

1 FOR GENERATIONS

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18 *reviewed in the SFU Archives located at the Burnaby Mountain campus.*

19 Introduction by Professor Cook

20 You're probably aware by now that we've had a change in plans. Dr. Keenleyside, who wants to be
21 here this evening, is feeling ill. He actually did come over this morning, but on doctor's orders he had to
22 return. I don't know what the affliction is. Dr. Keenleyside, of course, was to have talked on the
23 development of the Columbia River. Thanks to Dr. Neil Swainson, we were able to salvage this evening,
24 and I know he'll have some very useful things to say.

25 Neil Swainson is a professor of political science and was chairman of the department of political
26 science at the University of Victoria. He was president of his faculty at the Westwater Research Centre at
27 UBC. Neil Swainson's claim to fame is that there's probably no one who has done a more comprehensive
28 study of the Columbia River Treaty, certainly not focusing on the political and administrative aspects. His
29 study, which was part of his doctoral dissertation completed for Stanford University, is entitled, "The
30 Canadian Approach to the Development of the Columbia River: A Study in Political and Administrator
31 Behaviour." The title of Neil's talk is this very imposing title, "Fact, Fantasy, and Lessons Related to the
32 Columbia River Treaty Experience."

33 Fact and Fantasy: Well I thought some of you might have noticed, some of us in university might
34 have noticed, that in this evening's Peak [...], and then on the page a song that tells a story. The song that
35 tells a story is a band song [...] from 1964. Some of you may know the song, but I thought it might be
36 appropriate to just read you the contents of the song.

37 There are 7 wonders in this world, their names are known quite well.

CRT Lecture 6: Dr. Neil Swainson

38 From Babylon Gardens to the Sphinx, the ancient stories tell.
39 But now the greatest wonder is the folly in our land.
40 They sold us down the river with the new High Arrow dam.
41 Four miles up from Castlegar, the Columbia will be dammed,
42 and the water that we store there controlled by Uncle Sam.
43 This sets my mind wondering just what the fate will be,
44 of the big Columbia River and the Rockies of BC.
45 We could divert the Kootenay into the Columbia Lake,
46 by way of Thompson River and on down through Hell's Gate.
47 We could build a mighty complex of levies and dams,
48 and manufacture Canada's ores instead of Uncle Sam's.
49 It's not that we're afraid, we've never been before.
50 We've been trying to stand by ourselves since 1864.
51 And now upon this issue, we all should take a stand.
52 Canada for Canadian's, this land is our land.
53 Is this land your land? Or is it their land?
54 This land was made for you and me.

55 I know that Neil will want to take with the hypothesis that hides behind that view. I give you Dr. Neil
56 Swainson.

57 CRT Lecture 6: Dr. Neil Swainson

58 Mr. Cook, ladies and gentlemen. It's a pleasure to be here, even though I did not expect to be here
59 this evening, and can only say I would have been happy if Keenleyside was not taken ill – I might have
60 been slightly more ordered in what I shall say to you tonight had another week passed. But that's neither
61 here nor there. I hope Keenleyside is better shortly. Incidentally, Mr. Chairman, I forgot to tell you as I
62 came in that I parked on a parking metre. I don't know whether that can be used to balance off the poem or
63 not but I promised myself I would tell you at the time, and I just now recall it.

64 In a sense, the little poem that was read a moment ago makes a reasonable introduction to what I
65 have to say tonight, for I entitle my remarks: Fantasy, Fact, and Lessons to be derived from, or associated
66 with, the Columbia River experience. Deliberately, and not all that willingly, I would have much preferred
67 to spend this evening discussing the first and second parts only of that trilogy of fantasy and fact, because
68 that's what public interest fundamentally is associated with and concerned about. What the debate is about.
69 What I have noticed nearly all the questions in your series here this spring have centred on. Although there
70 are one or two people who sit over there in that corner who I noticed have always, and very properly, tried
71 to bring the speakers around to part three of the trilogy. You know what is to be derived or earned from the
72 entire experience. As it seems to me, this is really where we ought to end up, particularly in a university
73 class which is, I presume, working or reworking this exercise both with a view to [gain] historic insight,
74 and also with a view to [gain] some familiarity with what the realities of a principal process, the policy
75 making process, really are. It is stage three that I think university audiences should be primarily concerned.
76 So I am going to try to discipline myself, I've put my watch down here, and by a quarter past nine at the

77 latest, I'm going to have to cut myself off from anything that I have to say about part one.

78 I think it is incontestable that the public dialogue associated with the background to the terms of,
79 and subsequent evolution of, the Columbia River Treaty has been a major exercise in irrationality. I say this
80 not because I have a bias between public dialogue and debate, I can assure you I haven't, but because the
81 last 40 years, and in some respects [longer], has featured a series of claims, [which were] advanced with
82 escalating intensity by public and non-public figures, whose willingness to be categorical and often
83 hyperbolic seems to have been positively correlated so often with their unfamiliarity with really what they
84 were talking about. Phrases such as rip-off, swindle, crime, servitude on Canadian sovereignty, and
85 skinned-alive, which are very familiar to you as students who have been reading I understand much of the
86 literature, have been so freely banded about for a decade now and more, that there is a wide spread
87 uneasiness in this country as to what actually happened between 1959 and 1964. And indeed, I remember
88 very well that 3 or 4 weeks ago a gentlemen, sitting somewhere in this section of the room, making the
89 point that there just had to be some fire where there had been so much – if you like metaphors – smoke.

90 Well, you know this is a human construct and as is the case with all human constructs, it's not by
91 any means a perfect one, but my impression after spending much of a decade re-working the policy
92 information exercise and trying to understand the constraints which were operative at the time the decisions
93 were taken. And after all, historically, this was the only intelligent and fair way to assess any act of
94 decision. It isn't nearly as bad as so many have made out. As indeed the vast majority of the claims to
95 which I have already referred are based on either a misunderstanding of what the Treaty itself says, or a
96 misunderstanding of the options which were available to the decisions makers.

97 The widespread dissemination of so much ignorance and misinformation would be really rather
98 laughable if it were really not so sad. Not least because, in the first place, this country simply cannot afford
99 the luxury of assuming that one has to wrap oneself in the toga of Canadian nationalism to be entitled to
100 really play freely with the truth. Secondly, it would be laughable were it not so sad that in the process many
101 public and private figures who really did their best for this country during these negotiations have been, I'm
102 convinced, really quite unfairly maligned on a complex and difficult situation, even though you will
103 discover in the next hour and a half that I'm very critical of some of the things they did. Thirdly, and I think
104 perhaps most important of all, I find the post-1964 dialogue so sad because the questions which really
105 ought to have been asked have not been asked at all. Or if they had been asked, they've been largely slurred
106 over.

107 So what I proposed to do when I started to put my thoughts together rather quickly this afternoon
108 was to pick up perhaps two widely enumerated criticisms of the Treaty itself. Two related to the period
109 prior to the signing of the Treaty in January 1961, and two related to the period from 1961 to 1964, taken
110 out of at least 30 major claims and comments, usually critical, which I have identified with the pre-Treaty
111 period, the post-Treaty period, and the document itself. And to reflect on them for a few minutes really to
112 try and substantiate the first position I have taken. But there is a lot of fencing. Then I propose to go on to
113 reflect on the lessons.

114 I think probably as good as any place to make the point that there has been much misunderstanding

115 with respect to what Canada got out of this agreement, is to talk for a moment or two about the flood
116 control benefit. This has been very much in the news recently and featured in a good many newspaper
117 articles. Just 6 weeks ago the fairness, the adequacy, of the flood control benefit which Canada received
118 was assessed very negatively in a major public speech in this town by a very prominent public figure.
119 General McNaughton often advanced this same claim: that we had a servitude on our sovereignty imposed
120 by this provision, amongst others. His biographer, Mr. [John] Swettenham, for example declares very
121 bitterly that it would have taken the Americans at least \$500 million dollars to have provided alternative
122 arrangements, providing an alternative flood control, for which Canada got \$64.4 million US dollars. In
123 Canadian terms, and taking into account some bonuses which we got for early completion, we got \$70
124 million dollars and a prepayment when the Arrow and the Duncan projects were completed, for a
125 downstream flood control benefit which we provide the United States.

126 What is frequently overlooked in discussing this particular subject is the fact that the International
127 Joint Commission, which in 1959 as several speakers have pointed out to you, did outline a series of
128 principles defining the matter in which downstream power and flood control benefits might be identified
129 and secondly how they might be divided. What is frequently overlooked is the IJC principles, and flood
130 control principle number 3, suggested that the flood control benefit be recognized as the estimated annual
131 value of the flood damage prevented, not the cost of providing alternative means of preventing the flood
132 control damage. So the Treaty negotiators the following year took the advice of the IJC. The moment you
133 move the argument from damage prevented to alternative measures, you're suggesting somehow that the
134 Treaty negotiators should have turned around and told the IJC that in 1959 it didn't know what it was
135 talking about. Now there is nothing to absolutely force the negotiators to follow the IJC's advice, but they
136 would've had to have a pretty good argument for not doing so, and in this case one didn't seem to be
137 available.

138 Canada, as I think you students know, is credited with 50% of the estimated monetary value of the
139 damage which is prevented. Incidentally 50% is an interesting figure, which I'll come back to and discuss
140 in just a moment. It [too] was suggested by the International Joint Commission and its principles. If you
141 want to check on the detail, and really quite complex calculations which went into determining the R64.4
142 million US dollars, you [can] look up the government's green book, published in February 1964. You will
143 find there a very good [description], and very fair statement, of the way in which the technicians actually
144 came up with a figure. In any case, there is point one. The flood control benefit was identified, and defined,
145 and derived virtually as the IJC suggested it be derived.

146 Much misunderstanding has stemmed from a failure to recognize that Canada provides only a
147 relatively small part of the operative flood control in the basin, particularly the flood control which
148 generates the primary flood control benefit as it's called. The figure varies, I estimate it to be roughly 25%,
149 and some people who are working on the Treaty all the time, [who] work on it for a living, put the figure as
150 low as 23 or even 21%. In any case, roughly 75% or perhaps slightly more of all the operative storage for
151 flood control is provided on the United States' side of the border.

152 Now our anonymous public figure, to whom I referred 10 moments ago, in his speech to this town,
153 said something like this. (I did not hear the speech; it was simply reported to me.) He said that the US

154 Army Corps of Engineers recently estimated that in 1972, had it not been for Columbia River storage, the
155 River would have done \$213 million dollars worth of damage. We got 64.4 million US dollars, or slightly
156 more than that, on a one-shot payment. Yet, we were supposed to get half of all the downstream benefit
157 created, generated, or produced by our storage. How come? This surely must be a typical example of a way
158 in which our resources were used in a profligate manner. Our representatives were very poor fiduciaries.
159 But you see what this [public] figure, whose staff assistants I'm sure prepared this analysis for him, really
160 did not appreciate [was that] at least three-quarters of the storage, perhaps more, is American storage. And
161 there's no reason why the Americans should pay us for the flood control that's generated by their own
162 dams. So you better take that \$213 million dollar figure, and all of a sudden pull it down to something
163 between \$43 and \$53 million dollars - a bit of a difference. That's the value of the damage, presumably
164 which the Canadian storage prevented, in 1972. Incidentally, 1972 was a year of extraordinarily high
165 runoff, perhaps the greatest runoff in the 20th century, just two years ago.

166 The second thing to keep in mind is that the International Joint Commissions principles suggested
167 that Canada be satisfied with one-half the monetary value of the [avoided] damage provided by Canadian
168 storage. So you take this figure ranging from \$43-\$53 or more million dollars and you split it in half, and
169 you are down to let's say something of the order of \$25 or \$26 million dollars. Now you've ended up with
170 a figure that makes some sense and is some way associated with reality. We got the \$70 million dollars by
171 1968 really, when the Duncan and Arrow dams were finished. We're now talking about 1972. By that time,
172 that \$70 million dollars had compounded to something of the order of \$90 million dollars. We got a
173 prepayment you realize. The consequence: we got a prepayment before the Americans had enjoyed any
174 benefit at all. The consequence: well, we were in a position to invest it. So we've already got a present
175 worth, sorry a value, at the moment of something of the order of \$90 million dollars out of this flood
176 control payment. The \$213 million dollar figure simply has no relationship to the reality of the situation at
177 all. Yet this is typical of the claims which have been so widely advanced in the last 10 years, and which I
178 say this with amusement more than anything else, that have inspired the type of poem which we started
179 with a few minutes ago.

180 Does this mean that the downstream flood control benefit is reasonable? Substantially, on the
181 whole, yes, although the IJC's discussion of its own principals referred to a US Army Corps of Engineers
182 report which took the 1894 flood as a reference point. Although the negotiators carried on from this
183 reference in 1960 and made the 1894 flood the reference point against which they calculated the value of
184 the downstream flood control benefit, the flood in that year incidentally was the greatest on historic record,
185 the greatest flood in 100 years, a statistical probability of not more than one in 100. Many critics have
186 argued since, including rather remarkably General McNaughton, that the negotiators should not have been
187 satisfied to calculate the gain which Canadian storage generates on the basis of an 1894 flood. General
188 McNaughton himself once said that he referred to 1894 only in an illustrative basis, and perhaps Canada
189 should be rewarded for stalling the damage which a flood half as great again might produce downstream.
190 But you know what the statistical probability of a flood [one and one-half times] as great as the 1894 flood
191 is? It's one in 10,000 years. Every 10,000 years! I think the figure speaks for itself.

192 This does not mean that some reasonable questions cannot still be raised about the flood control
193 benefit. One fairly raised, incidentally by the public figure I referred to a few moments ago, concerns the

194 fact that the principles talked about an estimated damage - the Treaty obviously referred to an estimated
195 damage - yet clearly property values in the United States have escalated since 1960. And the question that
196 is legitimately raised is: Aren't we, under these circumstances, losing out? Well, in a way. I suppose in a
197 way we are, but stop and think for a moment. We've got a prepayment, which means we received a flood
198 control benefit that incidentally was calculated on the basis of discounting estimated damage all the way
199 though the 60 year life of the Treaty right back to the present, the present then being 1960. We got this
200 flood control payment when the projects were completed. And the moment we got the money, we were free
201 to invest it. So that, you can argue I think very sensibly, once the money was in our hands we were able to
202 invest that money in interest rates of an escalating amount that quite clearly reflect the inflation, or
203 increase, in property values.

204 There is however, an inflation of which is not covered in that way, and that is the inflation that
205 really took place during the 1960s prior to the completion of those two storage dams, Duncan and Arrow.
206 The inflation, if you like, between 1960 and 1968. There wasn't very much inflation up until 1963. The
207 younger members of the audience will find it hard to believe that the inflation rate in this country was just
208 over 1%, but that's the truth in 1960/61. It's a different age. But the situation did change after 63/64, and
209 the flood control benefit payment does not cover that. There's no doubt about it.

210 But I can say this, when the Canadian negotiators sat down with the Americans in 1960, one of the
211 things they were able to do was to persuade the Americans to equate the flood control storage we were
212 providing, essentially our own Duncan, with the existing 10 million odd acre feet of storage built in the
213 United States - the base system storage. Now if you have learned anything at all from reading Dr. Krutilla's
214 book, his articles, and I gather they've been on your reading list, you must surely be conscious of the way
215 in which the law of diminishing returns applies to the value of storage, both for the generation of power and
216 for the provision of flood control on a major and complex international river, or indeed a domestic river.
217 That simply means that successive identical increments of storage do not produce successively identical
218 increments of value. Each additional increment of value gets smaller and smaller and smaller. Our flood
219 control facilities, the 4.6 million acre feet of flood control which we actually do provide that wouldn't have
220 been there otherwise... are over-estimated to the tune of about 30% simply because of the fact that they get
221 first added credit. But they're not first added. There were 10 million acre feet of American storage there
222 before us. This, I think we knew quite well, compensates for the inflation that took place in the years 1963
223 to 1966.

224 The best criticism I know of, that can be levied at the flood control benefit, ironically is directly the
225 result of a decision taken by General McNaughton in February 1959, although the General himself was
226 subsequently to be the greatest critic of the flood control provisions of the Treaty. In that month, February
227 1959, just as the IJC was beginning to negotiate on the principles, the General was the Canadian section
228 chairman who presented the Canadian case, or what he thought should be the Canadian case. He outlined
229 what Canada should ask for and was asking for. In the process of this presentation, which had not been
230 cleared with the government of Canada or the government of British Columbia ahead of time incidentally,
231 he simply said that we would be quite satisfied to receive half of the downstream power benefit and one
232 half of the downstream flood control benefit.

233 If you stop to think of it however, there is an enormous difference between those two types of
234 benefit. There can be no downstream power benefit unless there is a downstream generator, unless there are
235 downstream dams and downstream powerhouses and transmission lines and all the rest of it. It's a two
236 party game. There doesn't need to be anything downstream to produce a downstream flood control benefit.
237 It's entirely produced, or it may be entirely produced, by an upstream storer. So you see, in logic, you can
238 argue for a good deal more than one half of the benefit produced by an upstream storer. Logic unfortunately
239 really doesn't help us very much here. There would be no point for the Americans returning all of the flood
240 control benefit. There would be no point going into the agreement under those circumstances. Logic really
241 doesn't tell us where the cut should be made. Incidentally, an economic committee, which Mr. [Larrat]
242 Higgins was the secretary of and which was solely a federal exercise in 1958, had suggested the same split.
243 So, the General had company in this suggestion. Apparently the economic committee first, and the General
244 who happened to be the chairman of the economic committee also, both came to the conclusion that a 50/50
245 split of the power benefit was as reasonable as anything else. Oddly enough, the provincial government in
246 British Columbia was always rather sore about that 50/50 split, and particularly unhappy about the fact that
247 it was made without its permission, or conceded without its permission, by the man that subsequently
248 claimed that the downstream power benefit wasn't nearly as great as it ought to be.

249 Well I've spent far too long on that particular subject, but it's important. It's something to keep in
250 mind. Incidentally, something else to keep in mind is that the Americans, as you know, have built the Libby
251 dam. They built it during the period of 1961 to 1964, or at least they started to build during this period,
252 when a great hiatus emerged between Victoria and Ottawa over the downstream power benefit sale. They
253 built a dam, on a tributary of the Snake, called the Dworshack dam or the Bruce's Eddy dam. These two
254 projects between them actually provide as much, if not more, flood control storage than we're credited for
255 and with under the Treaty. If, under any circumstance, we were to reopen the bargain with the United
256 States, the Americans could very readily say, "Well sure, let's go back to the base system which is, after
257 all, the base on which your benefit is calculated, but let's take a look at the fact that we've got here two
258 major dams, the construction of which we paid for almost entirely ourselves." Entirely, in the case of
259 Bruce's Eddy, and entirely, in the case of Libby, except for the fact that we paid the flowage cost in
260 Canada. Let's insert Libby and Bruce's Eddy into the base system. If they were to do that, they would have
261 a very strong case for saying, "You know, there's no flood control benefit any longer. We don't need any
262 more storage." And there our flood control benefit would go.

263 Ok, let me turn very quickly and briefly to the pre-Treaty period. Numerous commentators,
264 particularly Mr. Swettenham, [Donald] Waterfield, and [Ian] MacDougall, who's going to speak to you
265 next month, have emphasized the great value to Canada of Article 2 of the Boundary Waters Treaty in the
266 negotiation bargain itself of the Treaty with the United States, [specifically] stressing the importance of
267 retaining diversionary rights and the costs of limiting [those] diversionary rights. Such costs are in the
268 Treaty. We have agreed to hold off diverting the Kootenay into the Columbia for 20 years. The Treaty
269 [also] concedes that we can divert a much larger quantity of water, in effect virtually all the water behind
270 the Bow River dam, after 60 years, and after 80 years we can divert the water behind the Dorr dam as well.
271 These three gentlemen, and many other incidentally, also refer to the manner in which, with respect to
272 Article 2 of the Boundary Waters Treaty, the United States seemed to be prepared to invoke that clause of
273 the Boundary Waters Treaty when it seemed to be to the United States' advantage and then to set it aside

CRT Lecture 6: Dr. Neil Swainson

274 when it seemed to be in its own interest to do so. I can assure you that the Boundary Waters Treaty Article
275 2 is a complex subject. All sorts of seminars and lawyers, running over many days, have been held on the
276 subject of the right of the upstream state in an international watercourse to divert or the right not to divert. I
277 don't propose to do more than 2 or 3 observations, but I think very pertinent observations, tonight on this
278 subject.

279 No one in Canada, I think, can be absolutely certain as to why the United States, in the year 1959 if
280 not earlier (Mr. Hamilton suggested that it was personally ceded to him in 1957), agreed finally to attribute
281 to Canada, and then to reward her for, the regulation of the flow of the Columbia River. This is incidentally
282 what the Columbia River Treaty is all about. It's not selling water, it is an arrangement whereby we agree
283 under specified circumstances to regulate flow, and for [this] regulation under specified circumstances the
284 Americans agree to provide us with some recompense. In any case, it isn't clear to any Canadian why the
285 Americans agreed to that in 1959 when they were flatly opposed to a proposal in 1951. It was raised, as I'm
286 sure you've all gathered, in 1951 when the Americans applied to the International Joint Commission to
287 build the Libby dam. But I should point out to you that this was not the first time that it came to the
288 attention of Canadian decision makers.

289 One of the myths in the Columbia story is that General McNaughton is the father of the
290 downstream benefits case. That's just absolutely not true. I was fascinated to discover, in the files of the
291 government of British Columbia, a letter written in the spring of 1939 by Thomas "Duff" Pattullo, who was
292 the Premier [of BC], to William Lyon Mackenzie King, then Prime Minister of Canada at that time,
293 drawing to Mr. King's attention the fact that, if Canada were shrewd and wise, she might derive a very
294 considerable benefit from providing storage on the upper reaches of the Columbia River and suggesting
295 that Canada make an approach to the United States and perhaps bring the matter before the International
296 Joint Commission. It is perfectly obvious that Mr. Pattullo was being advised by people who knew all about
297 the downstream benefits concept in 1939. It's also interesting and quite obvious that Mr. King was advised
298 by the same type of knowledgeable people. Mr. King's advice to Mr. Pattullo was fascinating, but he said,
299 "Hold your horses; our position would be very much stronger if they come to us. No, I won't allow you to
300 directly approach the Americans now." And they did, of course, come to Canada in 1943 [after the] first
301 units at the Grand Coulee dam had just gone into operation. They had already begun to be perturbed about
302 the way in which, in low water months during the winter months, the river drops down. And this, of course,
303 was the beginning of the IJC reference in 1954.

304 In any case, this much is clear to me from 1945 on, the United States was loath to advance the
305 Harmon Doctrine. Now the Harmon Doctrine which Mr. MacDougall I'm sure will talk to you about, the
306 Doctrine, which in a sense enshrines the right of the upstream riparian in an international watercourse to
307 almost do as he likes, was an American construct. There was no question about this. The Americans
308 advanced this in a great row they had with the Mexicans in the 1890's [when Judson] Harmon was ~~the~~
309 ~~Secretary of State~~. [Editorial Note: Judson Harmon was actually the Attorney General of the United State
310 from 1895 to 1897 when he advanced the idea of absolute sovereignty.] And this was a time, you will
311 recall, shortly before the time when they had a Roosevelt coin [bearing] his famous phrase advising the
312 United States to "walk softly but carry a big stick."

313 The Boundary Waters Treaty incorporated that Doctrine in modified form in 1909 over the very
314 strong protest of the government of Canada. The government of Canada did not want it in there. The
315 Americans insisted. It's not in there in a completely unvarnished form because, if you know your Boundary
316 Waters Treaty, you'd probably know that there is a compensatory clause in there guaranteeing the
317 downstream state damaged by upstream diversion recourse to... and the same kind of compensation is
318 available to the courts now, and the same type of compensation is available to an upstream individual or
319 community or entity damaged by a still further upstream diversion in the upstream state.

320 However, I mustn't get lost in this. The point I want to make is this. From 1945 onwards, the
321 United States were loath to advance the Harmon Doctrine, which, when you stop to think of it, is an
322 assertion of ostensible law which could have very horrendous consequences for downstream riparians. In
323 that year the Americans, after many, many years of negotiations, arrived at a new Treaty with Mexico. Two
324 [treaties], as a matter of fact, involving three important water sheds. The Rio Grande was one, and the
325 Colorado was the second. And the United States did not invoke the Harmon Doctrine in that agreement.
326 Subsequently, in the late 1940s and early 1950s, the Doctrine was abandoned, in fact, in US domestic
327 adjudication.

328 Now it is true, and this point is often made in literature on the Columbia, that the United States
329 advanced it, at least advanced Article 2, invoked Article 2, over the diversion in the Waterton-Belly
330 Reservoir [in southern Alberta]. Mr. Swettenham, General McNaughton's biographer, suggests rising to
331 General McNaughton's bait. It's also true that, and this is of more direct relevance to the Columbia, the
332 United States did invoke Article 2, which in effect guarantees the right to the upstream riparian to divert
333 waters arising within its own country as it wishes. With reference to the Pend d'Oreille, a famous Waneta
334 application. But let me show you something which is almost never drawn to public attention.

335 The Americans advanced their application to build Libby dam very early. I've forgotten the month
336 now, February I think in 1951, the government of British Columbia and to some degree the government of
337 Canada also decided right then and there, in fact they decided sometime before this, that Libby would have
338 to be the test case. And that until the Americans were prepared to concede broadly the merits of the validity
339 of a downstream benefit claim with reference to the entire Canadian Columbia watershed, there would be,
340 there could be, simply no agreement on clearance on Libby. And the consequence was that BC and Ottawa
341 in 1951, and subsequently in 1954 when the Libby application was filed again, simply stonewalled. And the
342 Libby application was tied up in knots from 1951 right through, indeed until, the Treaty was negotiated.
343 For two or three months after the Americans applied to build the Libby dam here, they actually applied to
344 build the Libby dam around the corner here it was moved a few years later, just two or three months just
345 after the Americans apply to build Libby Canada decided to stonewall on the Libby application because the
346 Americans were not prepared to concede the generalized downstream benefits case.

347 Incidentally what the Americans said was, "We'll pay all the monetary cost of clearing the
348 reservoir in Canada." They said, "We will not demand any share of the very considerable downstream
349 benefit which Libby creates in the lower reaches of the Columbia here in the Creston Flats, all the very
350 considerable benefit that's created downstream between Nelson and Castlegar." They said, "We're well
351 aware of the fact that by flooding out 42 miles here in the United States we're depriving Canada of the

352 capacity to generate some power,” but their argument was that this was more than made up by a greatly
353 increased capacity to generate electricity between Nelson and Castlegar, which is being of course realized
354 now with the building of the Kootenay Canal plant which will be in operation next year. That’s the position
355 the Americans took. In any case, this isn’t my point.

356 My point is that three months after that application was filed, the consolidated mining and smelting
357 company filed with the International Joint Commission also because, like the Libby dam, [their proposed
358 development created] there was a small amount of flooding across the border. [It was] very miniscule, but
359 still there was flooding across the border, and that’s how the IJC got into this game - an application to build
360 a dam here on the Pend d’Oreille. Well, the Pend d’Oreille is a fascinating river. One tributary rises here,
361 and then flows down into the United States like this - the north fork. The south fork flows up in this
362 fashion. This is the Flathead River here. The Clark Fork River finally becomes known as the Pend
363 d’Oreille, spelled slightly differently in the United States. Here it’s a major river, a huge tributary as you
364 can see, flowing in this fashion. It flows for its last 15 miles before it joins the Columbia into Canada. So it
365 rises essentially in the States, most of it, and flows into Canada just for a short 15 mile period. But in that
366 period, it drops quite precipitously.

367 And Cominco was applying to build a dam at Waneta, just a very short distance upstream from the
368 junction with the Columbia. But there was not a single reference in the Cominco application to the fact
369 there already were several million acre feet of storage upstream, on the Pend d’Oreille, the Clark Fork, and
370 the Flathead, which regulation conferred a very major benefit on a potential generator downstream at
371 Waneta. There is a very considerable downstream power benefit created at Waneta, by virtue of existing
372 American upstream storage on the Pend d’Oreille. Now I’m absolutely convinced, in my own mind, that it
373 was the illogicality of the Canadians, on existing plants on the Kootenay, that there be a concession of a
374 downstream benefit case. But [it was] their complete ignoring of the major downstream benefit they were
375 about to enjoy at Waneta that choked [US] IJC commissioners like Roger McWhorter, and really which
376 prevented him, until he retired from the commission in 1958, from ever agreeing that the Canadians had a
377 legitimate case. He thought we were being outrageous. And if you stop to think of it, in a way, we really
378 were.

379 Let me draw something else to your attention however. The flow of the Pend d’Oreille, right here
380 at the border, is two and a half times or one and a half times as great as the flow of the Kootenay going
381 south over here. Much more water flows north here than flows south here. Those who have been greatly
382 concerned, Mr. Waterfield is one and my friend [Richard] “Dick” Bocking is another, about the Treaty and
383 about the fact that the Libby reservoir, which was created here, is very useful to the States and could
384 considerably produce sometime some benefit, who knows - heaven, who knows - all the way down in Los
385 Angeles, are inclined to forget that if we had decided to play the game really roughly, as the General
386 suggested we do, and had decided to institute immediately a 90% diversion of the Kootenay into the
387 Columbia, the Americans would have been just as entitled in international law, and in the Boundary Waters
388 Treaty, to divert the Pend d’Oreille, here, directly west into the reservoir of the Grand Coulee dam. They, in
389 short, could have bypassed that 15 mile stretch. They built a dam at the boundary called the Boundary dam.
390 They could have punched a hole in the mountains and the Boundary reservoir here, and generated 800,000
391 kW-yrs of energy. A very practical proposal. All I’m pointing out to you is that by no means all of the

392 physiographic trumps were played into Canadian hands. And yet, as Canadians we so often assume, they
393 were in our assessment and reworking of this particular Treaty.

394 Let me say a word finally about one of the consequences of the sale of the downstream power
395 benefit. I now moved to the post-Treaty period, 1964. The point is often made, and it's referred to in our
396 little poem, that the sale of the downstream power benefit enabled the American metallurgical refining
397 smelting industry to move ahead by leaps and bounds in a way that would otherwise not have been
398 possible. And in a sense, therefore, the sale was greatly dysfunctional. Jobs, in the jargon of 1964, were
399 "exported" to the States, which should have been returned or retained in Canada.

400 There isn't any doubt about the fact that the US aluminium smelting industry in particular, this is
401 what the reference is to, has expanded since 1964. Incidentally, it isn't nearly the employer that many
402 people think. The whole industry, and by far the greater part of it existed before 1964, only employs 11,000
403 people. It's been there since the late 1930s, but it's expanded since 1964. There's no doubt about this. And
404 the availability of power had something to do with the expansion. But if you've studied location theory as
405 economists at all, you're surely well aware of the fact that power alone is seldom the key desideratum to
406 locating the industry. And it's not even the key desideratum to locating this one. The availability of
407 excellent transportation facilities, this is a significant consideration. The operation and the availability of
408 markets is an equally important one. The location of a work force is a still further one. Perhaps most
409 important of all, and indeed undoubtedly most important of all in this particular case, the operation of the
410 US tariff. The Americans have deliberately kept a tariff around the United States with respect to aluminium
411 imports to stimulate precisely the kind of domestic smelting industry that they have wanted and they have
412 got. And they have got claims of this sort, and in any case that's really not my point, claims of this sort,
413 which my old teacher at UBC for many years [alluded] to. [Claims which] Mr. Swettenham repeats in his
414 biography of the General.

415 Somehow, otherwise assume that there was available to Canada an option whereby producing river
416 regulation, and again remember that's what we had to sell, we could produce in Canada cheap at-site
417 power. Cheap power at Mica and Downey and Revelstoke and the rest of them. Cheap at-site power and a
418 very reasonable downstream power benefit, but at the same time could produce a very expensive American
419 component of the downstream power benefit. The first thing to keep in mind is that there simply was never
420 any such option open to Canada.

421 There isn't any doubt about the fact that American power in the Pacific Northwest has sold at a
422 very reasonable price for a very long time. Those of you who know the American story well know why.
423 The building of the great plants which started in the 1930s enabled the United States to eventually
424 establish, by 1959, a network of facilities, many of which had been built during the depression years at
425 depression cost prices. Furthermore, the funding of these facilities was heavily subsidized directly and
426 indirectly by the US Treasury. As a consequence in 1959 to 1960, the Bonneville power system wholesale
427 rate for power was less than 3 cents a kWh. And I'm not sure to what extent it's over that figure even now.
428 There was an enormous low-cost base of power.

429 And this is something to keep in mind because it's a point that those who get terribly worked up

CRT Lecture 6: Dr. Neil Swainson

430 about the sale of the downstream power benefit forget. We sold our part of the downstream power benefit
431 for 4 cents US per kWh at the load factor that the Americans were actually going to use. They be-fond their
432 own public a little bit and said the price was 3.75 mills, but then they quoted an unrealistic load factor. The
433 price we got was about 4 mills for the realistic load factor, US cents, or about 4.25 Canadian cents, which
434 in those days were down around 92 cents to the American dollar, as you know.

435 Notice, incidentally, that I don't say we got 5.25 cents per mill for the sale of the downstream
436 power benefit. You can make an argument as Mr. Bennett did in 1964. It's very interesting to reflect on
437 this. Mr. Bennett was, I think quite rightly really, criticized in 1961 for exempting the downstream flood
438 control benefit from the calculations which the BC Energy Board and it's consultants were required to
439 make, comparing Columbia and Peace River power. And many critics of the Energy Board report
440 lambasted Mr. Bennett for that particular decision. The gentlemen who spoke to you last Friday night, I
441 gather Mr. Strachan was the one in particular, was always very wrathful about this consideration.

442 The fascinating thing is, and this is just a wry aside but I thought you might enjoy it, is that in 1964
443 when the Premier claimed he got 5.25 mills for selling the downstream power benefit, he really had his
444 critics impaled. And he was being a little bit outrageous because, if you stop to think of it, if he got 5.25
445 mills for the downstream power benefit, for each kilowatt hour including the value of the flood control
446 benefit, then he was really saying that he gave the flood control benefit away for nothing. But they had
447 lambasted him so vigorously in 1961 for having excluded the downstream flood control benefit in the
448 calculation of the value of the Columbia's development to Canada, that they were unable really to make
449 their case in 1964 on this issue. In any case, this isn't my point.

450 My point is this: the Americans paid 4 American cents, roughly, for each kilowatt hour of the
451 Canadian entitlement - the Canadian portion of the downstream power benefit. The rest of their domestic
452 power base was costing them something on the order of 2.75 cents per kWh. So actually, the sale of the
453 Canadian entitlement raised the average price of the US system somewhat, still not to a tremendous degree,
454 but it raised it somewhat. And you can argue this made the Americans a little less competitive than they
455 otherwise would have been.

456 A much more important consideration, because that argument doesn't appeal to me very much, is
457 this one. This year, 1974/75, this coming winter, the Canadian entitlement to downstream power benefit
458 will be at it's greatest. During this year it will amount to between 5 and 7% of the total amount of power
459 produced by American plants in the Pacific Northwest. Over the 30-year life of the sale, it will amount to
460 not more than 2% of the total amount of power produced by American plants in the Pacific Northwest. It is
461 readily apparent isn't it, under these circumstances, that whatever price Canada put on the sale of the
462 downstream power benefit would have had, and will have, virtually no impact on the US system price over
463 the 30-year period because of the magnitude of the system product in contrast to the Canadian entitlement,
464 which was sold itself.

465 Perhaps I should just comment on one or two other claims that proposed the Treaty [was flawed],
466 very quickly indeed. One, because this one is very important, one of the claims, which has been vigorously
467 advanced apropos the Treaty, that whatever its merits in 1960, and if you've read Mr. Waterfield's book

468 very carefully you'll find that, although he has reproduced very carefully his criticisms of 1960 and 1961,
469 he does say in one place, "You know that in 1960 it really made an awful lot of sense," you will find that
470 Mr. Waterfield, Mr. Higgins, Mr. [J.D.] McDonald, Mr. MacDougall, and many others, argue that whatever
471 the situation was in 1960, [it] was not the situation in 1963. The environment had changed dramatically,
472 and that the incompetence, really of the 2 levels of government in Canada, was demonstrated by the fact
473 that they simply did not appreciate the change in circumstances and have the agreement reworked. (I'm
474 horrified to see the CJR microphone. I hope that's not live.)

475 This warrants a comment or two. Let me tell you in the first place simply how the situation had
476 changed, and there is no denying it had changed. It had changed in the first place because the government
477 of British Columbia in 1961, the first of August, expropriated both the BC Electric and the Peace River
478 Power Development companies, and then gave immediate order to [the resultant company, BC Hydro,] to
479 go ahead with the Peace. So, instead of the Peace River being developed in series and after the Columbia,
480 as all the technical planners in Canada had assumed would be the case just a year earlier. The Peace, it was
481 now decided, was going to go ahead at least in parallel if not slightly ahead of the Columbia. There was
482 change one.

483 A second change, which had already taken place by 1961, August first as you know, was that Mr.
484 Bennett had decided to sell the Canadian entitlement to downstream power in the United States, to leave it
485 in the States for 5 mills if he could get it, and to use the return to help meet Canadian investment costs
486 upstream.

487 A third change, which certainly took place well before 1963, was that the Americans during that
488 hiatus, between 1961 and 1963, impatient at Canada's delays as I already told you, went ahead and built
489 one major domestic storage at Bruce's Eddy, and also moved ahead with a major thermal installation at the
490 Hanford nuclear plant. So the nature of the American domestic system began to change. And this is
491 important because the benefits we confer on the Americans are, to a very significant degree, a function of
492 the kind of system that receives those benefits.

493 Still another significant change was that in 1961, the American federal government decided to
494 move ahead to see if it could not build an intertie, a major high voltage transmission line, linking the
495 Pacific Northwest with the southwest - Arizona and southern California. Again, if you've read Dr. Krutilla,
496 you must have acquired a feeling for what this intertie does. This intertie gives to the United States the
497 capacity to generate great quantities of power, in the summer time for example, in the American Columbia
498 watershed, when the river unregulated is at its peak. And when it's therefore easy to generate this power in
499 the United States, but when this power at that time, and still probably would be, unmarketable in the Pacific
500 Northwest, send it south to the hot part of the United States where the peak load comes in the summer not
501 the winter. In short, via the intertie, the Americans acquired, as Dr. Krutilla argues, a mechanism which
502 largely did away, from their point of view, with the necessity to go along with the Columbia River Treaty
503 so far as the power benefit was concerned, because it made it possible, I repeat, for the Americans to
504 extract the energy from that water, without the water flow being regulated by Canada. Of course the intertie
505 does nothing for a flood control benefit.

506 There were two other developments which I should mention. One was the fact that the cost of
507 building the Arrow dam had begun to go up. It was estimated, originally in 1957, at something over \$60
508 million dollars. By 1961/62, they were clearly up to and beyond \$100 million for a number of reasons, one
509 of them was the fact that the Water Comptroller insisted that, in his licenses issued in 1962, standards of
510 foreshore clearance be pursued, although we didn't define that precisely. You read Mr. [Jim] Wilson's
511 book, it's very good about this, but he made it very clear that there would have to be ultimately a great deal
512 greater than originally anticipated. Another problem was, from this point of view, that the plant
513 downstream from the Arrow dam, which the government of British Columbia now owns [and that] went in-
514 stream in 1961, began to significantly transform the economy of the Arrow Lakes region. Ipso facto
515 increased flowage costs. Another significant factor, of course, was that the provincial government insisted
516 that a lock go in the Arrow dam, and a lock had not been provided for in the original engineering.

517 For all of these reasons, the cost of building Arrow dam started to go up. But there is still a further
518 consideration, and that was this: the load growth in both the American and Canadian Pacific Northwest was
519 rising alright, and continuing to rise, but as planners had predicted in 1960, the curve was flattening. And it
520 was flattening to such an extent that by 1965/66, it was apparent that the Americans would not necessarily
521 need the Duncan and the Arrow storages, which they had anticipated relying upon when the Treaty was
522 signed in January of 1961, to meet their loads for a few years from 1965/66 on. What this all adds up to, as
523 one Canadian technician was to put it very sadly and very critically in a private memorandum, which I
524 remember reading some years ago, was this. He said, "Well, while action is being taken in British
525 Columbia and the United States which is significantly reducing the quantity of, and the marketability and
526 hence the value of the downstream power benefit, the hiatus between Ottawa and Victoria continues over
527 selling the benefit; cost continues to march on inexorably."

528 The other consideration of course which emerged, by which was not clear at the time to lay critics
529 of the Treaty, stemmed from the emerging possibility that by linking the Mica dam extensively to the
530 American system, by interlinking it with a huge reservoir about to be built up on the Peace, and of course
531 by linking it with major market areas, the possibility began to emerge that the very strong technical case for
532 the Arrow dam, which incidentally the Crippen Wright Engineering company identified for the government
533 of British Columbia in a major report in 1957/58/59, which the Montreal Engineering Company identified
534 in a major report for the government of Canada in 1956/57, which the International Joint Commission itself
535 identified. It's seldom recognized that the IJC's report, which was a point of time study incidentally, which
536 has its limitations but it's also a type that's widely used in the utility industry, assuming that all of the
537 projects still to be added in the watershed north and south of the boundary were added at the same time,
538 still put the Arrow project as the highest benefit cost ratio project in the whole watershed. This is the kind
539 of data that the engineers put before the policy makers in 1960, and this is the kind of data which put the
540 Arrow dam incidentally in the Treaty. But in any case, by 1962, the emergence of the Peace reservoir had
541 begun to raise, in a few technicians' minds, questions as to whether or not the case for Arrow, not
542 withstanding its high benefit cost ratio, was not quite as tenable as it once had been.

543 It's interesting that even Dr. Krutilla, who was writing private monographs as well as public papers
544 in 1962, was not drawing attention to this facet of the Arrow dam at this time. This, as I pointed out, is an
545 assessment or reassessment of Arrow which came along subsequently. However, the interesting thing is

546 Arrow was bitterly criticized of course well before 1962, but it was criticized on the grounds of its potential
547 cost, the fact that in time its benefit largely disappears, the point in any case which I want to make is that all
548 of these changes took place with respect to the intertie, Arrow, Peace, costs, and the rest. And if you read
549 Mr. Swettenham, and if you read Mr. Higgins and you read Mr. McDonald and others, not only derive the
550 impression. You'll find these men saying categorically that the staff advisors to the governments in Ottawa
551 and in Victoria were simply blind in 1962 and were completely unaware of what was happening, and
552 therefore allowed the two Canadian governments, in 1963, to let slip a glorious opportunity to rework the
553 bargain.

554 I hope you'd be interested to know that I was fascinated to find, in working through the working
555 papers of the two governments of Canada, at least four tightly written, excellent monographs produced
556 right at the end of 1962 [and] drawing attention to precisely the considerations which I have outlined for
557 you in the last 5 minutes. All very pessimistic because, at that time, the chances of getting a final agreement
558 still appeared to be very, very far away. [The monographs were] drawing attention, as I pointed out a
559 moment ago, to the fact that McNaughton was taken on a tour of the United States to reduce the magnitude
560 and significance of the benefit [while] costs were going up very rapidly. All four of these memoranda
561 ended up by saying, "Maybe we're going to have to try to salvage something out of this, and this will mean
562 letting everything go."

563 These memoranda were written just before a negotiating session was held right here in Vancouver
564 in the BC Electric, or BC Hydro tower as it had become by that time. [This] negotiating session
565 significantly changed the minds of the writers of the four monographs because the Americans at this
566 session made an offer. They were asked to make an offer. This was a session which the Diefenbaker
567 government allowed to be held. It was a kind of exploratory meeting with the Americans, designed to see if
568 Mr. Bennett's claim that he could get 5 mills for the downstream benefit power was something more than a
569 figment of his imagination. And the Americans made a pretty good offer. It was limited; it was limited,
570 amongst other things, by the fact that the Diefenbaker government was not prepared to commit itself
571 categorically to agree to a sale if the price was right. It certainly said we'll listen, we'll listen seriously, but
572 we won't commit ourselves to anything.

573 There's another consideration here that you have to keep in mind, and that is this: during that long
574 hiatus in 1961 [and] 1962, the American government did become increasingly restless. It made this offer in
575 December of 1962, here in Vancouver, and it did not get an immediate reply from it. Of course, it's shortly
576 realized that something dramatic was happening. You will recall the Diefenbaker government collapsed as
577 a result, largely, of an internal chasm in January [and] February of 1963. And at that time, the Americans
578 did say, "Alright, we'll give you a little longer, but not very much longer, we're fed up." Not the least, of
579 course, of their pressure was a reflection of the fact that there were many American domestic interests keen
580 to go ahead with US domestic projects, which had to sit in the rings to mark time while a two year debate
581 went on between two levels of government in Canada. So the Americans made it very clear that they were
582 becoming impatient.

583 By January 1963, the technical advisors to the two level of government in Canada, therefore while
584 very cognisant indeed of the way in which the bargain they had really negotiated had been partially

585 outflanked by change in circumstances before it had ever been implemented, had also become very
586 conscious of the fact that much further delay would undoubtedly mean the American clearance for another
587 project, probably Knowles here on the Pend d'Oreille, and you'll appreciate what that would mean for the
588 base system and the downstream flood control benefit. They were very conscious of the fact that under
589 these circumstances, if the American base system were very much enlarged, the Americans would also, if
590 Canada were in 1963 to say, "Well, lets reopen the thing," the Americans would probably say, "Well,
591 maybe but we're not at all convinced any longer that a 50/50 split on a grossing formula of the downstream
592 power benefit is fair, and we'll no longer agree to it." Under these circumstances, the chances of
593 renegotiating any kind of favourable agreement, ever, seemed to be so slight that the technicians, in effect,
594 said to the two levels of Canada in January 1961, "For goodness sakes, take an awfully good look at this
595 offer to purchase which the Americans have made in the BC Hydro tower."

596 Now this is the background to the situation in which the Pearson government had heard Mr.
597 Waterfield say, categorically, that the change of position of the Pearson group is really inexplicable. And
598 he's referring here to the fact that the Liberals have been pretty critical of the Treaty prior to the 1963
599 election. And some had been very critical, had been prepared to make rather categorical commitments with
600 respect to renegotiation. The Liberals' position on this subject, incidentally, covered the waterfront. I
601 remember so well hearing [John Whitney] "Jack" Pickersgill on a speaking tour of Canadian Universities in
602 1962 addressing a group of our students in Victoria being asked point blank what he thought about the
603 Treaty. And I never forgot Pickersgill's answer. It alerted me on to just how bright this man is, because
604 Pickersgill's reply came back lightning fast. He simply said, "That's not a fit subject for partisan debate in
605 Canada." Walter Gordon had been through speaking to our same students just a few weeks earlier and had
606 denounced the whole deal from beginning to end in the most categorical of terms.

607 Well, this is a lesser complex story. What happened, simply, is that the new Pearson administration
608 took a very hard look [at what was] put before it by it's technical advisors, who put all of these changes and
609 circumstances that I just detailed for you on the table. And it came to the conclusion that the certain losses
610 stemming from a renegotiation had to be put on the table alongside the possible gains. When it took a look
611 at the two, it arrived at the calculus which prompted it to believe that the risk was simply too great - the
612 chances were too great that the gains would heavily under-weigh the losses. So the council decided to go
613 ahead instead with a modification of the Treaty by a protocol and an agreement with respect to the sale.

614 Now let me stop at this point, but just make one other observation. One of the speakers early in
615 your series, in talking about the negotiation of the Treaty itself, refers sadly to the fact that the government
616 of British Columbia, in February of 1960, had agreed to the presentation of the McNaughton plan as the
617 Canadian bargaining position. And then, when the Americans had conceded it, had reversed itself. I just
618 have to point out to you, that this is just not true. What the government of British Columbia did do in
619 January, and February really, of 1960 was agree to allow the Canadian negotiators to advance between 20
620 and 25 million acre feet of storage as a Canadian bargaining position. And there was no denying that this
621 meant, therefore, putting forward storage in the Arrow Lakes, Duncan, the Mica area, and east Kootenay -
622 upper Columbia valley storage as well. There isn't that much storage elsewhere in the whole watershed.
623 You read the minutes of the Policy Liaison Committee that Mr. [Alvin] Hamilton has made available.
624 That's not the McNaughton plan of course, because included in that storage is Arrow Lakes, and General

625 McNaughton was very critical of the Arrow project from the beginning.

626 What happened, of course, was that 25 million acre feet of storage was far more than the
627 Americans were prepared to pay for. The government of British Columbia obviously assumed that when
628 Canada had to back away from the 25 million acre feet, the storage which would be dropped would be the
629 storage to which it had real reservations. And it had made its reservations very clear from the beginning of
630 the negotiations, from the beginning the intra-Canadian negotiations in January of 1960. And they had been
631 known informally in Ottawa for 2 years earlier with respect to storage in the upper Kootenay and in the
632 upper Columbia, Dorr, Bull River, and Luxor in particular. However, these storages which of course were
633 being vigorously endorsed privately, behind the scenes, and publicly, by General McNaughton, first to the
634 federal cabinet and secondly to the external affairs committee in the House of Commons of Canada. The
635 federal government had become greatly enamoured of, and it had become convinced that they were in the
636 best interest both of the United States and of Canada, a complex assessment that I'd be pleased to discuss if
637 we had a moment or two in a discussion period eventually.

638 The government of British Columbia was never convinced of the validity of this case. The Crippen
639 Wright report, which had cost it at \$250,000 dollars, on which it based it's case really right through, had
640 taken a very jaundice view of upper Kootenay - Columbia storage, and had said in effect, you know, if
641 maximizing the amount of power you can squeeze out of a whole river is what you're after, then there's
642 something to be said for it. Something. But if you're interested in costs and incremental analysis, as we
643 presume as engineers and economists you are, we're not at all convinced that the incremental cost on the
644 additional amount of power you'd be able to squeeze out of the watershed by virtue of upper Kootenay
645 storage diverted into the Columbia would be worth the effort, particularly in a province with 20 million
646 hydraulic powers still undeveloped. This was the position which the Crippen Wright people talk, and which
647 the provincial cabinet very much impressed upon. In any case, the federal government stayed strongly
648 committed to upper Columbia, upper Kootenay storage. The Governor of British Columbia was very
649 sceptical about it for 3 months: February, March, April, indeed May. A very considerable debate went on
650 between Victoria and Ottawa privately over the amount of merit of storage in these two valleys.

651 While this went on, and it didn't go on before the Americans incidentally at all - the Canadian
652 negotiators saw to it that this did not happen, the Americans, in a sense, took the initiative. And I've tried to
653 outline here what in effect they did. Now this is a simplification of extraordinarily complex bargaining
654 exchanges, but I can assure that it is accurate. They put forward 3 proposals. They said 1) to Canada, you
655 can build Bull River-Dorr, and I think you know where those are and I'm not going to point to them, you
656 can build High Arrow-Duncan, and you can build Mica, on the condition that at least 275,000 kilowatts of
657 power be sold to the United States for at least 20 years, at the US system price, which I already told you
658 was about 2.75 mills, far lower than we can produce it. Secondly, they said you can build High Arrow-
659 Duncan first added, and Mica second added but with an unspecified reservation of credit for American
660 projects, and either Bull River-Dorr not better than third added or Libby at the Americans' option. At our
661 option, that's what the Americans said, with no diversion for the term of the agreement. No diversion, that
662 is, from the Kootenay into the Columbia, and no Canadian claim to downstream benefits from non-storage
663 plants from the Kootenay. Thirdly, they offered Bull River-Dorr, they said you can build Bull River-Dorr
664 and either Mica or High Arrow-Duncan, or High Arrow alone, with the downstream benefits returned from

665 generating plants to Canada at Canadian expense and only a 1 million acre foot diversion permitted from
666 the Kootenay to the Columbia. That's the Canal Flats or the Copper Creek diversion, incidentally. Now
667 these are the three proposals which they made.

668 It is really not correct at all to say that Canada had the McNaughton plan in the bag and let it go.
669 None of these represents the McNaughton plan. In one sense this, of course, is the closest to it, this one,
670 number three: Bull River-Dorr, which were two basic elements of the General's plan, and either Mica or
671 High Arrow. This is close. But notice, at the same time there would be no downstream benefits, sorry, the
672 Canadian downstream benefits being produce at American plants would have to be brought back to Canada
673 at Canadian expense, and there would only be a 1 million acre feet diversion permitted from the Kootenay
674 to the Columbia. And the whole point to building the storages that the General was so keen on at Dorr and
675 Bull River [was] that there be a maximum diversion, not a 1 million acre feet diversion, shooting virtually
676 the whole of the Kootenay north into the Columbia. These proposals were carefully assessed.

677 Proposal 2 had several disadvantages. One of them is very obvious. Mica only [gets] second-added
678 credit. Another disadvantage was that the Americans acquired a basic decision in the watershed. It was they
679 who decide whether or not there would be East Kootenay storage in Canada or the States. You see, if they
680 decide not to build Libby under this bargain, we would have to build Bull River-Dorr. And the governor of
681 British Columbia was inclined to say well now wait a moment, that's in a sense handing to the Americans
682 the right to make a basic decision about a fundamental Canadian resource.

683 This one certainly isn't the McNaughton plan, of course, because it's got High Arrow in it, and it's
684 got this. This, of course, was very serious. This 275,000 kW export at far less than the cost [of development
685 to Canada], because it went some significant way to negating the whole point to diversion in the first place,
686 which was presumably to maximize the amount of power available to Canadians. This is the kind of fact
687 which makes broad generalizations about what we had, and what we let go, so often invalid.

688 And I hope it makes a little clearer, than perhaps was otherwise the case with you, a basic
689 consideration which is, you know in a bargaining situation, the only way you can assess the merit of any
690 situation is to asses not only what you or yourselves are likely to get out of it but is to assess also the costs
691 the party can impose upon you. And for so many years after 1960, well intentioned people, I'm not for a
692 moment saying that people aren't entitled to critical of agreements, that's the essence of the democratic
693 system of course... well meaning and intentioned people and very often people who should have had
694 access to data that [would] have never been available to them, were inclined to rework in all the
695 negotiations of 1960 - assuming the existence of all sorts of options which in reality had conditions of this
696 sort attached you see, but which they don't really know about at all. Well, I've taken far more than my
697 initial 45 minutes in part A.

698 Now let me scoot along quickly to say something in half an hour about the lessons. How can one
699 account for, I think is the first basic question to ask, one of the most important of all considerations, the fact
700 that we ended up with the Peace and Columbia River being drawn up concurrently, but with a scale of
701 development which was never subjected to sophisticated technical analysis? When you stop to consider that
702 Mr. Bennett started saying, in 1958 soon after he'd heard about the Peace River plan, "I'm going to have

703 those two rivers not one, and if I don't get them both, I'm not going ahead on the Columbia." He said this
704 through 1958; he said this through 1959; he said it through 1960. And yet, so far as I know, there was no
705 engineering study ever made taking the man seriously. It's a really fascinating question. And I've already
706 pointed out to you that the Columbia River Treaty was technically designed by Canadian and American
707 technicians on the assumption that the Premier was not going to be indulged, and that the Peace was not
708 going ahead but was going to follow the development of the Columbia. How do you account for this? Well
709 I jotted down this afternoon a few quick explanations.

710 The federal government didn't want it to happen - a basic explanation. Mr. Green made it very
711 clear when he was here. The United States government didn't want it to happen either. It really didn't care
712 how we developed our own water resources, but it was astute enough to realize that if the Peace River went
713 ahead also, the company that was proposing to develop the Peace, the Peace River Development Company
714 was a private company, it would sell a block of shares. But the best bulk of the capital required would have
715 to be raised on the lending market, it would have to be borrowed via the sale of bonds, and this money
716 would undoubtedly be borrowed via Morgan Stanley of the First Boston Corporation in Boston and New
717 York. The Americans have then, as they still have, a balance of payments problem they didn't want to face,
718 and they were quite frank about this, with financing two river developments at one time.

719 The technical advisors to both Ottawa and Victoria were also convinced that concurrent
720 development would be a mistake. These men, engineers and economists, had enough welfare economics
721 training to appreciate the importance of bringing in your highest benefit-cost ratio projects first. This is what
722 welfare economics suggests you do, of course, if you're going to maximize your utility, if you're going to
723 avoid waste. And this is, of course, ultimately general principle number one [of] the IJC principles suggests
724 be done but with some qualifications which I will comment on in just a moment. So the technical advisors,
725 not only in Ottawa but in Victoria, were not at all convinced that the premier was wise in endorsing a two-
726 river development.

727 I think probably another explanation for the fact that there was never a major analytic exercise
728 taking the Premier seriously was the fact that probably the premier and his colleagues weren't really quite
729 sure through 1960 how they could pull off concurrent development. The technical opposition, by the way in
730 Victoria as well as in Ottawa, stemmed from considerations that I'm sure are very familiar to you. The
731 Peace development was to take place 200 miles away, farther away from the major market, Vancouver,
732 than Mica dam. It just seemed, by definition, to be potentially so much more expensive. I've told you what
733 the welfare economics principle suggests in this connection.

734 And there was another consideration that the Canadian technicians were very conscious of. It's one
735 that Mr. Higgins significantly denies but the technicians involved still believe, as does Dr. Krutilla, is
736 absolutely valid. The point they make here was this: that what Canada had to sell on the Columbia was, in a
737 sense, a wasting asset. That was Dr. Krutilla's point to a large degree. And you'll recall he makes the point
738 in his book, in which he is so critical of his own government and its analysis. He makes the point that by
739 not assessing where his country would have been by independent development, it's technicians failed to
740 realize how attributing benefits to Canadian storage moved a good many American projects from being
741 slightly super-marginal to being sub-marginal ... washed them out entirely. In any case, the Canadian

742 technicians were convinced that what we had to sell was a wasting asset, and if we delayed, the Americans
743 would go ahead and build projects of their own and ultimately would be very unwilling to extend much if
744 any credit to us for any regulation which we were able to produce by our own storage upstream. So they
745 had in effect said, "You know, if we don't move on the Columbia fairly promptly we'd lose the chance,
746 probably forever."

747 The opposition to Mr. Bennett was great, not simply in Ottawa and Washington but amongst his
748 own technical advisors. Hence the consequence, one of the things that happened here whether he realized it
749 or not: what he did was to split the problem. And in effect, he allowed the Columbia planning and the
750 negotiating of the Treaty to go ahead. He continued to say publicly, "I'm going to get them both or there
751 will be no Columbia." I don't know whether he assumed that the technicians were, at least part of the time,
752 asking themselves what kind of Columbia format they would come up with if he was to be indulged or not.
753 He, in any case, certainly allowed them to go ahead with their negotiations. And they did, but they did on
754 the assumption that their plan was optimal, that their plan would win out, that the Premier would not be
755 allowed to go ahead with the Peace.

756 Now the moment I say this, I raise a very important consideration with respect to the relation
757 between the two governments in Canada, and I want to say something about this because I think this is
758 particularly pertinent, certainly from my perspective as a political scientist. There's no question at all
759 about the fact that the federal government had a right, had a legitimate right, to be interested in the
760 Columbia itself. It has a distinct international responsibility with regard to the negotiation of treaties. It has
761 a distinct procedural role to play in that connection. It has also, I believe, an obligation to evaluate, from a
762 national perspective, actions which units, in this federal state, consider taking with respect to their potential
763 impact on the country as a whole. The crucial question which arises in a case of this sort really concerns the
764 data or the criterion on the basis of which the federal government will assess the extent to which potential
765 provincial action or inaction will affect the national interest.

766 Now it's a truism that you can't divide the governing process into water tight compartments. And
767 that federal and provincial governments frequently and necessarily overlap. But it's also a truism that our
768 federal constitution, as is the case with others, tries to prevent situations from emerging in which when two
769 levels of government do overlap in concurrent jurisdiction, and there is no clear-cut indication of the one
770 who has to prevail under these circumstances of conflict. So I repeat [that] Ottawa had every right to be
771 concerned with respect to the Columbia. It could not be indifferent to the extra-national consequences of
772 British Columbia's desires with respect to the Columbia, which is an international, but not incidentally an
773 inter-provincial, river. The federal government has a very valid concern with regional development -
774 regional economical development. And as I pointed out, it has a right to be concerned if the potential costs
775 of an initiative, or lack of initiative in one federal unit, on other parts the federation are great.

776 Incidentally Mr. Hamilton, you will recall, drew an analogy between the Columbia and the
777 petroleum situation. It's an interesting one, and it's one I thought about a good deal. It's one that worries
778 me. The analogy, I think, is only partially valid, but I mustn't pursue that consideration further in this
779 address. Notwithstanding all that I've said about Ottawa's role, I don't believe any of the desiderata, which
780 I have enunciated, really justified the role which the federal government sought to play between 1957 and

781 1963. I'm referring primarily to Diefenbaker government years but not exclusively so.

782 For example in the 1957 election Mr. [James] Sinclair, now a resident of Vancouver again, a native
783 son of this town I think, Mr. Sinclair offered, on behalf of the [Louis] St. Laurent government, federal
784 assistance to the provincial government to develop the Columbia if the Columbia were developed under
785 public power auspices. Now what Mr. Sinclair was doing there, of course, was seeking to impale Mr.
786 Bennett on a public-private power issue. It had not been clear at that time whether the Columbia would be
787 developed publicly or privately, and I think you make a pretty fair case for saying that the decision as to
788 whether or not a resource of that sort [should] be developed public or privately is essentially a provincial,
789 rather than a federal, one to take. Other members of the St. Laurent cabinet seemed to think so
790 subsequently, but in any case, that's history. I mention this to indicate to you, you can fault I believe, a
791 procedural role by both the Liberal and the Conservative governments on this issue.

792 British Columbia's plans did not have high extra-provincial significance. Indeed, no other province
793 mentioned them until 1962, a year and a half after the Treaty had been negotiated. And then, [only] one
794 province, Saskatchewan [you] will recall, raised a question as to whether or not the Treaty had actually
795 guaranteed a right to divert for consumptive use. And it wasn't able to establish then, or subsequently
796 really, a very strong case to sustain its claim in that regard.

797 It's important to remember that, with respect to water development, the Canadian provinces have
798 immensely greater power than American states. It is true that, after 1945, the extensive use of the federal
799 spending power by the national government, the willingness of provincial Premiers to ask for more and to
800 accept more, did tend to complicate Ottawa's jurisdictional pull. It can be argued that when British
801 Columbia in 1959, and particularly in 1960, asked for a direct federal grant, that it thereby justified a
802 federal government attempt to deliberately deduce a sequence of development on the Columbia which the
803 federal government preferred, because it had then decided that it was in the national interest. It's a pretty
804 difficult case to sustain. And in any case, when British Columbia finally announced of course that it wasn't
805 interested in federal aid, that case disappeared entirely.

806 It's also frequently forgotten that in 1957, in October, when the Diefenbaker government in its first
807 speech from the throne announced that it proposed to become associated in British Columbia in a joint
808 development, Mr. Bennett, at that time, made it very clear that he saw no need for any federal participation
809 at all. I could discuss this question of jurisdiction at great length, and I'm going to have to leave it for
810 tonight.

811 I thought you might be interested to know that the Department of External Affairs, this is a very
812 interesting fact, early in the Diefenbaker government's administration, made it very clear that, in its
813 opinion, what I've just been saying is essentially right and that deciding which projects should be built or
814 not built on the Columbia was essentially none of Ottawa's business. The federal government held the
815 provincial government off for 6 months on this between June or July and December 1957.

816 The Diefenbaker cabinet then got an interesting idea. It had just received from the Montreal
817 Engineering Company a report which told all the things that General McNaughton didn't want to hear.

818 [General McNaughton] decided that he'd better have another committee report prepared, and he got the
819 bright idea, the good idea, that [the cabinet] would get an objective [and] distinguished Canadian to chair
820 the committee. The man it wanted was Graham Towers, the retired governor of the Bank of Canada. He
821 was not available, and somehow General McNaughton became the chairman of this committee. And Mr.
822 Green was quite in error here a month ago, when he told you the province was closely associated with the
823 proceedings of that committee through 1958. It was held at arms length for a year and a half, not just half a
824 year... it had no role at all with respect with that economic committee report. The General continued to
825 deliver public speeches, so far as I know, announcing what he believed to be a preferred scheme of
826 Columbia River development for Canada. So far as I know, the one member of the federal Cabinet who
827 was really alert to the jurisdictional problem which was emerging was the late Sidney Smith, the Secretary
828 of State for External Affairs. Interestingly enough again, External Affairs started pointing out to his
829 colleagues in 1958 that the General was proliferating a plan of preferred development, which he was
830 convinced was in the Canadian interest. And people in Canada were assuming that he was speaking on
831 behalf of the government of Canada, as indeed on behalf of the government of British Columbia. He was
832 doing neither. Now, I mustn't pursue this much further here.

833 Let me, however, rhetorically raise this question: "Did the government of Canada attempt to
834 constrain the government of British Columbia?" I have to answer. I don't know if anyone in Canada was
835 really conscious of this, outside [of] the group that worked on the Treaty. The answer was yes. In the first
836 half, first of all, you'd be interested to know, I think, that in January of 1960 the Diefenbaker Cabinet
837 entered into initial contact with the American government prepared to be negotiating a Treaty, before it had
838 ever told the government of British Columbia that it had even started this. And yet the government of
839 British Columbia was the owner of the resource.

840 I have often asked myself why the government of the British Columbia went along with this. It
841 protested privately in a whole flurry of telegrams, and phone calls, and I'm convinced that the answer is
842 one that Mr. [Robert] Bonner enunciated in the speech he delivered in Vancouver at this time. He said,
843 "We've got 5 aces in this deal." In other words, the government of British Columbia, at the time, was
844 convinced that it had the trump cards and it was prepared to play them.

845 Not only did Ottawa move into negotiations before it had reached any understanding with British
846 Columbia, not only did it commit itself to negotiations before it had reached any understanding with British
847 Columbia as to what the agreed-upon Canadian objective should be. But in the long debate which took
848 place during 1960 on whether or not there would be federal assistance available to British Columbia, the
849 federal government first tied its proper assistance, in the form of a loan, to its agreeing upon the sequence.
850 And the sequence which it wanted was the sequence which had east Kootenay storage and upper Columbia
851 storage, the sequence which the government of British Columbia didn't want, incidentally. It lost that
852 argument eventually and incidentally, ultimately the government of British Columbia took its decision not
853 simply on, or in the light of the argument which I pointed out to you that, the Crippen Wright firm
854 advanced. It took its decision also on the basis of a very interesting environmental position. To build the
855 Dorr-Bull River-Luxor reservoir would have required constructing, really, an artificial reservoir 104 miles
856 long and 1 to 4 miles wide.

857 Now the government of British Columbia simply took a look at two valleys: the Arrow Lakes
858 valley on the one hand and the Rocky mountain trench on the other. It wasn't any keener than anyone else
859 to flood either of them, but it had come to the conclusion that one or the other would have to be flooded to
860 generate enough benefits to produce [the cheapest] Columbia River power possible. But it simply took a
861 look at the amount of land that was going to be flooded: 80,000-odd acres on the one hand as opposed to
862 27,000 on the other and, basically on environmental grounds, it simply said, "If we've got to choose
863 between a wide rather flat valley and a very narrow V-shaped valley, it's going to have to be the narrower
864 one. We're not going to flood the wide one, so there will be no storage, at least initially, at the upper
865 Kootenay and the upper Columbia."

866 Now I have told you what I have already said, and I've taken the position I've taken, apropos of the
867 federal government's role, because I am convinced here that the federal government really made a major
868 mistake. It attempted to advance a position which it could not sustain and from which ultimately it had to
869 withdraw. In short, it really established a very sticky wicket on which to bed.

870 "Why had we become so enmeshed in this issue?" was a reasonable question to ask, and I'm
871 largely going to skip it. Interacting personalities are part of the story. There was a change in all the
872 relationships between Ottawa and the provinces at this time, and tendency as a consequence to turn
873 individual issues into tests of strength. But the basic explanation was very simple, and Mr. Green made it
874 very clear to you in the first address which you had here on the open forum sessions. The Progressive
875 Conservative Cabinet got itself enmeshed in a political arena that, in my opinion, it should have stayed
876 clear of and, as a consequence, it set out to obtain political credit for its association with an international
877 river development in contrast with a government that didn't want to share the credit. It couldn't sustain its
878 position, and it had to back down. This was in many ways a major tragedy.

879 Let me say two things in conclusion about the role of the federal government. A good many
880 scholars such as Larier LaPierre have argued that the Columbia experience really just proves that the
881 correlative relationship, which federal and provincial governments have with respect to the Treaty power,
882 simply cannot be sustained any longer. He argues, at least with respect to Quebec as you know, some
883 provinces, or at least one province, has to be given an independent approach to international relations and
884 to other states. I'm convinced he's absolutely wrong insofar as the Columbia is concerned, that his thesis
885 here is a non-starter. There is no doubt at all, that in any federal state to some degree, we have to assume
886 that the view from the centre is a little sharper than it is from the province, from the periphery. And to some
887 degree, we have to equate that view with the national interest.

888 I think a wise federal government has always got to be alert to the prospect that its view might not
889 always be the clearest, and the prospect that sometimes the province may be ahead of it. [Including when]
890 advancing seriously a policy alternative with great potential for the whole community, as I think happened
891 incidentally with respect to the proposal to sell the downstream power benefit. It happened with respect to
892 the whole sale of downstream power [benefits] generally, which we cannot pursue tonight, at least not at
893 this stage of the game.

894 In any case, the crucial point that I want to emphasize here is, of course, that the Columbia

895 experience underscores the importance, when an international agreement has to be negotiated involving
896 something which falls normally within the ambit of Section 92 [of the Constitution Act], of reaching
897 intergovernmental agreement in Canada, ideally prior to the opening of negotiations, certainly earlier in the
898 negotiations, and in any case certainly prior to the signing of a Treaty. This lesson has not been lost on
899 Canadian governments. Despite all the delay and the friction that did emerge, my reading [and observation]
900 of this case study incidentally is that the two levels of the government in Canada, when basic understanding
901 has been arrived at, can cooperate very well indeed, and did on this issue. It's really fascinating to notice
902 how many of these issues were factored. How federal and provincial technicians worked together on many
903 of these issues. How provincial representatives were part of the federal negotiating team. How, in 1963, the
904 Protocol was negotiated initially by federal people, and the sales agreement by provincial people, and then
905 the two came together and pooled the whole thing, which makes sense and does not leave me lugubrious
906 about the Treaty power in Canada.

907 I was going to discuss, but I'm going to skip now because I'm going to stop in just a minute, a
908 second basic question - the whole role of comprehensive analyses with respect to the negotiation of
909 agreements of this sort. Nothing really that happened here sells short the potential of comprehensive
910 analyses. But I think the Columbia River experience does, for those who read the story carefully, prompt a
911 certain degree of caution or reserve on the part of the reader, and indeed we hope in the future on part of
912 governments, as to what to expect from comprehensive analyses. If you follow water resource development
913 in particular, you may be conscious of the fact that even people in my profession, the academic analysts,
914 and students of water resource policy, have changed their tune dramatically in the last 10 years. Ten years
915 ago our thesis was, you know, you have to identify all of the national objectives and goals first and then all
916 of the sub objectives and goals. You had to weight these goals. You had to decide upon the criteria which
917 you'd use to measure these goals. Then, and only then, were you to move to identifying and working out
918 the precise details of systems and develop various types of systems to analyze the whole series of
919 alternative routes to whatever your objective is. The assumption at that time was that, via comprehensive
920 analysis, it would be possible to follow up and [find a] genuinely optimal solution - an incredibly good
921 solution.

922 You know, for a long time, we thought the IJC was coming up with a solution like that. It wasn't
923 until 1956/57 that technicians, governments, and politicians if you like, came to realize that the IJC's
924 perspective was a systemic one, ignoring the boundary. It wasn't until that time that, frankly, the
925 governments in Victoria and Ottawa began to realize that that system perspective did not throw out the
926 solution that would be optimal from the Canadian perspective. While the men who worked on the IJC study
927 did a tremendous job, those who in a sense re-injected the boundary into the real world of analysis did a
928 major job too. If comprehensive analysis therefore has changed, it has changed in recent years because of
929 an increasing recognition of the importance of trying to make, I think, our analysis a little more realistic. Of
930 trying to provide greater flexibility for those who have the ongoing task of implementing decisions.

931 For you see, in the water resource field, there are some major problems. One is that public values
932 change in a way that really can't be predicted. Another is that technological change, such as change
933 involving nuclear power or long distance transmission interties [as examples], is something else that can't
934 be predicted. You can allow for it. And the most sophisticated analysis is helpful because it really

CRT Lecture 6: Dr. Neil Swainson

935 highlights what our areas of uncertainty are. Analysts today like to say, “The thing to do is to use the
936 greatest long range perspective but the shortest range of implementation.” This is very good advice except
937 for the fact that when you build a dam you don’t decide to pull the plug out from under it and wash it out in
938 4 or 5 or 10 years time if it costs you 4 or 5 or 6 hundred million dollars. For something terribly irrevocable
939 it isn’t entirely irrevocable. [We’re talking here] about very long range water resource development
940 [decisions].

941 Obviously, analysis is expensive [as are] time and resources, and I think one of the lessons to be
942 derived from the story, incidentally, is that a lone government in Victoria, and the government in Ottawa,
943 were really very good on this. They spent a great deal of money on augmenting their own analytic forces. If
944 they had to do it over again, I believe they would have [had] much larger analytic groups than they had on
945 the job between 1955 and 1964. The work some of those men were expected to do in very small teams
946 really had to be seen to be believed.

947 I close by drawing attention to one other consideration. You know our traditional approach to
948 analysis, and I have to leave a lot of other considerations out here, our traditional approach to analysis
949 assumes [that] after we have identified our goals and objectives and have hit upon our evaluative criteria,
950 we then concentrate really on identifying a variety, or range or series, of options and assess [what] the
951 consequences of these options will be, assessing these alternatives in the light of what we desire - our goals.
952 This is well and good, but in recent years we have become conscious of something that was, I think,
953 noticeably missing with respect to the Columbia. And that is that sophisticated analysis should devote, or
954 analyst should devote, part of their energy to move from [studying] alternatives or options back to
955 [studying] objectives in the belief that a continued study of objectives would clarify productive functions,
956 and a study of productive functions will clarify objectives. This was something that was noticeably missing
957 from the Columbia study and examination of what the whole thing was all about.

958 Mr. Green made it very clear for example what to him it was all about. He was very keen, and he
959 was so true and so realistic, and the speech that he gave you people he could have given in 1959 and 1960
960 and did give scores of times all over Canada. The objective of the whole thing, from his point of view, was
961 to endear British Columbia, and particularly the lower mainland area, to the benefit of low cost benefit
962 power as quickly as possible. Subsequently incidentally, his technical advisors began to point out to him
963 that some of the figures attributed to that low cost power were based upon a very questionable assumption.
964 That once the projects had been built such as Mica, and had been machined, you no longer charged any of
965 Mica’s costs to that downstream benefit power. Those costs were born solely by the at-site generation. This
966 was an interesting assumption to make, and that’s what helped to make the downstream benefit power so
967 cheap on paper. But again, it’s an assumption which can be questioned. Similarly, they had to point out to
968 him eventually in 1962, you know, that if Mr. Bennett could pull off anything like his 5 mil sale, [it would
969 be] no longer valid to talk of this power as being very cheap, to the degree that anything which you can
970 consume has to be assessed in terms of the benefit that has [been] forgone from having sold it. In any case,
971 I have departed from my point as I conclude.

972 When in 1957/58 Mr. Bennett had the Peace River project drawn to his attention and took the
973 position which I enunciated for you a few minutes ago. You see, what he really did was to say to the people

974 of British Columbia and the government of Canada, “Look, I’m putting on the table as a major value to be
975 considered, in power development in this province from now on, not just tomorrow’s price of domestic
976 power and the price of power in Vancouver in the first and second half of the 60’s, I’m putting on the table
977 also the value to be derived from making a major move to shift the economic centre of gravity away from
978 what is perhaps the biggest problem we have in this province: the concentration of people and everything
979 else in the lower, or the South-western, corner.” This is really what he was saying. He didn’t put it in these
980 words; he’s not a political scientist, although he’s got a doctors degree in political science I’ve noticed.

981 You see he was positing another value, another series of values. The position which his
982 government took when it decided to sell the downstream benefit was, in effect, to say, “If we bring the
983 downstream power benefit back, if it is as cheap as [is] said, if we sell it at cost, then it will be of no value
984 to us in helping us to put in the installations upstream on the Columbia River. No help at all. We’re instead
985 going to sell it for as much as we can get out of the Americans, and in a couple decades we’ll have, out of
986 the Columbia we hope, some pretty modest power.” You remember Mr. Bennett made some hyperbolic
987 statements to the effect of, “We’re going to develop the Columbia on the sound basis of making the
988 Americans pay for it. Nothing is cheaper than free.” These are the statements that are being thrown back [at
989 him], and the political dialogue to him at the moment. Of course, he shouldn’t have made them in the first
990 place. It didn’t make any sense at the time.

991 One of the things that have been wrong with this entire story was the willingness of public, as well
992 as private, actors to make statements based on assumptions that were open to [and] possessed a great
993 margin of error and could not really be sustained nor attacked, but certainly in many case weren’t justified.

994 In any case, to come back to my point here, the point is [what] this government in effect said was
995 that, “If there is going to be a major reduction in power costs, it may have to be postponed for 20 years.”
996 The point I’m simply making to you is this. I’m not a polemicist for the former provincial government or
997 any government. In a well-ordered federal state, we try to prevent the two levels of government from
998 getting enmeshed on the resolution of the same basic issue. And it is not possible to sustain really, the
999 federal government’s claim to be entitled to really insist upon, as it did for so long although it eventually
1000 gave way, first of all the form of development in which it preferred and then even to insist upon its position
1001 in respect to the sale of the downstream power benefit.

1002 In short, my argument is that if there had to be a debate, and clearly there should have been a
1003 debate, a much broader debate than there actually was with respect to the wisdom of having low cost power
1004 in the 1980s as opposed to the later 1960s, it’s essentially one to have been argued in the provincial context.
1005 But it didn’t work out that way. Instead we had a standoff situation emerge between two levels of
1006 government, which fuels positions all around. And I address myself to you people here, who are students
1007 here, who are interested in the bargaining process which inhibited an examination of options and
1008 alternatives, and particularly inhibited an examination of, as I pointed out to you a moment ago, the
1009 objectives of the entire exercise, because ironically there never was a debate really on the merits of, you
1010 know, moving the centre of gravity towards the North as opposed to slightly lower cost power in the later
1011 1960s. The debate was not conducted in these terms. It faulted, in a sense, Socrates’ basic proposition that
1012 you’ve got to agree upon some assumptions, and the definition of your terms, if you’re going to exchange

1013 contending views rationally at all.

1014 Mr. Cook, I think I better stop here. It's half on red, but it's awfully late, and you've been very
1015 tolerable as it is. Those of you who aren't prepared to stop, I'd be pleased to discuss this with you for a
1016 while.

1017 No thanks, I'll change my mind on that one, I'll take one. You better look out or I'll start all over
1018 again. You wouldn't want that to happen.

1019 You'll sense that one of the points I've been trying to make to you is that I'm convinced that there
1020 is a very great need, in this type of policy making, for dispatching behaviour on the part of policy makers
1021 themselves, and incidentally on the part of the public at large. One of the questions I'd have hoped to
1022 discuss with you on really great length was the nature of the advisory process which was, and which was
1023 not, applied to this. That's why I conclude by repeating the point I made earlier, that I was in no sense
1024 trying to be cynical or flippant when I referred to the uninformed nature of the public dialogue on this issue
1025 in Canada. It's been uninformed because, for example, the record on international negotiation was
1026 classified from the beginning and has never been seen by the public or any member of any provincial
1027 legislature or federal legislature either. Not all of the engineering reports have been issued by any means. A
1028 few were issued: the IJC report in 1959, a progress report in 1960, [and] a brief statement with the Treaty
1029 [in] January 1961 thank you very much. These were all valuable-enough documents, but I'm afraid the
1030 treatment they got was in a sense unjustified, but in a sense explicable in light of the fact that there was
1031 nothing else available. So frequently, those who used them forgot to, of course, go back to their basic
1032 assumptions.

1033 Incidentally, even if a great deal of the data had been available, comparison would have been very,
1034 very difficult. Five of the major reports I can think of all utilized different interest rates. And if you people
1035 had any courses in welfare economics, or resource development, you probably know that, if you're
1036 calculating a benefit cost-ratio for example, the interest rate is probably the most crucial decision of the lot.
1037 Well here are five different engineering reports, and they all use different rates. So that comparing the
1038 findings of one report with another [becomes an] extraordinarily difficult exercise.

1039 You'll sense I've read the record. I find nothing that the negotiators of the Treaty, of the Protocol
1040 sales agreement, really ought to be ashamed of. You will sense that I've tried to say to you that I think that
1041 everybody in Canada has something to learn. The politicians, the technicians, the federal and provincial
1042 technicians, I think clearly in 1960 did not realize that if the two major river systems were brought on
1043 together, that there could have been a relationship between them which would have had implications for
1044 project selection on at least one of them. I don't think this was appreciated in 1960, or in 1961 either, by the
1045 technicians. It certainly wasn't appreciated by Mr. Bennett who presumably, if he'd have understood this,
1046 would have insisted that his advisors take him more seriously than they did. It's very obvious however that
1047 the numbers didn't appreciate this either. Eight UBC professors issued a very interesting paper in 1962 on
1048 the validity, or the invalidity, of this bargain and the Peace River plan too. They never raised this for a
1049 moment. Dr. Krutilla wrote a private appreciation of the Treaty in the summer of 1962. He didn't mention
1050 this consideration as well. Everybody had something to learn on this one.

1051 **Audience:** [inaudible] Were they really conscious of the Peace River option?

1052 **Dr. Swainson:** Well they were conscious of an option but...

1053 **Audience:** Are you saying that they should have counted it in?

1054 **Dr. Swainson:** No, I'm not saying that they should have counted it in. What I'm simply saying is that
1055 everybody had something to learn. Dr. Krutilla, of course, was watching the story from the start, in fact
1056 before the start. He and Irving Fox, with whom I'm working at the moment at UBC, came out here in 1958.
1057 (We're not on the radio I trust now.) You know what they said to the government of Canada? They said,
1058 "The government of British Columbia," they said, "The government of the United States, here is a chance
1059 for three sophisticated governments to jointly plan the development of an international river in such a way
1060 as to produce a major benefit in the most economic possible manner, and possibly to establish a model
1061 which will be a great assistance is the world order." At first the reception in Victoria, by the technical
1062 people here, was very positive. I don't know what it was in Ottawa; I think it was reasonably positive there
1063 too. And I have no idea what the reaction in the United States was, I must find out some time from Irving.
1064 In any case, the proposal got grounded on the shoals of intergovernmental rivalry in Canada, never mind
1065 international rivalry.

1066 But you know the perspective that was being utilized, and it's a brilliant one. Krutilla is a good friend of
1067 mine, and I've read his book many times and appreciate it. As a perspective, that you've got to rethink in
1068 terms of national interest. Dr. Krutilla, of course, was very concerned about Libby dam. This is, above
1069 everything else, the thing he was so disturbed about. He knew very well the Americans conceded this in
1070 private negotiations: that it's benefit cost ratio was just a trifle over 1:1. And if British Columbia pushed it
1071 to a last added place, as it is last added in the Treaty, it would be under 1:1. In other words, when the
1072 Americans ended up building it, you know they would be poorer not better off. He's very critical of them
1073 for ever allowing that thing in the Treaty. And I can understand his feeling on this, anyone can who has any
1074 feeling for welfare economics and any feeling for waste. And this is really what he was fighting - waste.

1075 The government of British Columbia, however, had some very astute technical advisors too. And I should
1076 tell you this, these fellows took a hard look at this situation early in the game, and they came to a very
1077 interesting decision, which was this. They said, "It's apparent to us that the Americans are going to have to
1078 be indulged on Libby one way or another. Either they are going to have to build it, or they are going to
1079 have to be allowed to build it, or they are going to get their pound of flesh out of us in other ways." So
1080 these men took a very hard look at upper Kootenay Columbia River storage. I remember reading on a
1081 monograph a comment by one of them, probably the most senior of them all. I've told some of you about
1082 this already. His comment went to this effect. He said, "You know, the thing that probably should happen
1083 to the upper Kootenay is nothing. Nobody should build anything in Canada or the States." This is a
1084 comment by one of the men who was denounced as a flooder of valleys and an insensitive person with
1085 respect to the environment. But, you know, that assessment with respect to the American position apropos
1086 Libby was right. The American negotiators, right through 1960, made it perfectly clear that they were going
1087 to get Libby. And if they were [not going to get it, they were] going to extract a significant payment. And
1088 they did. In this sense, the provincial decision makers were shrewd very early in the game. Sorry I went on

1089 there.

1090 **Audience:** [inaudible]

1091 **Dr. Swainson:** That's a very good comment. Let me respond to it in this way, first of all, by saying I knew
1092 the General. I was a guest of his once; we spent a whole day working through this. I'm not a revisionist
1093 historian at heart. I'm always quite saddened when I see some of the revisionist attempts to discredit our
1094 folk heroes if you like. The General is far more than that to me. He was a very great Canadian whose
1095 contribution to Canadian life has been well and properly memorialized and recognized. I'm the first one to
1096 honour his memory, and I'm almost embarrassed to disagree with him here, because the man's dead of
1097 course, and he's not in a position to respond to anything I say.

1098 There's no question about the fact that he put up a tremendous fight in the IJC, through the 1950s, to
1099 prompt the Americans to ultimately concede the downstream benefit case. He, of course, and his supporters
1100 are convinced that he won out. The government of British Columbia could make an equally good case for
1101 saying that it's not at all clear that that did the trick at all. That it was the sudden emergence of the
1102 possibility that the Columbia might sit for 20 years while nothing happening on it that really prompted the
1103 Americans to think the thing through. Who knows? I repeat there's no question about the fact the General
1104 argued his case very vigorously.

1105 I think he made some tactical errors. For example in 1954, he introduced to the IJC the Kootenay to
1106 Columbia diversion without ever clearing it with the government of British Columbia. And that
1107 government was a proud government, and it knew it was scorned in those days, and it was sore. In 1955 I
1108 think, he made a tactical error with respect to the International Rivers [and Lakes] Improvements Act. He
1109 got put on the docket as a witness for the Act, and the government of British Columbia, of course, wasn't
1110 very happy about that. But [it was] particularly unhappy about the fact that Mr. [Clarence "C. D."] Howe,
1111 prior to the passage of the Act, took the position [that the] government of British Columbia had very
1112 deliberately seen to it that Ottawa was completely uninformed as to what the Kaiser people were up to. [It]
1113 turned out, of course, that the government of British Columbia had insisted that the Kaiser [Aluminium]
1114 people go to Ottawa and see the General, and see him on a number of occasions, but he never told the
1115 federal government of this.

1116 But on a much broader scale than this, I think that the General really was guilty – no, no the victim - of
1117 faulty analogous reasoning. You'll recall when he first went to the IJC in 1950 that the major issue before
1118 him at that time was the St. Lawrence Seaway. Here [the desires] of the federal government was perfectly
1119 clear. [The necessary] major navigational work [was a] straight forward exercise, which moved very
1120 smoothly and ably, and the General was very proud of the speed in which they were able to move in the
1121 early 1950s on that one. He tended to equate the Columbia and the St. Lawrence, and he simply said over
1122 and over again that ultimately the federal government decide. I'm convinced this was bad advice, and this
1123 helped to derail the federal government, particularly the Diefenbaker administration.

1124 The other thing before I sit down is this. A few people realized that relations between the federal technical
1125 staff and the General got very bad as the 1950s advanced. The General talked to me about this. He was a

CRT Lecture 6: Dr. Neil Swainson

1126 very pleasant person to talk to, very critical of them, and I talked to them about it also. And I asked them
1127 why. And they said, “Well, you know essentially, we and the General began to part company about
1128 1954/55 when our technical studies started to teach us things that we haven’t known before. Particularly,
1129 for example, our studies began to reveal the potential attractiveness of the High Arrow dam.” But they said,
1130 “Just at the time when technical analysis was beginning to produce insights that we haven’t had earlier, the
1131 General began, before the External Affairs Committee of the House of Commons, to very precisely identify
1132 projects which were good for Canada and were bad for Canada, with no reference at all to the costs which
1133 could be imposed in bargaining.” In short these fellows said, “You know, we just came to the conclusion
1134 that he and we were on the same analytic wavelength.” That situation lasted, and ultimately I think, it was
1135 responsible for the fact that the negotiation of the Treaty was taken out of the IJC’s hands.

1136 Let me say one final thing. Many of the General’s supporters, you know, bitterly regret the fact that he was
1137 not in on the negotiation of the Treaty. For those of you who know the story of the International Joint
1138 Commission know that very interesting philosophy and practice has grown up around this very important
1139 and useful body, and the gist of it was this: the six members of that commission do not sit as six partisans.
1140 The six of them, three Canadians [and] three Americans, try to view all issues from all perspectives. The
1141 Canadians try to see things from the American perspective, and the Americans try to do the reverse, and
1142 they try to come up with an agreed upon position. Strictly speaking, the commissioners are not subject to
1143 direction by their respective governments. They have some arbitral functions and some judicial functions.

1144 The Columbia River references, as many of you know, were given to the IJC under Article 9. It was simply
1145 an examination and report reference, with the commissioners having no arbitral or judicial power at all. But
1146 in any case I think, where the General got off the rails as I believe he did was this. During the 1950s he was
1147 a delightful man, an engineer incidentally, and absolutely fascinated by the technical details of this thing, as
1148 sometimes political scientists have, sensed after a few weary hours. He was fascinated by the technical
1149 details and became convinced it was his prerogative in a way, and it was going to be his function, to
1150 identify the optimal plan for Canada. But you see, he became a spokesman of it, as I pointed out to you,
1151 before the House of Commons and before many audiences throughout Canada. He sought to play a role as
1152 the primary architect of a plan, upon which subsequently as an IJC member he would be expected to sit in a
1153 quasi-arbitral capacity. That was just an untenable position and was basically the reason why, finally, the
1154 whole thing was moved away from the IJC.

1155 **Audience:** [inaudible]

1156 **Dr. Swainson:** I don’t know whether he had any impact on the Conservative Cabinet at the beginning of
1157 1960 and prompting them to move rather precipitously to negotiations with the United States. He certainly
1158 had an impact on the cabinet with respect to the cabinet’s perspective of what was an optimal plan for
1159 Canada. He was not close to members of the cabinet incidentally, save Mr. Green, with whom he ultimately
1160 became very close. Mr. Diefenbaker often likes to tell the story that he played a major role, indeed, in
1161 humiliating the General when the General was in the House of Commons delivering a speech in the fall of
1162 1944.

1163 **Audience:** Is the Treaty renegotiable, and if so, what significant change should be made in it?

1164 **Dr. Swainson:** There's a good question. I suppose any Treaty is renegotiable if the two parties decide to
1165 reopen [it]. I'm going to answer your question by saying just this. Excuse my sitting down.

1166 There are hazards involved in reopening it. I've, a couple of times this evening, pointed out one of them. A
1167 hazard that, if we reopen it and give the Americans the chance to put a new base system in there, the whole
1168 basis, if you'll excuse my repetition here, of the calculation of both the flood control and the downstream
1169 power benefit is significantly modified. And I think this is potentially a very hazardous exercise. If you ask
1170 me if I expect it to be reopened, if I think you did obliquely, I guess I suppose I have to say no. I don't
1171 think I do expect it to be reopened.

1172 It's possible that the ongoing agreement in time might be improved. Let me suggest a couple of ways.
1173 [The] Montreal Engineering Company suggested in 1957, that when the Columbia was developed in British
1174 Columbia, the Canadian plants should be entirely integrated in the American system, connected by interties
1175 [and] transmission lines very close to the system, and operated in complete conjunction with it. This scared
1176 the technical advisors of Canada at the time, federal and provincial, General McNaughton above everyone
1177 else, primarily because of the fact that the American system was so much bigger than ours and so much
1178 more mature in developmental terms. The Canadian technicians were frankly not sure that integrating two
1179 systems at such different stages of development could be done without the less developed system, the
1180 Canadian system, suffering. I'm not sure after 15 years that the technicians feel that way any longer, or that
1181 the Montreal Engineering Company feels any less strongly, than it did in 1957, that this is the sensible
1182 thing to do.

1183 I don't know whether you've ever examined the economies that can be derived from integrating
1184 neighbouring electric systems. It's a real positive of some game, to use the jargon of the game theorists. If
1185 neighbouring electrical systems to intertie [to] each other and store surplus power from one reservoir or
1186 from one plant in a reservoir of a still bigger plant, if in short by closely cooperating and interlinking our
1187 systems, they do all they can to prevent spillage, because you see spillage is waste - lost revenue. They can
1188 greatly increase the benefits available to both parties. I have a feeling that we might still profitably intertie
1189 the British Columbia system with the American system to our advantage and to theirs. There's one guess.

1190 The other, and this is just a guess, the Americans were only prepared to pay, in 1961, for 15.5 million acre
1191 feet of storage in those three reservoirs. We provide more than that. We've got extra storage in the Mica
1192 reservoir. I think we've committed 7 [million for] operation, for power purposes 7 million, but we've got
1193 12 million. It's possible that via some type of formal agreement we might be able to get some additional
1194 benefit from the Americans with respect to that storage in the future. I think this is a very real possibility.
1195 We'd have to agree to regulate that storage, of course on an agreed plan, as we regulate the 7 million acre
1196 feet of storage. Now this is right off the top of my head. I'm not privy to any secrets here at all. This would
1197 be if you like an improvement of the bargain somewhat.

1198 But otherwise, I could see the thing changing over time, new benefits emerging for example. It's possible
1199 to argue that by evening out the flow of the river we make it possible for the Americans to build thermal
1200 plants downstream on the Columbia. We provide them with a heat dissipation [and] pollution control
1201 benefit. Now no one thought of that one in 1960. [It is] very interesting [that], in 1960 as the Treaty was

1202 being just finalized, the government of British Columbia took a very interesting position, and its staff took
1203 a very interesting position. They said, “Look, let’s make the Treaty as brief as possible and allow the
1204 operating entities as much flexibility as possible. This is the way to run neighbouring power systems.” The
1205 federal government opposed this, frankly because it was afraid that what really British Columbia was doing
1206 was sneaking the Peace in by the back door. Now the ironic thing is, that was not what the British
1207 Columbian technicians were talking about at all.

1208 **Audience:** [Inaudible]...wrote a paper as early as 1960, examined all 10 of the major alternatives open to
1209 the Americans, and dismissed all of them on the basis, of one form or another, of local objections. And he
1210 points out that very little of the Corps of Army Engineers’ recommendations in the report of 1948 were
1211 built. There seemed to be a mounting local resistance. It wasn’t an environmental resistance, because those
1212 things were unknown. [It was] a series of local objections to the dam building binge which had been going
1213 on since 1934. Do you have any comment on that?

1214 **Dr. Swainson:** Yes that is a very good point. Actually, a good deal of the opposition in the United States
1215 wasn’t environmental at all. Even as early as 1958/59/60, quite a number of these projects flood back into
1216 national parks. And Dr. Krutilla is well aware of this criticism. It’s a perfectly valid one. They did go ahead
1217 with two projects. They went ahead with the Boundary project, and they went ahead with the Bruce’s Eddy
1218 project - Dworshack project - that’s right, same one. Whether to what extent how far they will go ahead
1219 with the others, or would have gone ahead with the others, is really hard to tell. There was certainly strong
1220 domestic opposition to a great many of them, and this has to be put on the table beside Krutilla’s argument.
1221 What this really does is to suggest that, in fact, his thesis that they lost 250 and 500 million dollars is
1222 perhaps understandable only if you accept his thesis concerning the availability of these. I think it’s a
1223 basically a valid position to take. What will happen to them in the future, I couldn’t begin to guess.

1224 **Audience:** As you probably know, John Krutilla’s main concern now, and has been for a couple of years, is
1225 with the evaluation [of] the intangibles.

1226 **Dr. Swainson:** That’s right.

1227 **Audience:** And particularly the perennial intangibles? How do you put a value on the Libby basin and the
1228 obligation for all we can control it as long as the dam lasts? How do you evaluate the 6000 head of deer,
1229 and 500 head of elk, that will disappear? How do you evaluate the, I don’t know how many, head of beast
1230 that would be produced every year perpetually? That’s his concern. Do you have any thoughts on the sort
1231 of job that we did, or we didn’t do, on that?

1232 **Dr. Swainson:** Well yes, I could say a couple things about this, because these are points, these are good
1233 points, and they have been raised. Interestingly enough, the government of British Columbia, the coalition
1234 government way back in 1949, did a remarkably sophisticated job of attempting to assess not just the
1235 tangible but also the intangible costs of the Libby reservoir. And it looked, at that time, as if we might have
1236 to concede this to the Americans. So in effect, the government of British Columbia said to its staff planners,
1237 “For goodness sakes, let’s make the bill list as big as we can legitimately. Let’s get everything in there we
1238 can argue for.” So they put in the then-estimated cost of buying up the land, the 40,000 acres or so. They

CRT Lecture 6: Dr. Neil Swainson

1239 tried to calculate the stumpage, the value of the forest grove foregone. They calculated, as far as they could
1240 in the future, the value of the agricultural production. And they calculated the present worth of that. They
1241 tried to put a value of the recreational gain. They didn't do it in the somewhat more sophisticated manner
1242 that is pursued today and is still a pretty crude exercise as you know. In that reservoir, interestingly enough
1243 way back in 1949, they did try to put a monetary value on the works.

1244 Now so far as the other reservoirs were concerned, they didn't go so far. For example, they took into
1245 account the stumpage value of the forest grove forgone, but they didn't try to put a value on the forest
1246 grove otherwise. And they did not try and put a monetary value on the social destruction costs, other than to
1247 put a value on what they felt they would have to pay to compensate people for it. This is a terribly difficult
1248 exercise. All I can really say is, in fairness I think, that the men who worked on this thing in 1958/59 did
1249 their very best as they understood the situation at that time. But they certainly did not deliberately, for
1250 example, overlook costs. I have a feeling that they, Mr. Waterfield [talks] a good deal in his book of the
1251 failure to, for example, include in the benefit-cost ratio the ratio of the timber growth forgone, this in one
1252 sense [had] a valid point. On the other hand, you have to take into account the fact that, until for example
1253 there are no longer a decaying forest resource, in other words until you've no longer got wood that's
1254 become over-aged and decaying, you have to make some allowance for this. And there's a great deal of
1255 wood in that area, as you know, which is his position. That's a good question.

1256 I haven't asked John Krutilla, in recent years, what his feeling apropos the Columbia is. He's rather fed up
1257 of the whole thing. [He] doesn't want to talk about it anymore. He incidentally is a very sophisticated
1258 economist. He never argued that the decisions had to be taken, or should be taken, on economic grounds.
1259 As you know, his thesis was that they could be taken on all sorts of other subjective grounds. These other
1260 subjective values were just as significant, and as you're pointing out, John's thesis now, in a way, is that
1261 they, in a way, are perhaps more significant than we ever realized. But his thesis is that they ought not to be
1262 taken, decisions of that order are not to be taken, by skewed or phoney economic data. And secondly, his
1263 thesis is that if they are ever taken that way, perhaps a decision maker ought to be conscious of the
1264 economic opportunity cost of his weighting, of say, a recreational or environmental value.

1265 Let me make one final observation here. You may recall from his book [that] he points out - and he's been
1266 very flattering about the Canadian technical analysis but he goes after the BC people who he knows well in
1267 once place - he points out that the British Columbia analytic group, which did a really remarkable job and
1268 was a small group in Victoria and a small group here in BC Hydro eventually - he points out that after June
1269 of 1960, after a decision was definitively taken not to allow Dorr-Bull River-Luxor, after the Americans
1270 agreed that Canada could provide Duncan, Arrow, and Mica all first added, the Americans then said,
1271 "Okay, you're allowing us to build Libby, but you gotta make some concessions to us to keep this thing on
1272 a positive side of the benefit cost ratio." He points out that they did impose some costs. One of them was
1273 the Libby flowage, which we agreed finally to pick up. And he says this, "If the Canadian technical
1274 analysts, if the provincial technical analysts, had continued their work and had applied to the bargain that
1275 they finally accepted the type of assessment they applied to the earlier offers available in May/June, they
1276 would have found, for example, that the bargain they ended up with is worth, in present worth terms, about
1277 50 million dollars less than they would have got if they had agreed to build east Kootenay storage."

CRT Lecture 6: Dr. Neil Swainson

1278 Now he doesn't say British Columbia should have agreed, but he simply says, in effect, it'd be interesting
1279 to know whether or not the government of British Columbia would have agreed to proscribe east Kootenay
1280 storage if they were throwing away 50 million dollars. This is a very interesting position, and I think a
1281 defensible one to take. But let me put the other side of the coin on the table: if you look at that argument of
1282 John's, and look at the sequence that he's talking about, I've forgotten the number, L2 or something, I
1283 looked it up once very carefully, you'll find that the sequence he's evaluating is a sequence that had Dorr-
1284 Bull River-Luxor, in other words the trench flooded and the Arrow Lakes flooded too. Now the interesting
1285 thing is, you know, the Bennett cabinet said, in 1950, as my children would say, "No way. We're simply
1286 not going to put them both underwater. And forget it." They said this right to their own analysts. It was a
1287 subjective decision, and I can't fault them on that one either. You've got to stop analysis sometime.

1288 **Professor Cook:** Well thank you very much. You really covered your grounds and provided much food for
1289 thought, for sure. And I presume you'll be here for some of the others, particularly Friday when Larry
1290 Higgins will be here.

1291 **Dr. Swainson:** Friday this week?

1292 **Professor Cook:** Friday, March the 1st. It's amazingly a number of times he's talked. And his, the title of
1293 his, talk is "The Columbia River Treaty, Aftermath, and Policy Implications." Well, we'll see what his
1294 lesson's on. I imagine it'll be quite different. That's on Friday the 1st. Thank you very much

1295 **Dr. Swainson:** You're welcome.