalization, and I guess I would ask the question then as to whether or not we ought to—to proceed to use such a powerful weapon, that is, the criminal law when we have really such equivocal kinds of support.

Q I'm not certain that I understood your answer. Let's take it one step at a time. Do you have evidence to refute that study?

A In terms of the—the 54/35? If you have two choices, either in favour of—of decriminalization or opposed?

Q Yes.

A No.

Q In your evidence, you made a statement that I thought was a good observation. You—you described the government's attempts as being attempts to satisfy a diversity of constituents and you have just—we have just dealt with fifty-four percent and thirty-five percent as part of

the constituents. We have then the—excuse me. What we have is perhaps a debate in Canada. You're nodding in agreement, for the record, and it would be fair, I suggest, to indicate that you are on one side of the debate and there are others equally concerned, probably as well motivated, who are on the other side of the debate.

A Yes.

Q Okay, and you have been on your side of the debate for many years. Probably since before the LeDain Commission. Would that be fair?

A Actually, it would be since about the time of the LeDain Commission, I suppose, so about—since about '73.

Q Is it fair for me to summarize your position in a very general sense, because you have given a lot of evidence, that you do not agree with the current law, for a starter? Is that right?

A That's correct.

Q And you have, in your evidence over the past number of days, provided your opinions on a variety of policy options that could be available to the government.

A Yes.

Q Over the years, you have been a fairly active voice on this—on your side of the debate. I think that's a fair statement, isn't it?

A Yes.

Q And you have addressed a number of government bodies, have you not, expressing your side of the debate's point of view?

A Yes.

Q And when did you do that most recently?

A Federal government?

Q Yes.

A I think it was last spring. In May of 1995.

Q Okay. Part of the problem that I perceive you have—part of the issue that I think you take with the discharge provisions is that the Criminal Records Act didn't necessarily keep up with the—with the discharge provisions. Is that—do I understand you correctly? The discharge provisions were designed so that one could quite quickly, on the case of the conditional discharge, take certain steps and not have

a record. I—I gather that part of your dissatisfaction is that the Criminal Records Act doesn't necessarily move in the same plane as the—

A As the—as the philosophy, if you like, of the discharge provisions.

Q Okay. Is that a fair attempt to summarize that?

A I think so. I think that's—

MR. CONROY: I think the evidence was that the Criminal Records Act was changed to make sure that a person still got a record with the discharge. The—the Criminal Records Act was silent about discharges until they were created and then it was put into the Act.

MR. DOHM:

Q Then, with that assistance from my learned friend, it is probably even more clear that you have no problem with the discharge provisions, but the problem is with the Criminal Records Act.

A Well, no. I would—I do have difficulties with the discharge provisions. I don't believe that people should have to go to court in order to respond to the issue of possession of—of marihuana.

Specifically, my position in relation to the issue is that—that we should have a civil fine for public use and that—that we should basically ensure that this is a—an activity that is engaged in by consenting adults in private, and so I—I don't favour discharge provisions for—as a response to cannabis possession. I don't favour court appearance as a response to cannabis possession. I don't favour a response to cannabis possession provided that it takes place among consenting adults in private.

Q Would you have a different view with respect to adolescents?

A Yes.

Q Then one law for the adults and one for the adolescents?

A Let me—no. No. I mean, I think the difficulty is with adolescents—I mean, we—I take the position that informed consent is the operative principle, that—that a young person ought not to be using cannabis, and of course we have—we have drawn lines in our culture about when people can drive and when people can vote, and I think it's appropriate to draw a similar kind of line with respect to cannabis because of the principle of informed consent.

Now, we know from our experience with alcohol that some people—some young people will use alcohol. So the question then becomes what—what do we do about that? Do we use the criminal law to

respond to the problem, or we—or do we try to use other means to respond to the problem, and—and I think if you look at the experience in Italy and France, for example, in relation to alcohol, very similar social responses, that is, there is no criminalization of underage drinking in either country and yet you have very different sets of problems in Italy as opposed to France. Much higher rates of sclerosis of the liver in France, and so forth.

To make a long story short, I think that's because of the different kind of cultural approach and I think in—in terms of young people, we ought not to criminalize cannabis use, but we ought to take a strong stand against it and use whatever resources outside of the criminal law are available to—to try to ensure that young people who haven't reached an age of informed consent don't use cannabis, and I—and I think we try to do that now with alcohol in a way that is a little—has much less moral stigma attached to it than was the case when I was growing up in the late 1960's. That was probably—that was taken very seriously, underage drinking, in a way—in a way I believe that is—is much less the case today, and I'm—I'm—anyway, that's essentially my position.

Q I think I even understood that one. Excuse me. Just one more point, please, Professor. Are you familiar with any studies done on the effect of prohibition on the use of alcohol, and I'm thinking of the places like the United States in the first thirty or forty years of the century.

A So studies that would look then at levels of alcohol use prior to prohibition and after?

Q Yes.

A Yes.

Q Are you familiar with that sort of thing?

A Yes.

Q Did you see any correlation between prohibition and use?

A Yes. I think there was reduced use during prohibition, and I think there was increased use after—after prohibition of alcohol.

MR. DOHM: Those are all my questions, Your Honour. Thank you. Thank you, Professor.

RE-EXAMINATION BY MR. CONROY:

Q Now, my friend put to you the—he referred to the book by Abel, and asked you about widespread use of cannabis in western society and

put to you that it was relatively recent, and I think you said—if you didn't say it in response to his answer, you told us before the commencement of widespread use was around 1966?

A Yes.

Q So about thirty years ago?

A Yes.

Q When we talk in terms of relative recentness, we're still talking a period of thirty years, in any event—

A Yes.

Q -- with varying increases and decreases, and yet a consistent pattern at least since '66 of efforts by government to reduce the impact of the consequences, as you have described to us the different amendments all seem to be a lessening of the penalties.

A I think that's right, yes, and I think it's again reflected in C-7 -- in the version of C-7 that was passed by the House of Commons on October 30th of last year.

Q And my friend then put to you the Adellap Report saying that there was—it indicated a dramatic increase in use by adolescents over the past few years. You said not as high as in '79 and the eighties, but would you agree this—this increase in use has occurred despite the law? It appears to have occurred despite what the law is?

A Well, in fact, the irony, I suppose, is that the—the period of lowest use in both Canada and the United States appears to be 1987, which was the date at which—on which Canada embarked on the—its drug strategy and—and the date on which the former prime minister, Brian Mulroney, declared that there was a drug epidemic in Canada when, in fact, rates of use of both licit and illicit drugs were at their lowest point in perhaps twenty years.

Q If there has been an increase in use by adolescents in this period, does that indicate that there must have been some who were non-users who have become users during that period?

A Not necessarily, but I think that is—I think it is true that—that—I mean, it's true in the sense that as—as individuals come of age, certain individuals in the twelve to eighteen or eighteen to twenty-nine age bracket become users of marihuana.

Q And that would appear to be so notwithstanding the existence of the law?

A Yes.

Q So if we go back to Erickson's study that my friend asked you about in terms of the deterrence—deterrent effect of conviction, you said that that study—he asked you if you agree whether that study said anything about the effect of the law on the public in general.

A Right.

Q Leaving that aside, the Adellap Report would seem to indicate, and correct me if I am wrong, that the existing prohibition didn't appear to have any effect on adolescents who—

A Yeah. I think if—if we look at Canadian—

MR. DOHM: Excuse me. That's not what the witness said.

MR. CONROY: All right.

MR. DOHM: The witness said that he—he couldn't say that the prohibition had no effect on the decisions of individuals to commit the offence.

A In fact, I think that's right. I think I did say that. At the same time, what we have from the high-school surveys from 1967 to the present is an indication that very substantial numbers of young people have -- have used cannabis in violation of the criminal law, and I think I made the point in an earlier day that in my view and in the view of many researchers, these are underestimates because you're—as a student, you're being asked if you have committed a criminal offence and for many people, the prudent response, even if they have committed that criminal offence, is, "No".

So I think what we see in—in the high-school survey data and in most other forms of survey data is an underestimate of the total extent of use and in my view, it's not unreasonable to conclude from the data that we have that the rate of use among graduating high-school students of having ever experimented with the drug, having ever committed that specific offence, is probably in the nature of fifty percent or more and so in that context then, one can say that—that although the—the prohibition may have an impact on the decision of some people not to use, there is very substantial—perhaps the majority of young people who, notwithstanding the prohibition, decide to use marihuana.

MR. CONROY:

Q My friend put to you a number of questions in relation to tobacco and its availability, and yet this decrease in use.

A Yes.

Q And am I right that that decrease in use has occurred without resort to the criminal law?

A Yes.

Q And that it has occurred primarily through education and—and information—

A And education, and I think the emergence of the Non-Smokers' Rights Association.

Q Okay. My friend got into a—

A Or the—or the emergence of that movement. I don't mean specifically the non-smoker, but the—the general set of principles underlying non-smokers' rights.

Q Okay. My friend put to you the question of a definition of "decriminalization". As a lawyer familiar with the laws in Canada, can you tell us what "decriminalization" means in Canada?

A Well, I suppose the simple—a simple way to think about decriminalization is to say that there is no offence. No criminal offence for possession.

Q And that would mean no law—no federal law under the criminal law power—

A That's correct.

Q -- or under the—

A It would be a matter—

Q -- that government—

A -- a matter, I guess, of exempting marihuana from a schedule of drugs prohibited for possession.

Q That—so when we use the term "criminal" in a—in a strict constitutional sense, decriminalization in Canada would mean taking it out of the criminal law jurisdiction.

A Certainly with respect to possession, at least. Yes.

Q That doesn't mean that it wouldn't—it might not have some penalty attached to use or—

A I think we would still regulate. I would imagine—in fact, I have argued for regulation of—of public use in the sense that I see tobacco

and cannabis as quite similar. These are activities that should be engaged in by consenting adults in private to the extent that things are and do so.

Q And that might occur through some provincial legislation.

A I think that would be more appropriate.

Q Okay. My friend questioned you on your knowledge in relation to international law and treaties, and asked you if you were aware of the consequences of a breach of international treaties. Now, in my friend's Brandeis Brief material at Tab twenty—it's either the comment from Marleau at twenty-eight—if I could just have a moment to find it.

I recall a comment in one of these two speeches either by Marleau or by Frye indicating that Canada had been in breach of its international obligations and that part of the purpose of C-7 was to bring Canada into line with its international obligations. Are you familiar with that?

A I can't recall that specific comment. I do remember a comment to the effect that—that decriminalization of cannabis could not be contemplated because of international obligations.

Q Now, did you know that—or were you aware that part of the rationale for bringing in C-7 was stated—

A Yeah.

Q -- by the minister to be—

A Yeah.

Q -- to bring it in—

A Into line with it. Yes.

Q -- in order to fulfil international obligations?

A Yes.

Q Can we assume then from that that we obviously mustn't have been in compliance for some period of time?

A It seems a reasonable assumption.

Q And are you aware of any consequences to Canada as a result?

MR. DOHM: Objection. The witness' very candid and forthright admission of incompetence to answer that question during cross-examination does not change, Your Honour.

MR. CONROY: Well, I assume that his answer then would be, "No."

THE COURT: I think the objection is—is still a valid one in the sense that even if his answer is, "No," does it carry any weight if this is not a field with which he has any particular expertise.

MR. CONROY: Well, let me then ask some further questions in terms of his expertise.

Q In studying in this area, I take it you did—

MR. DOHM: Your Honour, with respect, the time to qualify a witness is during examination-in-chief before you start to ask questions, not in re-direct.

MR. CONROY: Okay.

Q In observing the Canadian situation over the years that you have, did you follow when they were in breach or when they were in compliance with their international obligations?

MR. DOHM: Objection, Your Honour. Judging by the answer given during cross-examination, the witness is not able to answer that.

MR. CONROY: I thought he said in his answer he had read the conventions and attempted to understand them and how they meshed or failed to mesh with the existing law.

THE COURT: I'm not sure that that allows him to give detailed evidence simply because he has read them, as any member of the public might have. I don't think that necessarily entitles him to give evidence in relation to matters which ought to be testified to by an expert in the field. He may—

MR. CONROY: Well, --

THE COURT: He may say, to his knowledge, because obviously he has a cross-disciplinary approach to all of these matters which will cause him, in the course of his academic work, to touch upon these areas. The difficulty is the—is the fact that he has not -- let's say or assume that he has not come across, in any of his readings, any indication that Canada was, at some point, in noncompliance with the conventions and there were or were not consequences. I don't know what weight I could attach to his answer given that it's a peripheral aspect of—of his work and he's not an expert in the field.

MR. CONROY: I have some difficulty with this whole concept of somebody having to be an expert on international law in order to be able to interpret an international treaty which is written between governments, especially if somebody is a lawyer and they are used to interpreting legislation and used to determining whether or not the law

is in compliance necessarily with a—with an obligation or not and—and how you use that as an aid to interpret your domestic law.

Professor Boyd, surely as a lawyer, can read through a treaty and can see in the treaty what provisions there are for withdrawing, for example, from the treaty, what provisions there are for breaches of the treaty, if any, and could then comment on what the document itself says the consequences are or—or what the provisions are for withdrawal, for example.

THE COURT: But I can do that myself without having him do it for me. If we get into an area where some level of expertise is required to assist me, then obviously we need someone who has stated expertise in that area. We wouldn't take a criminal law lawyer to help me in understanding a contract law.

MR. CONROY: Yes. I have your point. I think—I appreciate that then, Your Honour. I will move on.

Q When my friend put to you the context of arrests made in relation to how various people were caught, was your—and you got into this issue of whether it was common, or very common, or certainly not rare that they were—there was a smell in cars. Was the evidence that it was the smell in a car, or was it that people were—the smell came from people driving the car? See, my friend first put to you smell in car was common, and then he added to that people driving the cars.

A I—I would have to go back to the piece of research to determine the specifics.

Q Okay. Now, you're a lawyer, but have you ever practised law in the sense of appearing in the courts defending people?

A Yes.

Q Have you ever defended some—

A Actually, as a—as a student, but not as a practising lawyer.

Q Have you ever defended somebody charged with impaired driving?

A No.

Q Are you familiar with the differences between impaired driving and driving with a blood alcohol level in excess of eighty milligrams of alcohol in a hundred millilitres of blood?

A I am not an expert in that area, but I have some idea of the differences.

Q Do you know what it is that an officer does, first of all, in an investigation for somebody who's involved in impaired driving as—or

whose ability to drive is impaired as opposed to somebody who he thinks may have a blood alcohol level in excess of .08?

A I wouldn't want to provide chapter verses to the specifics of what an officer does.

Q Have you any familiarity with what happens at—at a roadside—if somebody is pulled over on—on the side of the road and what is available to an officer to determine whether or not the person's ability to drive is impaired by alcohol or a drug?

A Again, I'm—I don't feel qualified. I have some idea, but I don't feel qualified to provide a detailed—

Q Have you ever heard of roadside tests?

A Yes.

Q Do you know what they are?

A Yes.

Q What are they?

A As I understand it, roadside tests are—well, there are a number of different conceptions, but one notion is of—of random testing. Another notion is of—of the use of the breathalyzer. I'm not—I'm not quite sure—

Q Have you ever heard of somebody having to walk a straight line?

A Yes.

Q Have you ever heard of somebody having to put their nose to their—

A Yes.

Q -- or finger to their nose, and their foot in the air—

A Yes.

Q -- and put their head back, and all that sort of stuff?

A Yes.

Q You have heard of those roadside tests?

A Yes.

Q What is the purpose of those roadside tests?

A To determine impairment.

Q Impairment of what?

A Of the ability to drive.

Q Thank you. It doesn't involve the use of any technology, does it?

A No.

Q Okay. So would it be more difficult to determine whether somebody's ability to drive is impaired by alcohol or a drug in applying those types of tests?

A No.

Q And you're aware, I take it, of some technology that exists that is used in the prisons, at least. I think you mentioned this in your evidence before. The Barringer Ionizer Scan, in terms of determining levels of people's contact or use of drugs as opposed to alcohol.

A Yes.

Q Okay. The public—the Public Health Survey that my friend put to you from Tab 29 of his materials. Are you familiar with the—the specific survey? It's called "The 1990 Health Promotion Survey".

A I think I have—yeah. They have been doing this for some time and I'm aware of what they do in relation—

Q Do you remember what the specific questions—how it was posed?

A No.

Q Did I understand you correctly to be saying it depends upon how the questions are posed, the type of answers you get?

A I think I was saying that in relation to preference for particular kinds of legal regime insofar as cannabis is concerned, that is, as I said, I'm—much like the referendum question in Quebec, your response is going to be, at least to some significant extent, determined by the manner in which you put the question.

Q And would it also depend upon the person's knowledge and information about the subject matter?

A I—I think that's—we have a lot of evidence to indicate that that's true, that people change their minds when they have more information in relation to a wide range of subject matters.

Q Do we know what the position of the missing eleven percent was? It's fifty-four to thirty-five.

A I—I don't know.

MR. CONROY: Okay. Thank you, sir.

THE COURT: That's it.

MR. CONROY: There was one—one point, if I could. I had mentioned this to my friend. It was a point I should have asked in-chief and it had to do with clarification of an answer in the transcript, which I think was taken down incorrectly, if I may, and I'm referring to November 28th, 1995, Page 68, where Professor Boyd gave a long answer. My question is on Page 67, but it dealt with this issue of potency and effects on youths of this high-quality cannabis and risks of smoking high-quality cannabis.

Q Is it your evidence that because of the high-quality cannabis that this leads to an increase in smoking, or a decrease in smoking?

A I think there's a lot of research to confirm that it leads to a—a decrease in smoking.

Q So if the transcript said that you said it led to more smoking, that wouldn't be accurate.

A That wouldn't be accurate. No.

MR. CONROY: That's Line 45, Your Honour. Page 68.

THE COURT: All right.

MR. CONROY: Thank you.

THE COURT: You're excused.

A Thank you.

THE COURT: Thank you.

(WITNESS EXCUSED)

THE COURT: We will adjourn then until 1:30.

MR. DOHM: Thank you.

(PROCEEDINGS ADJOURNED)

(PROCEEDINGS RECONVENED)

MR. DOHM: Recalling the matter of Regina versus Caine, Your Honour.

THE COURT: All right. Gentlemen, I have just broken a temporary filling in one of my teeth, which causes me to sit on the edge of paranoia. I have made a dental appointment for five o'clock in the city. The real city. Vancouver.

MR. CONROY: Okay.

THE COURT: I was just wondering if it's—I have to leave here at four to make that. Is that a possibility, or will that cause great inconvenience to—

MR. CONROY: I don't think so.

THE COURT: I can start earlier tomorrow if—to make up the half hour, if it's—

MR. CONROY: Why don't we just see how it goes and—and break at four, but I—I think we can accommodate that, Your Honour. Well, we will accommodate it one way or the other. Let's put it that way.

MR. DOHM: What time will you have to leave—have to adjourn in order to leave at four?

THE COURT: If we—if we stand down at four, I should be able to make it in the city by five.

MR. CONROY: I left a message with the trial coordinator on his machine late in the day yesterday that we may require a couple more days and—and so tipping him off to that possibility, but I also said that I would try and see him sometime today, and I regret I neglected to do that over the noon hour. I might try and see him at the afternoon break just to have him working on that anyway, although we've got Professor Beyerstein and we expect that he will be cross-examined as well this afternoon, or possibly completed.

We've got Dr. Connolly for tomorrow, and that will be the witnesses for the applicant, and so that may be a clean break that takes us over to the 21st and 22nd or 20th and 21st. I forget. The Thursday, Friday anyway, and so it's just that possibility we'll need maybe an extra day to finish off the Crown's witnesses or for argument. That's—those are the current thoughts, anyway.

THE COURT: All right.

MR. CONROY: Before—Professor Beyerstein, if you could take the stand, please, to continue. Just before we start, I have managed to obtain copies of the Access To Therapeutic Marihuana Resolution of the American Public Health Association that was referred to by me in the evidence of Dr. Peck, and if we could mark one of these as the next exhibit, and there is an extra copy for the court.

THE CLERK: Exhibit 23, Your Honour.

THE COURT: All right.

MR. CONROY: Twenty-three?

THE CLERK: Twenty-three.

MR. CONROY: Thank you.

EXHIBIT 23 - PHOTOCOPY OF DOCUMENT ENTITLED "ACCESS

TO THERAPEUTIC MARIJUANA/CANNABIS"

THE CLERK: Do you wish him resworn?

THE COURT: Yes.

BARRY LANE BEYERSTEIN, a witness, called on behalf of the Defence, being duly sworn testifies as follows:

THE CLERK: State your name for the court.

A Barry Lane Beyerstein, B-e-y-e-r-s-t-e-i-n.

EXAMINATION-IN-CHIEF BY MR. CONROY, continuing:

Q We had got to the point yesterday, Professor, of coming to the topics or issues arising out of the Hamahn (phonetic) case and so I am going to just ask you to comment on a number of issues and to also advise if, to your knowledge, based on your expertise, there has been any change, any new evidence, or new research, or whatever, since 1991 on the particular topic. All right?

A Yes.

Q The first issue I would like you to address is based on your knowledge and expertise in relation to cannabis, can you tell us if occasional use of cannabis is harmful to healthy adults?

A No. I would agree with Dr. Callant on—on that point that—that certainly the upshot of the assessment done by the Australian task forces—well, that the risks to healthy adult users who use it recreationally, occasionally are really quite small.

Q And is there more recent information or research that reinforces that conclusion?

A Nothing to change that conclusion. No.

Q So is there recent information that just reaffirms it?

A I think so. Yes. We have summarized that—or I should say in the Brandeis Brief that we have submitted, Zimmer and Morgan have summarized that data quite well, and I think it supports that conclusion.

Q And would the McDonald Report from the Australians—would that—

A Yes. The McDonald Report, you will recall, didn't actually look at the medical and psychological risks themselves. That was the previous Hall Report, which was the companion one to the McDonald Report, but McDonald looked at Hall and said, "All right. This is a very up-to-date survey of the world literature of risks and the possible harms, and taking all of that into consideration from a public policy standpoint, we conclude that the risks of the substance are not as great as the costs of prohibition, and therefore we recommend a limited decriminalization approach."

Q Do you agree that the—with the statement that the risks are related to amount and frequency of use?

A That's true for all psychoactive substances, or virtually any other health risk factor.

Q Do you know if—are you able to tell, from the literature or your research, whether the numbers in terms of marihuana smokers—do few or many use enough to do significant harm?

A Very few, as a matter of fact, that—daily usage, for instance, is—is the exception rather than the rule and you have to get up to something close to that before any of the possible things that have been suggested as adverse effects would be a serious risk.

Q And is there anything we know about the background or about the situation involving those people who do tend to use a lot if we're elevating it from the point of use to abuse, for example?

A Yes. Abusers tend to be a different sort of person psychologically and demographically than people who use occasionally for recreational purposes, and insofar as they are different people to begin with, it's not surprising that there are certain adverse effects when they use to excess and therefore expose themselves to more of the things, most of which are in the smoke rather than in the psychoactive substance in the case of marihuana.

Q Can you comment on short-term psychiatric problems in some users during acute intoxication?

A Yes. There have been a few surveys since the time that Dr. Callant testified, and these have been summarized in a recent 1994 article by Gruber and Pope that we submitted in part of the Brandeis Brief, and the first part surveyed the world psychiatric literature up to the time of publication and found there that there was no convincing evidence that marihuana causes serious psychiatric problems or that the incidence of acute abreactions or panic reactions is especially high except in a few who—cases of people who are already psychologically unstable or take the drug in some kind of threatening circumstances.

They then also, that is, Gruber and Pope also surveyed something over nine thousand psychiatric records of people that had been admitted to two large hospitals in the Boston area looking for evidence of so-called cannabis psychosis, and came to the conclusion that if people used marihuana only and not in conjunction with other psychotropic substances that there really was no convincing evidence for the so-called cannabis psychosis.

Q And when they do see it, is it something that goes on for some duration or is it of brief duration?

A In cases that you see anything that looks at all like this, it's usually the—the acute panic reaction that they're talking about, and this is a short-lived kind of fear reaction that some people experience while they're under the influence of the drug and it can be scary, it can be very disconcerting to them and some of them may even seek some treatment for it, but it is a self-limited condition and there is no evidence that the symptoms linger beyond a few hours and at most, a day from the time of the acute reaction while intoxicated.

There are some cases of people who are already suffering from serious psychiatric problems for whom use of the drug might—might exacerbate the problem, but there is no evidence that the problems are caused by the drug, marihuana, by itself.

Q And you referred to Gruber and Pope. That, just for the record, is Tab 5 of our Brandeis Brief and you say that that article gives us the—an update since 1991 on this question of pre-existing—or people with pre-existing problems versus those without terms of use.

A That's right.

Q And Shedler and Block, that is, Tab 9 of our Brandeis Brief. Does that also update the situation in that respect?

A It adds a new dimension to it because as I have said before testifying in this case, this was one of the only so-called prospective studies where people were studied before they became exposed to the drug, during the time they were using it, and right on into young adulthood, and they were then able to be compared on a variety of psychological variables.

As you will recall, the finding was that the adolescents who had experimented occasionally and responsibly with—with—primarily with marihuana, but other psychoactive drugs as well turned out on these measures of psychological adjustment to be better adjusted than either of the group who had been firm abstainers or the group that we have been discussing as abusers, who we say and certainly Shedler and Block provide the strongest evidence for where people with predilections for psychological difficulties that showed up early in their childhood before they were even exposed to the drug.

Q And also the Cowry and Pope article, Tab 6 of our materials, bears somewhat on this issue as well, does it?

A It does. In this case, they asked the question, "Well, would it not be reasonable to expect that heavy users would show any kind of adverse effects, whether they be medical or psychological?" In this case, they were primarily interested in the psychological end of things exclusively and psychological realm. Would it not be reasonable they would show more of these symptoms than occasional users, but if dose is important as we have just said it is, then you should show greater maladjustment and greater scores on various psychiatric scales of symptomatology in the heavy users and, in fact, they did find a few differences in the group, but not in the psychiatric measures, but these people were not showing any kind of serious psychological problems to a greater extent than—than were the occasional users.

Q Let’s turn then to the issue of the possibility of lung damage from smoking marihuana. I think you have already testified about this issue to some extent, and as I understand it, there is some concern here.

A That’s right. I think all the literature that we have dealt with says that it’s not a particularly good idea to put burning materials into your lungs, or the products of burning materials and so that I think we can safely assume—but the thing to keep in mind here is that the dangerous part of marihuana smoking is the smoking itself.

It’s not the psychoactive substance which, by the way, is true in tobacco as well that nicotine, except for a few small number of people who have particular conditions, is not a particularly dangerous substance in small amounts either, but it’s the effect of smoking and so what we can say about this is that there are safer ways of using that drug and if public education were to make it widely known that

there are other ways of getting the benefits that people seek from the drug without having to put the burning material into their lungs, well, then I think we'll find them switching in that direction, and there is some indication that they are doing that and despite the worry that some people have about the potency of marihuana going up, in fact that is probably a good thing because as Reese Jones testified also in the Hamahn case, people do titrate their doses.

That's what his own survey showed, which means that when they are given a more concentrated substance, they use less of it and so in this case, if we grant that putting smoke in your lungs is not a good thing, then getting the same psychotropic dosage from fewer puffs is possible with a more potent brand of marihuana, and that's one way of dealing with this. Of course, there are new methods for vaporizing the smoke. There are filter techniques. Waterpipes. There are many other ways that one could, in fact, reduce the harm from smoking per se if one still wished to use marihuana.

Q And this issue, I understand, is dealt with, to some extent, by Goldstein and Callant at Tab 2 of the Crown's Brandeis Brief, the article on "Drug Policy: Striking The Right Balance" published in 1990?

A Yes. That's what they conclude in that section is that it's the damage from the smoke rather than the psychoactive substance that creates the worst health risk.

Q And more recent publications on this topic include the Zimmer and Morgan study in our brief?

A Yes, although Zimmer and Morgan didn't do the study. They simply reviewed the—

Q Review it, I mean.

A -- the medical literature, and that included things that had happened since the Hamahn trial, such as the large-scale U.C.L.A. study which is still ongoing, as I understand it, and in that study it was—it was found that marihuana smokers seem to have somewhat fewer problems of a pulmonary nature than tobacco smokers, not because the substance is inherently cleaner or less damaging, but because the typical user doesn't expose himself or herself to as much.

Q Then also the Australian—or part of the Australian Report, the Hall part of the Australian Report, deals with this issue as well.

A That's right, and it came to essentially the—the same conclusions which the McDonald Commission looked at when it recommended the changes in law that it's urging on the Australian government.

Q Now, let's just understand that. So Hall came out with concerns about lung damage—

A That's right.

Q -- consistent with the previous, but McDonald, focusing on policy options, said what?

A That there are other ways of dealing with that than prohibition and criminal penalties, and that it's well and good to discourage smoking as an activity, but that—that as with tobacco, we can do other things to mitigate the damage from the smoking part of marihuana and without it necessarily having to be illegal, and they therefore recommended controlled decriminalization as a policy to the Australian government.

Q Okay. Let's then turn to the topic of deleterious effects on driving. The—I think we have testified a bit about this before, clearly that consumption of marihuana can affect people's motor skills, and I think you have said a number of times people shouldn't operate vehicles under the influence of anything—under the influence of anything to a degree that would affect them.

A Yes. I would agree.

Q Now, is—what are the most—the most recent studies on that topic? Is that again Morgan and Zimmer?

A They are summarized in there and all the actual references are listed in the bibliography at the back. For instance, a 1993 U.S. National Highway Transportation And Safety Administration Study is cited in there, a study done under the auspices of the U.S. Government, obviously, and what it found was that the actual risks, though not negligible, are—are probably not as great as some of the earlier studies might have suggested and some of the people who did these studies actually were associates of Professor Robb, and in fact Professor Robb himself, who—who was the author of one of the chapters in the Crown's Brandeis Brief that was submitted.

Q And that is the one at Tab 17 of the Crown's Brandeis Brief, "Robb: Influence of Marihuana On Driving (1994)"?

A Yes.

Q All right. Let's then turn to the question of brain damage being caused by marihuana consumption. There is some suggestion in some of the materials that that could be something that could happen as a result of marihuana use. What's the current position on that?

A Yes. Well, Professor Callant testified that the data were inconclusive, in his mind, at the time he participated in that trial and I think if anything, the—the pendulum has swung more in the—in the opposite direction, that even though there was not strong evidence for brain damage from—certainly not from low-dose occasional recreational use

at that time, I think there is better evidence now that it's a relatively safe substance and in Morgan and Zimmer's review, they point out that many of those earlier animal studies had used excessively high doses, in some cases over two hundred times what an average dose would be for a person smoking marihuana recreationally.

Numerous studies have used more physiological levels of dosage and also have developed a kind of a mask that monkeys can wear so that they actually inhale the smoke rather than having to inject it, as many of the earlier animal studies had done, which again makes it more ecologically valid and representational of how some human use would take place.

In this study that was conducted and published in 1992 by Slicker and colleagues, they used monkeys with this inhalant mask and exposed them to the equivalent of five full joints of fairly potent marihuana every day for—for a year. Then after a seven-month abstinence period, they removed the animals' brains, submitted them to laboratory study, and found no residual neuropathology or detectable biochemical changes in those brains compared to those control animals that weren't exposed.

Q Let's then turn to the topic we often hear of, amotivational syndrome. What would you say about that?

A Again the newest study—I never think there—there has been strong evidence that the drug per se causes amotivational syndrome.

It may be that unmotivated people turn to drugs for a variety of reasons, but the newest study that points in that direction is one that's in our Brandeis Brief: the Cowry, Pope, et al. study of 1995 and there they found that on self-report measures, heavy marihuana users—daily, large-dose users reported themselves that they felt, you know, that it had some effect on their motivation, but the problem is that those heavy users were almost inevitably heavy users of alcohol and other psychotropic substances as well.

So there was a—a confound there. These people were not just heavy users of marihuana, but be that as it may, this study was done in college students in some of the elite colleges of the Boston area and so despite some self-report or note of this, they obviously weren't adversely effected enough in their motivation that they couldn't get into and maintain satisfactory -- satisfactory academic standing in these colleges, or they wouldn't have been there to be a subject population to be studied in the first place, because that's where they were recruited from.

Q And again the Shedler and Block—first of all, Cowry again is at Tab 6 of our brief, but also the Shedler and Block article at Tab 9 of our brief touches on this issue, doesn't it?

A It does. The same thing there. As I said many times, it's a prospective study which makes it a stronger piece of evidence and what they conclude is that people who are unhappy, disaffected, already alienated from family, from society at large tend to withdraw and do antisocial things of a variety of sorts and they may well all turn, as Shedler and Block suggested they did, to drugs out of protest, out of boredom, out of an attempt to medicate the sort of unpleasant psychological feelings that they were experiencing at the time and had, according to Shedler and Block's data, probably been feeling since before the time they exposed themselves to drugs.

Q Is there any evidence that you're aware of that occasional use will impair somebody's motivation in a psychologically well-adjusted person?

A It certainly doesn't come out of our surveys in our own students in well-adjusted people who are already—already have a stake in life, in society. I don't see any evidence that it's going to turn them around and make them non-productive citizens.

Q The same sort of thing said about the hippies back in the sixties?

A That's right. You remember the story about L.S.D. was, you know, a turn on, tune in, drop out and there was great concern expressed at the time that—that L.S.D. was going to produce a—a generation of ne'er-do-wells and laid back, useless slugs on the cabbage of humanity, but it didn't really happen; that what all the data and follow-up say is that the vast majority of—of those people cut their hair and they're now productive mortgage holders and workers in the rat-race of the eighties and nineties.

Q Where did you get that expression, "slugs on the cabbage of humanity"?

A I'm sorry, I don't know, but it's been a favourite of mine for a long time. It obviously had an impact on me.

Q Okay. Let's turn then to addiction potential. What can you comment on that topic?

A Yes. Any drug is a potentially addictive substance for a small portion of humanity, that—and at the same time, no drug is addictive for everybody, and so it's true that marihuana, like every other psychoactive substance, legal and illegal, has some potential for producing addictive behaviour in people, but so do eating, and running, and gambling, and shopping, and in our studies, even praying.

Some people show all the signs of addictive behaviour in praying to the extent that it gets in the way of other productive relationships and activities in their lives, and so it's compulsive behaviour that can

attach itself to any of a number of—of activities over and above drug use.

Q So as I understand it then, the addiction or the addictive aspect of things relates to the individual and not the drug itself.

A I think that's what the data pretty clearly show because if that weren't the case, then, for instance, everybody who uses morphine to quell pain should become addicted, and that's clearly not the case.

It's only people who have certain things going on in their lives that are intolerable to them and that they wish to try to ameliorate with the use of drugs or some of these other behaviours that I—I measured are likely to get involved in such an overwhelming compulsive way that it becomes negative use, it becomes problematic for themselves and others, and that's how I see addiction is behaviour of the problematic sort that interferes with normal enjoyment and normal productivity of life.

Q What about the alcohol example? Some people, one drink is too much and others can drink an awful lot. Again, it doesn't seem to be related to alcohol per se, but the individual. Are you saying that that's also because of other problems in their life, or can that be due to simply the genetics, or metabolism, or whatever of the individual?

A I think it's—it's a combination of all of those, but obviously you're right. Eighty percent, probably in most surveys, of North Americans are at least occasional drinkers and maybe ten percent of them are problem drinkers, and so the alcohol itself doesn't turn somebody into a problem drinker.

And so I think it's a combination of personality, which does have a genetic component to it, and the kind of nervous system you—you are born with, which has a large genetic component to it because that also pans out in terms of—of how you react to stress and other things that we know that are involved in the ideology of alcoholism, and—and then the particular social milieu, the pressures on people, the learning experiences, lack thereof in their lives interact with the alcohol to make certain people problematic drinkers, but the vast majority of us—as Winston Churchill said, you know, "I take more out of brandy than brandy takes out of me," and—and I think that's true of most drinkers.

Q We always hear about heroin. As soon as a person touches heroin, they become addicted. That seems to be the popular view. Is that an accurate view?

A No. Clearly not. In fact, most people don't like heroin or morphine, which is virtually the same thing, and given to volunteers in laboratory studies, for instance, the majority of people don't find it pleasurable. Enjoyable. They say there is absolutely no—no reason why they would

want to take it—take it again, and also what our own studies with heroin addicts show is that the majority of users are not addicts.

In fact, even in our own society in the illicit drug trade, the majority are what we call "chippers": people who—who use it occasionally, only on weekends, or when their friends come over, or whatever, and they don't use enough of that—or they just don't become addicted. Period.

Q Is that true of cocaine as well?

A Yes. In fact, a large-scale study out of the Addiction Research Foundation published a book called "The Steel Drug" by Patricia Erickson and her colleagues. Actually, Reginald Smart as well is a coauthor. That and another equally large study done in the Netherlands by Peter Cowan and his colleagues show the same thing; that if you concentrate on people in treatment, obviously those are the people who have had trouble with the drug, but this gives you a false impression of the number, or rather the percentage of people who use cocaine, in this instance, but the same is true of all other drugs as well, who actually get into trouble with it, who start to use it addictively, start to—who use it to the point where it harms them economically, socially, in their family lives, in their occupational lives.

What Erickson and her colleagues here in Canada and Cowan in the Netherlands found was that when you go out and survey a much larger group and find out who's using, the majority of people use it occasionally, responsibly with no harm to themselves, and certainly no addictive problems or health consequences to note.

Q What about such things as—I was going to say Contact-C because it's almost time for me to take another one, but what about aspirin?

A Yes. Well, you know, as I was saying before, there is no drug that isn't abused by somebody and it doesn't have some addiction potential for—for some small population, anyway, and in my course at the university just a few weeks ago, I was having my students read some papers on addiction to—to aspirin, addiction to non-prescription cold medications.

In fact, there is even some studies on addiction to placebos; that some people find the—the activities of addiction meaningful in their lives to the point where they show all the—all the attributes that would pass on any standard test of addictiveness to sugar pills. To placebos.

THE COURT: It doesn't say much for the human race, does it?

MR. CONROY:

Q In the Crown's Brandeis Brief, there is the paper by Goldstein and Callant and, as I recall, it places the addictive potential of cannabis slightly above that of caffeine.

A That's right.

Q Have you—

A They have a table in there and they—they list an order of—of severity of risk, and caffeine was the very lowest and—and marihuana was the next one in their table.

Q And if I recall correctly, his evidence is that a small percentage of cannabis users might become addicted or dependent on the—

A That's right. The same as I was just saying in the example of all of these drugs, that it isn't the drug itself that's the important thing when it comes to addiction. It's the interaction between the individual, the drug, and the social and psychological setting in which the individual takes that drug, and some things that seem remarkably innocuous for the majority of people can still be used abusively and addictively by a small percentage of the population, and I think that's true here with—with marihuana like all the others.

Q Isn't there some evidence or some data showing a rising number of people seeking treatment, claiming to be addicted to marihuana?

A There is, but when you actually look at these studies, you very soon notice a confound here and that what people have done is—is just keep records of the number of people seeking help at treatment centres for various drugs, and there has been a rise in recent years in the number of people listing marihuana as—as one of the drugs that they're using and in a few cases, the only drug that they were using which led them to seek treatment, but the artifact here is a subtle one, and this is the kind of thing I teach about in my research methodology course. When you try to parcel out cause and effect for things that sometimes the correlation is due to a—a third cause, not the one that seems most obvious.

In this case, what seems to be happening here is that with the advent of widespread urine screening tests and—in the private sector, in government, in the military, and so on, by far and away the most common and positive urine test is for marihuana because, as I have said earlier, the metabolites linger in the urine much, much longer than for many of the—in fact, all of the other illicit substances, and so if you're going to be caught at all, the chances are it's going to be for marihuana if you have used it, and so there has been a—an upsurge in people with marihuana metabolites in their urine, which doesn't prove that they were impaired at any time. It doesn't prove that they are bad employees, or anything else. It just proves that at some time in some unspecified time, they took an unspecified amount of the drug.

What that does though is it kicks in that kind of automatic set of prosthesis in a lot of organizations and in order not to be fired, in order not to be turned over to the criminal justice system, many of these organizations have a diversion program where if somebody will—

will agree to go to a treatment program whether or not he or she thinks their use has been abuse or whether or not they think there's any adverse effects in their lives, if they will admit that, they will go to treatment, at which point then they have to say, in order for the insurance company to pay for it, that, "I was addicted and I am having terrible problems with this." Otherwise, they won't get their treatment paid for.

So this increase is probably an artifact of—of a lot of actually quite functional people who weren't identified on the job as shirkers, or unsafe employees, or anything of the sort who got caught in these random, unannounced, mandatory screens and in order to get out of punishment, opt for treatment, and that's why we're seeing a bulge in the statistics in that one area.

Q In the Crown's Brandeis Brief, Tab 30, we have the Ontario Student Drug Use Survey from the Addiction Research Foundation in which—which I think has been referred to as "the Adellap Report", but Reg Smart was a participant or is known in terms of these surveys. Isn't that one of his main areas of—

A Absolutely.

Q -- involvement? Do you know what the results are from his surveys?

A I don't know the numbers off the top of my head, but I know he has been on record in various places at saying—as saying that the addiction problem among people who use marihuana exclusively is really quite a small percentage of the problems that they pick up in their surveys.

Q Let's turn then to a topic that we have actually dealt with quite a bit, but just so you can address it in light of this other testimony, and that's this question of availability relating to usage rates.

A Yes. Well, this is the area where you can find a single study to prove just about any—or, it doesn't prove, of course. It simply argues for almost any position you want to take, and I think that's a fair assessment of—of the research; that you can find places where availability is great and usage is low. You can find the opposite. You can find places where penalties are reduced and usage goes up. You can find places where penalties are reduced and—and usage goes down.

So the only way you can make sense of this, and this is what Morgan and Zimmer try to do is look at the whole picture and trace it back historically as long as good records and reliable data can be found, and when you look at it in that global perspective, there's just no consistent pattern that says that usage goes up when availability does, or that usage goes down when availability does.

It’s—what drives people to experiment with and even use regularly or use compulsively drugs is a much too complicated thing to relate to a single variable like availability, and there is just no—no good evidence that stringency of penalties or simple availability predicts usage. It depends on the society, on the attitudes, on the educational system in place at the time.

Q Do the studies from these other countries indicate a major concern in this regard?

A Well, I think not. Again, the McDonald Report that we have been discussing had to grapple with that issue and look at the—the whole picture, as have the other people we have mentioned recently here, and there again they agreed with Ethan Nadelmann that—whose paper I discussed yesterday in my testimony, who said that, you know, there is no compelling reason to think that—that usage will go up greatly. In fact, Dr. Smart’s own surveys among teenaged marihuana users and non-users indicate that among the non-users, only about three percent said that they had any desire to even try the drug and wouldn’t change their behaviour or would change their behaviour if it became legally available.

So what McDonald and colleagues concluded, as did Nadelmann, is that you can’t rule out the possibility there might be a small increase, but that this would more than be offset by the advantages of taking this horrible problem away that’s been caused by a prohibition and attempts to regulate this behaviour by legal means.

Q Professor Smart’s investigation—you mentioned this figure of three percent for non-users. Did it look into fear of punishment and how that affects the students?

A Yes. He asked them specifically. He said, "If you’re not using now, what are the reasons why not?" and very few non-users listed fear of punishment as a—a reason for not using, and they simply said something which I think is objectively true: that the risks of detection and punishment of any teenager or anybody else, for that matter, if they’re reasonably discreet, are sufficiently low that it’s not likely to—to happen.

And so teenagers in particular have this invulnerability feeling about them that says, you know, "It may happen to somebody else, but I’m not going to get caught," and objectively, very few of them do, and so they were quite adamant that if—if they weren’t using already, it wasn’t because of fear of punishment, and of course those who were using it already had already proved that punishment hadn’t deterred them.

Q Let’s then turn to another topic. Are you familiar now with some of the studies done by Dr. Reese Jones?

A Yes.

Q And specifically do you recall what he concluded in terms—in terms of the studies that he had been involved with?

A Yes. The studies for which he is most famous, and justly so, are ones on the acute effects of marihuana smoking. He was one of the first people to document the kinds of—of effects during acute usage that we have already discussed. He is also well known for his studies on tolerance and dependence in marihuana, and I think most experts agree that the tolerance and dependence liability of marihuana is somewhat lower than most other drugs, but what Jones showed is that it's not zero; that, in fact, if you give people high doses daily for an extended period of days is you can show, in fact, withdrawal symptoms, which is the classic definition of tolerance and dependence, and the problem is not those data. Those are good data and they are reliable, as far as they go.

It's the all-too-easy jump and I would say unwarranted jump from tolerance and dependence, which are physiological events, to addiction which, as I already indicated, is much more a psychological and social event and what our own data show is that people can be tolerant and dependent, but not addicted. People can be addicted and not tolerant and dependent; that they are—they are independent things and, of course, some people can be tolerant, and dependent, and addicted as well, but there's all combinations of those variables and so it's a big mistake to equate addiction to the phenomenon of tolerance and dependence, which simply means if you stop taking the drug that you have become used to taking and that your body is adapted to, you get rebound symptoms, which are the opposite of whatever effect the drug has been having while you were taking it before.

So when you go cold turkey—it's called that because as one of the effects in the case of—of heroin is that you get these—you get pilar erection. The hairs stand up on the skin and—and you get that kind of goose-flesh look. Well, this is a rebound effect because heroin depresses the part of the autonomic nervous system that controls that response. We take the heroin away, you get the pendulum swinging in the other direction, and that's why you get the goose flesh that gives us that slang term "cold turkey".

So that—that's dependence, but that doesn't necessarily mean that somebody who is dependent and would show withdrawal symptoms will show the craving, and the antisocial behaviour, and the neglect of other important things in his or her life that go along with the all-consuming drive to use the drug again, which is the addiction part. You don't necessarily have to have dependence to get that kind of behaviour because as I said, you can become addicted to placebos and people will act that way. On the other hand, some people who are physically dependent don't show the—the craving and addiction response either.

Q So a couple of comments then. First of all in terms of Dr. Jones' study, if I understand you, you're saying in one part the doses given in his study weren't the same as the normal user would use in practice.

A That's right. First of all, they were given orally, and now this—this is not a criticism of the study because what he did was—was to set out to provide the optimum conditions to produce tolerance and dependence so that he could demonstrate that phenomenon, and he then quite successfully went about doing that.

Even though the withdrawal symptoms were relatively mild and were over within twenty-four hours, he was able to show a—a withdrawal syndrome associated with marihuana, which hadn't been demonstrated before, but we have to remember that he gave people unusually high doses by oral route of administration and daily for a period of five or six days, if I remember correctly, and this is rather unecological. It's not the kind of dosage that the average experimental, occasional, recreational user would be subjected to.

Q Now, do I understand that notwithstanding that methodology that he used, are you saying that even in those circumstances, the symptoms were mild, or are you saying that only if you take the occasional user's amounts, symptoms are mild and gone within twenty-four hours?

A Even in Jones' case with these large doses orally taken and taken in a very concentrated period of time, the—the withdrawal symptoms were things like nausea, and difficulty in concentrating, and sort of general malaise with it. They weren't—they weren't serious, in his estimation, as—as I believe Morgan and Zimmer quote Jones to that effect in their summary that he has published elsewhere on his work and said they thought the withdrawal symptoms were—were mild, self-limiting, and not medically dangerous in any way.

Q Then if I understood you again, you were then saying that in addition, Dr. Jones was indicating that even heroin users don't become—don't necessarily become dependent or addicted if they're chippers, that is.

A That's right, and that's of course what the LeDain Commission Report noted as well and—and any standard textbook of psychopharmacology will point out that the majority, probably eight to one or ten to one in some surveys of heroin users, are just that. They are occasional users and the slang in the subculture is "a chipper"; somebody who just uses occasionally, say on weekends or—or special occasions and that their tendency to increase their usage and to show addictive problems just doesn't develop.

Q Okay. Then when you made this distinction though between tolerance, dependence and addiction, if I understand you, you're simply saying that simply because somebody shows symptoms of withdrawal doesn't mean they're addicted. Is that what you're saying?

A That is correct and, in fact, that's true of—of most heroin users too. It's also true, for instance, in people who—who take opiates under legitimate medical prescription for pain of postoperative sort or of—from burns, or fractures, or whatever that many of them are given high doses of medically pure opiates, either morphine or its many derivatives, and they get concentrated doses over a long enough time that they do, in fact, become tolerant, that is, as the effect of a constant dose of the drug tends to diminish and they show dependence problems in that when their medical condition no longer calls for the opiate and they stop, they start showing withdrawal symptoms.

But the interesting thing is they rarely ever identify them as withdrawal symptoms; that taking it in a medical context puts a different gloss on the whole thing and although they feel a few achy joints, and their nose begins to run, and their eyes water a bit, and they—and they show, you know, classic signs of -- of opiate withdrawal, they really interpret this as just some aftermath of their general medical treatment and they don't get terribly upset about it or ask for treatment for it.

It subsides relatively quickly, and they get on and go about their lives, and so the iatrogenic or treatment-caused rate of addiction in people who are given large, pure doses of morphine and heroin or any other opiate is very, very low. It just doesn't happen, which proves that it's not mere exposure to the drug which is the cause of addiction because they don't become addicted in any appreciable numbers.

Q Is this true too in terms of American soldiers coming back from Vietnam who had been involved in heroin use?

A That's correct. A large portion of American servicemen in the Vietnam War were exposed to very cheap, very potent heroin on the black market there. Incidentally, the reason they started using heroin was that the army was relatively successful in stomping out marihuana use; that General Westmorland (phonetic) tried to prevent marihuana use among the troops and because marihuana was easy to detect, the troops switched to heroin. So they created a heroin epidemic when they probably wouldn't have had one otherwise, but the—that was the bad news.

The good news was that despite serious worries that a huge number of addicted American servicemen were going to return from the Vietnam theatre of war and—and suddenly hit the streets of America and be addicts, it just didn't happen.

Lee Robins (phonetic) and her colleagues, and my late friend and colleague, Norman Zinberg (phonetic) were among the people who studied this in detail and what they found was that once these servicemen got home, and got back to their families, and jobs, and out of the horrible situation of war, and threat of death, and being maimed, et cetera, that the drug no longer had any attraction for them and—

and very, very few of these people who were tolerant and dependent as measured by again withdrawal symptoms when the army made them withdraw before coming back to the United States—very few of them showed any interest at all in going out and seeking drugs on the street once they came back.

Q Now, Professor Jones—or Dr. Jones, I should say—

A It's both, actually.

Q Is it? Okay. Also dealt with some of the same topics as dealt with by Dr. Callant: psychotic reaction from marihuana use. Now, is it fair to say that your answers on that topic are the same as you told us a short while ago in relation to Callant? The Pope study, for example? Gruber and Pope is the real answer to—the most recent answer to that question. Let's put it that way.

A Yes, I think that's a good summary.

Q Okay, and Pope—just for the record, that one was a 1994 study. Okay. Similarly or in addition, Dr. Jones' comments on psychological problems of those who use marihuana in a clinic run by The Addiction Research Foundation. Any comment on that in terms of the psychological problems experience or the number?

A Only that the subjective impressions that were expressed at that time that it was a relatively small problem have, in fact, been reinforced by much more careful, large-scale, in-depth studies by Pope and his colleagues that we have already referred to. It just doesn't seem to be a serious problem in people who use marihuana and nothing else, and certainly not in those who use occasionally and responsibly.

Q And are his opinions with respect to titration of dosages in the face of more potent strains and this business of penalties and usage rates—are his opinions in that regard the same as yours, or do they differ?

A I think I agree with most of the things that he said over the years. He -- he has gone on record as saying that his informants, when he does his surveys, are telling him that with the advent of higher concentration, more potent strains of marihuana that they're actually smoking less because they get the desired effects that they have learned to recognize and desire with fewer or—fewer puffs, and therefore are actually putting less of the substance into their lungs.

Q On the—on the question of these penalties and usage rates, does he—he cites a number of studies, laboratory studies, where usage went up, but does he, at the end of the day, say that there is a great relationship or little relationship between penalties and usage rates?

A I think he tries to argue that there is more of a relationship. He is certainly a representative of that camp that penalties and availability are important, but he doesn't make irresponsible claims that these are huge results, and that's really where the debate lies: that we have numbers that in some cases tend to support his position, in other cases—probably in the majority of cases, I would say don't, but the relationship is just inconsistent; that you can find a high usage in low availability and high availability, low usage. All kinds of things, if you keep looking.

And so what he was doing when he was citing the—the experimental studies was to point out that when people have been taken—these are healthy volunteers who had some exposure already, were occasional users of marihuana already and had been taken as volunteers into studies where they have been taken into hospitals where they're almost incarcerated, they can't leave until the study is done, and had been studied under varying regimens of stringent or liberal availability of marihuana, that in some of these studies the more available marihuana was used to a greater extent by these people.

But what we have to be concerned with here is again ecological validity that, first of all, there was nothing else for these people to do in this hospital environment and there were no penalties for using large amounts. It was there. Freely available. There was no cost penalty to them. There was—they didn't have to drive home, so there was no worry about impairment. They didn't have jobs and other things that were taking them back shortly thereafter for which they might legitimately want to maintain a clear head, or anything like that, and—and the mere fact that they were available to be in a study like this probably suggests that they didn't have a lot of other things going on in their lives anyway, so they may not be typical users of the more recreational type anyway, and so these are interesting studies.

Again, no one disputes the data. What is in dispute is the generalized ability of those rather atypical usage conditions with people who were probably not representative of the average recreational user to that much larger group of occasional, recreational users.

Q Let's turn then to the opinions and positions of Reginald Smart. Is it Dr. Smart or—

A Yes. He's a Ph.D. and also a professor at University of Toronto as well.

Q And he's a psychologist, I understand.

A That's right.

Q Okay. He documents declining rates of marihuana use since about 1979. We have some newer information than that. Since 1991, I understand.

A That's right. The trends that he noted has—has continued until very recently when there has been a slight upturn, but that increase has gone nowhere near to the levels that were common in high-school seniors, who were the main people studied in this regard back in the 1970's. So although it bottomed out sometime a few years ago and there has been a slight rise, it certainly hasn't been precipitous or gone back to the very high levels, say around 1970.

Q And he takes a position also on marihuana being a gateway drug, doesn't he, or the stepping-stone type of theory. Is that right?

A Yes. He doesn't take the—the strong position because he, I think—I know is well aware that it's just not logically or empirically supported. The strong position is that there is an automatic progression from so-called soft drugs to hard drugs. Well, I mean, it's just clear that the data don't support that.

It is true, however, that if you look at people who use hard drugs, their early exposure has probably been to—first of all, to alcohol or tobacco. So if there are any gateway drugs, these are probably the ones, but their first exposure to an illicit drug is probably going to be marihuana, but the thing to remember here is that the vast majority of teenagers who experiment with marihuana do not go on to L.S.D., or cocaine, or heroin, or any of the so-called harder drugs and—and so—in fact, the majority of students who experiment during the heady days of youth when people do all kinds of experimenting while developing an identity of their own, the majority of them don't go on to even use marihuana much any more. So marihuana isn't even necessarily a gateway drug for future marihuana use.

What really seems to be the case is—is that certain people who have certain psychological make-ups and a certain attitude toward society, and the Protestant work ethic, and other related things decide that they're going to break a number of society's written and unwritten rules, and among them is probably to use various disapproved substances, including illegal ones, and if they do that there is probably a typical progression amongst that kind of unique individual that says that they start with marihuana and then later on perhaps will try and use L.S.D. and—and heroin, if they're going to, but the vast majority of marihuana users stop with marihuana and don't go on to those other substances.

Q And there are statistics from the National Institute On Drug Abuse and from the Dutch experiences that are to that effect?

A That's right. They—they would support that, and they're summarized in the Zimmer and Morgan review as well.

Q Then also Dr. Smart cites statistics to do with Canadians responding to various polls on whether marihuana should be illegal or not, and these sorts of things. Can you comment on that?

A Yes. He noted that in most, but certainly not all of the Gallup-type polls/surveys that had been done around the time of his testimony, a majority of Canadians were opposed to legal—outright legalization and maybe even decriminalization, although there were times when that wasn't true, that the majority was in the other direction, and I would say that's been a—a fairly consistent finding since that time too that a not huge majority, but a majority of—of people would agree that all drugs, marihuana included, should stay illegal, but I don't really think you can put much stock in—in those kinds of data because these are opinions of a largely uninformed and I would say a misinformed public that Goldstein and Callant, in the article in the Crown's Brandeis Brief, again used the word "hysteria" to describe the overreaction in the public to the perceived dangers of these drugs as opposed to the documentable ones, and so when you have that kind of—of a misperception of danger, then it's not surprising that the majority of people would say we need to have legal restrictions here, but, you know, just because people—a majority think something is right, it doesn't make it right.

I mean, not so very long ago the majority of people in North America supported laws that were racially discriminative, or—or laws against consenting homosexual conduct as well and—and most people no longer accept those as valid social goals and if we had taken a poll back then, we would have found that most people liked it the way it was and supported those kinds of laws.

Q So if we read, as is contained in my friend's Brandeis Brief at Tab 29 taken from Horizon's 1994 Eric Single, Ann McLennan, Patricia McNeil "Alcohol And Other Drug Use In Canada" references made to a 1990 Health Promotion Survey which found that a slight majority of fifty-four percent of Canadians believed possession of marihuana should be a criminal offence and thirty-five percent believed it should not—first of all, are you familiar with that particular survey?

A I—vaguely. Not in detail.

Q Okay, and would you put that in the same category then as the polls you have just been talking about?

A Yes. I think that—that's a good example of the kind of thing that if you—if you simply ask people, you know, polled, "Are you in favour of legalization?" of course that in itself, as we have already seen, implies a number of different possible outcomes and, in fact, the McDonald Report in Australia pointed out that decriminalization can mean anything from out and out deregulation where it's as free and available as Corn Flakes on the Safeway shelf all the way to—to something short of criminal sanctions, but strict medical control by prescription only, and that sort of thing, and there are many independent and intermediate steps that go between those poles of the continuum.

So if you simply ask the public, they don't really know, nor is it implied in a question like that which of those options is really being considered,

and they're probably going to err on the side of saying, "Well, no, I don't want it because it could be bad," but these aren't informed opinions and so they really -- I mean, social policies and laws should be informed by scientific research and—and demonstrable data, not mere prejudice.

Q Now, in your capacity as a psychologist at Simon Fraser University and focusing on this issue of drug use, and so on, I take it you have not only studied the drugs themselves, and the pharmacology of them, and the effects on individuals. You have told us you have also looked at various policy options in terms of regulation. It's my understanding that in addition, you have examined the—from a psychological point of view the cognitive, attitudinal, and social factors that go into decision-making in relation to the various policy options. Is that right?

A Yes, that's right.

Q And in—as a result of your study of that aspect of this issue, you coauthored a paper called "On Avoiding Folly" with Patricia Hadaway?

A That's correct.

Q And this is a copy of that paper?

A Yes, it is.

MR. CONROY: I have given a copy to my friends, Your Honour. Here's two other copies. I would ask that one be marked as an exhibit. That's Exhibit 24.

EXHIBIT 24 - PHOTOCOPY OF ARTICLE ENTITLED "ON

AVOIDING FOLLY"

MR. CONROY:

Q Now, could you tell us then essentially what you did here in terms of your investigation, and what you found, and what your conclusions were?

A Yes. Well, this was an invited paper. It was a special issue of The Journal Of Drug Issues on alternatives to the War On Drugs. In other words, what could we do to—to minimize harm of drug use without necessarily bringing the criminal law into play and—and when I saw who the other contributors were going to be, I realized that my recommendations were going to be fairly redundant since I agreed with many of the illustrious people who had been asked to also contribute to this special issue of the journal.

So I decided to take a slightly different tack and with my then Ph.D. student, Patricia Hadaway, I decided to tackle something that had been bothering me for a long time which was that, you know, I had started out as a straight psychopharmacologist interested in how drugs affect the brain and how that affects behaviour, and everything I could see from the scientific literature indicated that while there could be problems from this kind of usage, they were meliorable by various means and—and that the law seemed to be causing more trouble than—than helping these problems and it seemed initially to me that it was just that the scientific literature hadn't got out into the public policy-making sphere and that we had done a bad job as scientists in making our—our data, which showed fairly unequivocally that these things are—are much more benign than people generally believe them to be.

We had done a bad job of disseminating that information, so I simply left the laboratory for a while and tried to pass that information out thinking naively that people would change their mind immediately.

Well, what I found was that that didn't happen at all and the people didn't want to hear what the scientific evidence was pointing to, and so then the psychologist part of me kicked in and said, well, you know, when you find clear evidence that people systematically distort and systematically refuse to credit and refuse to admit, there is often some very interesting psychological dynamics that drive this, and motivational things, and prejudicial things, and—and so there is actually a big literature on this in the area of social psychology, and it's called the area of cognitive heuristics and biases.

So what Patricia Hadaway and I tried to do was show how even though the scientific community was able to show that these things are not as dangerous as they are perceived to be, the policies just did not reflect that and that the policy-makers were ignoring the scientific evidence and so, you know, one obvious possibility would be that these people are just stupid or they're ignorant. In fact, that's not the case and it wouldn't be nearly so interesting to a psychologist if that were the case, but these people are not stupid. They're not evil. They're not ignorant. Quite the opposite, and yet they're doing things that are clearly counterproductive not only for society at large, but even for their own purposes.

Just about that time, I came across a delightful book by the historian, Barbara Tuckman (phonetic) called "The March Of Folly" and what she does in that book is document from the time of the Trojan wars on through the debacle that led to the attack at Pearl Harbour or to The Bay of Pigs Fiasco to the prosecution of the Vietnam war long after it was obvious to most people that the war was unwinnable, and she asked the question, "Well, why"—you know, "Why do people persist in folly?" and it looked to me like The War On Drugs was just another example, and so that's what Patricia Hadaway and I do in this paper is try to document that War On Drugs is just as unwinnable as any of those follies that Barbara Tuckman described.

Then we were left with this problem of trying to explain that. I mean, why would intelligent, honest, decent people persist in a—in a policy that was causing more harm to people than the harm that it set out to ameliorate and—and why—why are they so refractory to the scientific evidence that seems to point that out, and Barbara Tuckman defined "folly" as—as dogged pursuit of an unattainable goal long after it's—it's quite clear that it's unobtainable and it's not folly if everybody thinks that it's obtainable and they're just keeping going even though it turns out not to be, but the folly is when the signs are all there and any intelligent person should be able to see that they're heading in the wrong direction, and they're—they're not only not achieving their goals, but they're actually causing harm to themselves and others in the process.

So anyway, we analyzed the War On Drugs from that perspective in this paper and then we went into the social psychology literature on cognitive and heuristic biases, as I said, and tried to bring to bear the best research on sort of cognitive errors of thought that lead people to misinterpret information, to draw faulty conclusions from data and how prejudice, and personal ambition, and other kinds of psychological variables can lead intelligent, honest people to do bad things while intending to do good things, and that's essentially what we concluded is going on in the War On Drugs, and we had a few suggestions in here on how to avoid folly. Hence, the name.

Q And so as you go through the paper—or, sorry. As you went through your study or your research, you identified then a number of factors. They start at Page 690 of the paper. You've got psychological factors and you refer to judgmental heuristics. I take it that's then one of the factors.

A That's right.

Q And that, in a nutshell, means what?

A These are things that cognitive psychologists have studied for some time and they are, strictly speaking, errors of logic, but they are errors that nonetheless are close enough most of the time that they lead to something good enough, close enough to the truth, and -- and for that—for that reason, people generally tend to use them.

They're kind of quick and dirty rules of reasoning that would never pass any—a test of formal logic, but often enough come close enough that people persist in using them, and most of the time that's okay, but under certain situations where information is filtered in certain ways, as it clearly is in the case of the War On Drugs, say through the media, and the hype, and the statement of facts that propagandists use, and so on, these normally useful habits of quick and dirty reasoning can lead to really egregious errors of—of judgment, and we give some examples from the area of cognitive psychology of how these things work and then argue that this has led to many of the

misperceptions of the data that lead people to conclude that the War On Drugs could be winnable if we just redoubled our efforts.

That's the danger, of course, is that people can't stop easily when they get ego involved and—and on a course of action that they're identified with, and the failure of which will be identified with them.

Q You also refer, on Page 691, to representativeness heuristic—

A Yes.

Q Is that sort of a subset of judgment heuristics?

A That's right. This is one that says that most people don't take the trouble to go out and enumerate events carefully, that they—they look at certain things that they take as representative of a whole class of events and make their decisions on what they should do about that class of events based on those representative examples, but in actual fact, many times those are not representative examples.

So the—the instance we give here is—is that because of popular fiction and media portrayals that don't like to show good stories, they all want to show bad stories on the evening news, for instance, the stereotype that the average individual has of a drug user is quite at variance with the—the vast majority of users.

In other words, they take what we have been calling "the abuser" as the norm when, in fact, the abuser is the rare case and the user they don't even know about because they don't stand out in any of the surveys, or on the streets, or even amongst your colleagues, and coworkers and family, for that matter. If they're not abusing in ways that show problems, nobody knows what they're doing, and therefore people make decisions based on these unrepresentative samples of the abuser who is having trouble even though that's a small portion of the actual using population.

Q And so that particular subset then, at least in terms of the way you have analyzed it here, is a typical thing arising from the nature of the media, is it, in the sense that the media, in order to sell papers or television time, are focusing on unusual and exceptional events and you're saying that in the result, people get a steady diet of unusual and exceptional events and for them, that then becomes the norm?

A That's right, and it's a—

Q But in the drugs context, it's the abuser—

A That's right, and it's an unrepresentative sample on which they base their opinions on what should be done about the problem and on the magnitude of the problem.

Q And they then lobby their politicians, and so on, in an effort to have laws then be brought in that are based on that perspective as opposed to the user perspective.

A That's right.

Q So that's a pretty important thing to bear in mind then, I take it, when one is analyzing any of this literature in terms of—or studies to do with use or abuse of marihuana.

A That's right. Our objective was to try to understand how this distorted picture came about in the first place, and this was one of the most important things we were able to find in the social psychology and cognitive psychology literature to try to explain it.

Q Another heuristic that you mention on Page 692 is availability heuristic. Could you explain that one? I take it that's another subset of the judgmental—

A Right.

Q -- or judgment heuristic.

A In this case, availability simply refers to the amount of—of thinking effort you have to put into coming up with an example, and so lurid examples pop to mind much more frequently and easily, and it takes less effort to think of them than more mundane ones, and so if you were to ask people, you know, "What's your biggest fear of being killed in a transportation accident?" most of them will probably say, "Oh. Airplane accidents." You know, "Terrible, terrible things," but if you actually look at it, their chances of being killed driving home any given night in their automobile over the lifetime of travel and so on are much, much greater, but this is a mundane, everyday sort of thing that doesn't have that same emotional impact, so it doesn't have the same availability.

So you will find the absolutely absurd thing of somebody who is afraid to fly, and hops in his or her automobile, and drives the same distance on their vacation when in fact the probability of being killed in an automobile accident on that journey is greatly increased over the probability of—of flying, which is actually quite a safe thing. I mean, when it goes wrong, it goes wrong in a big way, a dramatic way, a lot of expensive equipment and many, many innocent lives are snuffed, but in fact the real dangers of flying are far less than the dangers of driving an automobile.

So here again people make judgments. They—they make decisions based on how easily they can come up with an example which may not be a typical one or even a valid one given the base rate of—of the activity, or the risk, or what have you in the population at the time.

Q You mention, at Page 692, another cognitive twist: this problem of mistaking correlation for causation, and we have touched on that a bit earlier.

A Well, many times that—unfortunately in many cases, that's all we have because we can't do experiments where we can manipulate variables and prove that there is a causal relationship between "A" and "B", but many of the arguments that show up in the debates over the legality or illegality of drugs, and so on, are based on correlations and—in fact, one of the arguments against legality of—or legalization or decriminalization of currently illegal drugs is—is that there is a correlation between crime and drug use.

Well, there is, but the problem there is that all the data I'm aware of point quite unequivocally to the fact that drugs don't cause the crime. It's the illegality of drugs that causes the crime.

So, in other words, there's a correlation there, to be sure, but the crime rate, the violence, the other things that are typically laid at the feet of drug use as being the cause of them are, in actual fact, causes—or, sorry, are, in actual fact, caused by the black market and the necessary and expected consequences of trying to prohibit the use of those drugs and that a lot of those things would disappear if—or at least be greatly ameliorated if the illegality were removed.

MR. CONROY: There's a couple of other areas arising out of the paper that I intended to—to ask him about and then conclude with the part on how to avoid it. I'm in the court's hands. It's going to take probably more than fifteen minutes to do that, so—

THE COURT: All right.

MR. CONROY: -- if you want to take the break now—

THE COURT: We'll take the afternoon break. Before we do that, I would just like to ask the question myself, if I could. In terms of social science methodology, is there a point at which correlation is so prevalent, and so consistently prevalent and so strong that the conclusion that one could logically draw is, well, we should at least act as if there is a causal relationship here, or are we always stuck—

A Logically, we're always—we're always stuck with the problem that correlation can never imply causation, but what correlations are valuable for is generating hypotheses that could then be tested in another kind of paradigm that would allow a—a causal connection to be made, but certainly the higher the correlation, the more cause for concern and, you know, something should be paid more attention to, and that sort of thing, but—but there is always the possibility that you can have a very high correlation between two variables that, in fact, both are the effects of a third cause that's out of sight.

So you could be attacking one as the presumed cause of the other and, in actual fact, both "A" and "B" are the result of "C", which is hidden in various, sometimes quite subtle ways.

THE COURT: I realize that there is always the possibility of an error being made in drawing inferences from very high and consistent correlations, but in terms of running our everyday lives, for example, do we not act upon those correlations as giving rise to reasonable probabilities that should dictate how we behave?

A Yes. In fact, that's essentially what those cognitive and heuristic biases are is—is using just exactly those kinds of things and as I said before, they're right enough of the time that we fall into the habit of thinking that they are logically valid and sustain a greater degree of confidence than they really ought to, but it doesn't mean that—I mean, correlation does not mean that there isn't a—isn't a causal relationship either. In fact, often there is.

It's just that we need more information than just the correlation in order to do that, but, yes, in terms of how we—we lead our daily lives, very often correlations are useful information that we should pay heed to.

THE COURT: Well, in fact, we might find ourselves paralysed in terms of action if we didn't rely upon them.

A I think that's a very good point. In fact, Daniel Connoman (phonetic), the man who—he and Amos Diverski (phonetic) were the two people who had initiated this whole area of research called cognitive heuristic biases and that's almost exactly what—what they said is that—that we are, as human beings, probably evolved to work that way because if we didn't, we probably would be paralysed; that we don't often have the luxury of knowing all the information we need to know or the time to sift it and draw what would be logically valid conclusions from it, and that these quick heuristics are not wrong all the time.

It's just that in certain situations, they can be—they can be quite wrong or lead to quite wrong conclusions, but in other ones they may turn out to be valid conclusions and useful for guiding everyday actions.

MR. CONROY:

Q And just in—in fairness, in your paper you point out that these are factors to be considered not only by those who are in favour of the continuing regime that exists in terms of drug prohibition, but also for those who wish to see that reformed in terms of what they put forward.

A That's right. This—this whole paper could be typified as a—a cry against dogmatism, really, in saying that dogmatism got us where we are and what it's asking for is cautious experimentation, and always

with the realization in the back of our minds that—that any policy that looks good on the surface can go awry and it's the inability to change, and to abandon, and improve things that has led to staying the course on so many really ill-conceived things, and this is an admonition to reformers that while we can agree that the status quo is wrong-headed, all of our solutions may not be perfect either, and that dogmatism is the real problem, and that we shouldn't get caught up in the same kind of rut that we can't get out of; that we should enter into experiments with built-in evaluation measures in them so that when they are unfolding, we will have good information and if what looked like a good way to proceed turns out not to be that we won't be too proud or too pig-headed to say, "Well, sorry. That wasn't the optimal answer after all. Let's go back and try another one. Let's find the best social policy that does the least harm and creates the most good."

Q I take it then one ends up acting though on evidence as it presents itself instead of waiting for the evidence to appear over a great number of years.

A Well, when it becomes fairly clear that what you're doing is counterproductive, then that's the time to reassess, and re-evaluate, and probably change directions.

THE COURT: All right. Thank you. Fifteen minutes.

(WITNESS STOOD DOWN)

(PROCEEDINGS ADJOURNED)

(PROCEEDINGS RECONVENED)

THE COURT: I apologize for the delay.

MR. CONROY: We have managed, Your Honour, to get May 27th and 29th for continuation dates.

THE COURT: The 27th and 29th?

MR. CONROY: Yes, just in case we need it, and if Your Honour just tells us when you need to go.

THE COURT: All right.

BARRY LANE BEYERSTEIN, recalled, testifies as follows:

EXAMINATION-IN-CHIEF BY MR. CONROY, continuing:

Q Professor, we're dealing with the article, "On Avoiding Folly" and I had just dealt with the correlation-causation issue. You then talk about distortion of reality to fit world view. A brief comment on that?

A Yes. Probably one of the most well-supported areas of research in—in social psychology concerns the area known as cognitive dissonance and—all right?

Essentially, cognitive dissonance is the name that social psychologists have put on this—this widespread human tendency to—who distort information to make it comply with their heart-felt desires, wishes, beliefs, et cetera, and so even when facts are fairly clear, it is still a widespread human tendency to filter them through those—those biases in ways that fit preconceived notions and make them—shoe-horn them, in fact, to make them support prejudices that—that we already have.

Q You then talk about mental compartmentalization.

A Yes. The whole issue of cognitive dissonance is based on a—a well-supported theory that says that most of us like to be consistent in our views so that we don't hold views in one area that are blatantly contradictory to views in another area, or that we don't believe facts in one area that contradict emotional feelings that we have somewhere else, and that we try to maintain some kind of stable dynamic in our world view, and—and when things come along that can't be shoe-horned or bent out of shape, as I was describing in answer to your previous question, then this is really disquieting to all of us.

Another frequent defence mechanism is to push it away, to sort of redefine it as something other than what it seems to be and irrelevant to the things that it really does impinge upon, and it's always been a fascinating interest of mine to see how people can hold antithetical views that are obviously contradictory to outsiders, but don't seem to be to them.

So, you know, I said earlier that most of the people that advocate strict drug laws, and prosecution, and so on are not evil people. They're not mean-spirited people. I mean, they want to do the right thing and yet they seem unable to reconcile the idea that pursuing that can actually do bad things to people, and so they're able to compartmentalize that information and not really see that it

contradicts the humane values that they share with me and most other human beings in another area.

Q Self-serving delusions is the next topic that you mention.

A That's essentially the same kind of thing, that when people's own self-image, self-worth, self-definition becomes attached to a particular idea, or position, belief, whatever, then attacks on the belief implicitly become an attack on the core of the individual and that, of course, is going to be psychologically disturbing as well and there are strong psychological pressures again to distort contrary information, no matter how firm it may be, so that it serves that self-preservation or preservation of one's sense of self, and ego strength, and so on.

Q You then refer to quantitative ineptitude.

A Yes. The mathematics professor, John Allan Powliss (phonetic) has written several excellent books on what he calls "innumeracy" and innumeracy is the mathematical equivalent of illiteracy.

Many people in our society have a great deal of trouble—it seems to be a failing of our education system, perhaps—in drawing facts from figures; that they tend to put extraordinary weight on absolute numbers of things but be relatively unaware of the fact that those numbers are only meaningful if you know what those numbers are in proportion to the total number of possible cases.

So if you have a large number of people who—who are showing some kind of adverse effect from a drug, for instance, that's interesting and those people need to be helped, of course, but whether we should become alarmed about it or not depends on what portion of the total drug-using population would ever get to that sorry state. If it's small, well, then we treat those people with compassion and with the best scientifically validated treatments available, but it's not cause for major social realignments, or changes in policy, or something if they are indeed small.

So that's one example, but Powliss has many in his series of books showing that the inability to deal with numbers leads people very often to—to error in thought and to making wrong decisions because of it.

Q You then go on to deal with social and organizational factors in poor decisions, and you mention again judgmental heuristics and self-deceptions. One that you specifically focus on is false consensus effect.

A Yes. This is part of an area that has come to be known as "group think"; that policies are practically never made by individuals, except in the case of absolute tyrants, and so there always has to be a process of jockeying for position and a process of consensus-reaching, but this is often done in a group where there are unequal power relationships, unequal command of data and knowledge that's relevant

to the question at hand, and—and there are all kinds of unwritten social rules of discourse that are actually quite good that help us to avoid conflicts and get along amicably with our fellow citizens in many other situations, but paradoxically turn out to be counterproductive in a lot of these decision-making processes.

The Yale psychologist, Irving Janis (phonetic), made a—a career out of studying these kinds of bad decisions that were reached by groups of individually intelligent, well-educated and decent people, and what he was showing was that despite those good attributes of the individuals that made up the group, the dynamics within the group were often conducive to leading them to decisions that were not well considered, that were not humane. In fact, they are sometimes foolish and quite inhumane.

The false consensus effect is just one sub-area of that where people again, because of the dynamics of—of how they will state their position, and how they assume other people are reading them, and what their positions might be leads to the fact that the groups making decisions often come up with a more radical approach than any of the other individuals would individually have—have reached on their own, and it's this false consensus that leads them to think that everybody else is going in a certain direction, and it's usually beyond where I am, and—and that's one of the things that leads to ill-considered decisions that lead to folly.

Q The balance then of your—of the paper deals with "On Avoiding Folly", and so I suppose the question is how do we avoid some of these problems that you have just described.

A That's right. Well, your knowledge is power and from the work on group think, and cognitive heuristics, and things like that, people have said we can analyze past mistakes and see how these things contributed to the—to the bad decisions, but maybe we could train people. Maybe we could select individuals. Maybe we could put in place institutional guidelines, rules, reconsideration processes, and so on that will—I think it would be foolish to think we could eliminate all of these things, which are really the consequences of being human. I mean, that's really what we're talking about here, but that could restrain them and could make some of the more egregious errors less likely.

So it's essentially going through the list of things that you have already alluded to and say, "Well, what could we do that would ameliorate that? What could we do that would cause people not to act in this way or if they act this way, to mitigate the worst excesses of acting that way?"

Q As I think I had pointed out to you just before the break or mentioned before the break, you're saying that this applies not only to the people who are in positions of authority that are promoting a

continuation of this existing drug law/prohibition as it equally applies to those who are trying to change the drug laws.

A That's right. It's an appeal for awareness of—of these all-too-human frailties that got us into this morass and to not repeat old mistakes because that's essentially what this is a litany of old mistakes that keep coming up time and time again, and probably the most common one being what I call "the cost fallacy" here: the idea that because you put a lot of effort, in some cases, a lot of lives even as well as your treasure into a particular project, when it goes sour or there is a very, very strong and self-serving bias to justify it at all costs and—and the pressure is to stay the course no matter what, that—that to convince yourself that—that it didn't fail because it was a bad policy. It failed because we didn't pursue it vigorously enough and wholeheartedly enough and that all we need is just a little more of the same. More effort along the same lines.

Given that this is a human characteristic that's been very prevalent in history, I don't see any—a reason that people who I think might propose those things that I would like to see tried as experiments that I think would be better than the status quo would be any less likely to persist if those turned out to be ill-conceived, and so I'm saying, you know, we all suffer from this and please be careful. By all means, experiment. It's unlikely it could be worse than what we've got now, but be aware of the fact that tinkering and maybe wholesale realignment and change may be necessary in any reform. Don't let it get entrenched and fossilized to the point where you can't back out when it's clearly working against the stated purposes of the policy.

MR. CONROY: Would you answer any questions my friend has, please?

A Certainly.

CROSS-EXAMINATION BY MR. DOHM:

Q Professor, the—the Hall Report is a matter that has received quite a bit of attention over the last few days in evidence and I understand from your evidence, and I would—I want to confirm that you generally tend to agree with the Hall Report.

A Not in all respects, but they generally have done a good job of summarizing the evidence.

Q You would agree with me that the contributors to the Hall Report are international researchers with expertise in their areas?

A Yes.

Q Many of them are people of some substantial stature in the medical and in the scientific communities?

A Yes.

Q In fact, a paper like the Hall Report generally looks to those who are seen as being leading figures in their—their own field.

A That's true.

Q Thank you. You would agree that the Hall Report is generally a fairly current document, especially in the nature of social science. It's only two or three years old.

A Yes.

Q And it's quite a thorough document?

A Yes.

Q The World Health Organization is an organization of which we're all aware. I assume you would agree with me that that is an organization held in good regard in the scientific community.

A Yes and no. It's also a political organization run by national governments with axes to grind and particular reasons to push certain agendas, and therefore it's not held, in the scientific community, with the same high regard that some of the more independent organizations are, but—

Q It's like any other organization in the sense that it consists of members each with their own point of view and different competing goals sometimes to promote.

A That's true.

Q Now, the Addiction Research Foundation and the World Health Organization put together a paper in 1981 that you're familiar with.

A Yes. It was part of your brief, as I recall.

Q Yes, and that was a very thorough review of the world literature in 1981, I take it.

A I think so. Yes.

Q In fact, it was so comprehensive that the Hall Report did not even try to extend to that breadth.

A It accepted the findings as they stood. Yes.

Q The Hall Report suggested that of the major health and psychological effects of chronic heavy cannabis use, the major probable adverse effects appeared to be respiratory diseases. I'm sure you will agree with that.

A Yes.

Q Secondly, the development of a cannabis dependent syndrome?

A That one, I disagree with.

Q No, but you agree that that's what the Hall Report concluded.

A Yes.

Q Okay, and the Hall Report also concluded that one of the major probable adverse effects appeared to be subtle forms of cognitive impairment, most particularly in retention in memory, which could persist while a user remained chronically intoxicated and may or may not be reversible after prolonged abstinence from cannabis.

A They said that, but I disagree with some aspects. If they're talking about acute use, I will go with that. The long-term ones are a lot more controversial, but that is their conclusion. Yes.

Q But they are a body of recognized international scientists who have come to those conclusions honestly and of good motive.

A Yes.

Q The Hall Report also identified certain high-risk groups. The first high-risk group identified was adolescents, especially those with a history of poor school performance.

A Yes. That would agree with the Shedler Report as well.

Q The Hall Report also indicated that women of child-bearing age are a high-risk group.

A Yes.

Q And they indicated that persons with pre-existing diseases including cardiovascular disease, respiratory diseases, schizophrenia, and those dependent on alcohol and other drugs are a high-risk group.

A Relatively.

Q That was their—that was their finding. Right?

A That's in their summary. Yes.

MR. DOHM: Thank you. I note, Your Honour, it's about four minutes to and I'm thinking that it might be advantageous—if I get myself organized, I'll probably pick up the time in the morning.

THE COURT: That's fine with me. We will adjourn then until 9:30. Will this gentleman be back? You'll be back tomorrow morning?

A Yes, I will, Your Honour.

MR. DOHM: Should the witness be given the customary caution, please?

THE COURT: Yes. I will do that. You are now under cross- examination. I don't know if you're familiar with that; what that means. That means you're not to discuss your evidence with anyone at this point in time—

A Yes, Your Honour.

THE COURT: -- including your own lawyer. All right. We will resume at 9:30 tomorrow morning.

MR. DOHM: Thank you.

(PROCEEDINGS ADJOURNED TO 1996 MARCH 14 AT 9:30 A.M.)