

A career in quality: An interview with wood specialist Les Jozsa

Don Gayton

Abstract

In an interview conducted by extension specialist Don Gayton, senior British Columbia forester Les Jozsa reflects on a long career working in the fields of wood quality, silviculture, and dendrochronology. Jozsa, now Research Scientist Emeritus with Forintek Canada, describes the importance of distilling scientific and technical forestry information into practical terms, and extending it to industry users. He also summarizes the history of the “Hungarian connection” to the Faculty of Forestry at the University of British Columbia.

KEYWORDS: *dendrochronology, history, wood production, wood quality, silviculture, University of British Columbia.*

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Introduction

I first met Les in the middle of a cutblock near Horsefly. He was giving a field day talk on the value recovery chain in timber harvesting, and I was captivated by his blend of wisdom, humour, and irreverence. Resolving to learn more, I tracked Les down in his laboratory at Forintek on the University of British Columbia (UBC) campus. Les has specialized in the impact of silvicultural treatments on wood production and wood quality for some 35 years, and has authored more than 150 scientific papers, technical reports, and articles. Surrounded by wood samples (he calls his lab “the Xylarium”), Jozsa spoke animatedly in response to my questions, handing me various wood samples and tree cookies to illustrate his points. A fit 66 years old, he is now Research Scientist Emeritus for Forintek, but still comes to the lab every day. A Hungarian-Canadian, he is equally passionate about both countries.

A Dialogue

DG: So, I’m here to get to know Les the man, as well as Les Jozsa the wood quality expert.

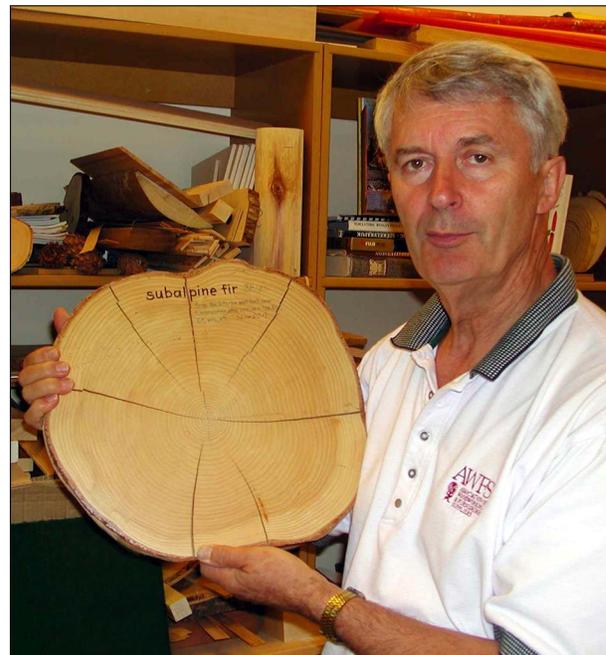
LJ: Well, first of all, you need to keep in mind that the only normal people are the ones you don’t know well. Now, as far as my wood quality work goes, I’m brainwashed. You tell yourself that you like what you’re doing enough times, and sure enough, you begin to actually like it.

DG: I can’t help but notice the colourful pamphlet on your desk. What is it?

LJ: It’s called *The Champion Trees of Canada and the World*, and it’s a good example of how an idea can mushroom. I do a lot of public speaking, and I like props. I started out using my wood cubes, but I wanted something more basic, more visual, for a lay audience. Lately, I’ve been representing the Canadian Wood Council, and talking to architectural firms about tree growth, wood structure, and wood quality. This pamphlet is designed to get lay people thinking about trees. I believe everyone in British Columbia should know something about tree growth and wood structure. This pamphlet will put the reader on first base.

DG: I’m looking at one of your wood cubes right now. It’s like an elaborate Rubik’s Cube, but the surfaces contain close-up views of wood structure. I can see the longitudinal wood fibres on the side of the cube, and the same fibres in cross-section on the top of the cube. I guess it’s no coincidence that Erno Rubik was another Hungarian. *[At this point I accidentally drop my notebook and a sheaf of Les’ research papers on to the floor of his lab.]*

LJ: I see you are a rather disorganized journalist, but no matter. As I mentioned, I speak to a lot of audiences about wood, so I’ve become an enthusiastic showman. A showman needs props, like cubes and pamphlets and tree cookies. A showman also needs a sense of self-deprecating humour. I “work the room,” like a comedian does, to get people to buy into the idea of wood quality. And sometimes I push the envelope. Humour doesn’t work if you aren’t out on the edge, risking something.



Les Jozsa holding a sample of his favourite material, British Columbia wood.

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DG: What were the big themes in your career?

LJ: [*Pointing to a bookshelf full of his publications*] Mainly taking these technical reports into meeting rooms, classrooms, and on field trips, and making the dry scientific data inside them real for the audience. When most people look at a technical report, their eyes glaze over. They either don't understand it, don't have time to understand it, or both. And an awful lot of operational people, the ones that really need this information, are in a squirrel cage—they're going flat out just to keep up. So it's my job to package this technical information, bring it to them, and make it real for them.

DG: You're ringing one of my bells here: it's called extension. If science isn't closely coupled with extension, then there's a problem.

LJ: Yes, but extension has to get it right. I've lectured to thousands of forestry professionals over the years, and you can't bullshit them; you really have to know your stuff. The other thing the extension specialist has to remember is the importance of the success story. Sure, many parts of British Columbia's forests have been raped and pillaged in the past, but there are plenty of places where we've "gotten it right," silviculturally speaking. We need to seek out, understand, and showcase those success stories.

DG: How much has your European background influenced your approach to forestry?

LJ: When you come from a country where every square metre of ground is managed and utilized, you could not help but be uncomfortable with the typical standards in the province 40 or 50 years ago. But don't get me wrong—I've seen the downsides of overly intensive forestry as well

as the downsides of letting nature take its course. Either approach can potentially produce a silvicultural slum.

DG: Okay, talk to me about wood quality.

LJ: Well, I think we've given out enough "cocaine samples," so to speak, to get people hooked on the concept of wood quality. When I talk to industry about wood quality, I often start off by showing the growth statistics on a plantation of radiata pine in South America. In the long run, there is no way that British Columbia's timber industry can compete on productivity and quantity. So wood quality is our best marketing asset, but industry needs to realize that you don't sell a product, you sell a concept. It's just like flogging steak knives at the PNE; everyone has a steak knife at home, but you have to convince them that your company has taken the steak knife concept and totally revolutionized it.

DG: I've heard you use the phrase "density management." Is that like crowd control?

LJ: Something tells me you're not a forester. Density management is the heart and soul of silviculture. Let me set up the goal posts for you: at one extreme, you have a very open-grown "cabbage patch" stand, where each tree has lots of room to grow. Of course they grow rapidly, but because they're not shaded by other trees, all the lower branches persist. With that extensive live crown, the tree continues to produce what we call juvenile wood, which has a number of inferior properties. So with this scenario, we get big trees, with big branches, and poor quality wood. Now let's take the other extreme, the dense, "dog hair" stand, which reaches crown closure early, and the lower branches die off because light no longer gets to them. As a result, the trees are very small in diameter and, in extreme cases, never reach

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merchantable size. In human terms, I liken this to the 35-year-old “kid” who still lives at home, does not have a job, does not take out the garbage, and does not clean or cook either. At the other end of the scale, it’s like telling 10-year-old kids that it’s time to leave home, go and develop some character, and come back when they are rich.

To sum up, density management seeks the best location between those two goal posts, while keeping in mind the intended end use of this wood. In other words, you look for the best possible trade-off between quality and quantity. Good density management could mean multiple entries in order to maintain that optimum trade-off point over time.

DG: That leads to my next question. What about intensive silviculture?

LJ: First of all, you can only apply it in favourable growing areas where you can reap the benefit. A treatment like pruning, for example, is only likely to pay off in coastal areas where you have long seasons and good growing conditions. On the cost-benefit scale, I think fertilization and improved genetics, plus tree selection, are probably the best intensive silviculture tools at present.

DG: What are your thoughts on the current mountain pine beetle invasion?

LJ: Some natural disturbances are so massive that the best thing we can do is relax and enjoy them while we wait for a couple of cold winters. We must remember that this type of infestation has happened many times in the last 10 000 years. Some experts feel that the root of the mountain pine beetle problem is the large inventory of over-mature lodgepole pine, which is a by-product of our very efficient forest fire suppression activities. A more normal fire regime would have created a patchy, uneven stand age distribution, which would be less conducive to large beetle outbreaks.

DG: What about future management in the mountain pine beetle areas?

LJ: Well, obviously, we must dramatically increase our harvesting in the short term to rescue as much wood from the attacked stands as we can. And we’ll have to mill all that wood right away too because excessive drying checks in the dead

trees will reduce lumber recovery factors to unacceptable levels. But beyond that, we will need to totally rethink our management of these susceptible lodgepole stands, and start harvesting them sooner. If we reduced average harvest age from 80 years and older, when trees have already lost their vigour, to 60 or 70-year-old vigorous trees, this would really limit the amount of mountain pine beetle attack. And obviously, we’ll need to diversify the landscape by creating stands of varying ages.

DG: I’ve Googled “Jozsa” and I keep turning up more and more pies that you’ve had your fingers into. Tell me about increment borers.

LJ: I like practical things, and an increment borer is about as practical as you can get, but it’s amazing how many people don’t know how to use them or care for them properly. In one Forintek project, some 8000 cores came into our lab from various parts of the province. Ninety percent of them were either marginal or useless. So I wrote a paper on the proper care and feeding of increment borers.

DG: And how about the Mount Cayley project?

LJ: Oh, yes. We used dendrochronology to date old debris flows near Whistler, which caused a bunch of the trees to be pushed into leaning positions. We were able to date the flows by changes in the compression wood of those leaning trees. We did some similar work in the Mackenzie Valley in the 1970s. The pipeline people wanted to know the frequency of landslides, and we were able to give them that information by looking at tree rings.

DG: So you’ve done a lot of dendrochronology. Tell me about it.

LJ: Basically, it’s a nice hobby.

DG: As a closet dendrochronologist myself, I’m deeply offended by that statement. What do you mean?

LJ: Dendrochronology is where the plot thickens. Often we can’t even accurately cross-date from one side of the same tree to the other. You need large numbers of sample cores to make any kind of accurate determination. Samples from stressed sites are the best, since they more accurately reflect

growing conditions, but trees growing in stressful sites frequently have missing growth rings, so accurate dating is very difficult. Probably the biggest contribution dendrochronology has made is the establishment of carbon-14 referencing. As trees absorb carbon dioxide to form wood, they lay down an accurate record of the natural fluctuations in the carbon-14 isotope concentration over time. This work laid a solid foundation for the whole science of carbon dating.

I worked for a long time in the dendro field, but finally pulled the plug and switched over to wood quality.

DG: You have done some interesting economic research into optimum log diameters from a harvesting, transporting, and milling perspective. Tell me about that.

LJ: In all fairness, I did not do the research, but I recognized a certain pattern as I consulted with sawmill and woodlands managers and asked them about their stem size preferences. More and more, we're talking about small diameter (10–20 cm DBH) and medium-diameter (20–30 cm) logs, since the days of the big old-growth trees are just about over. We looked at the costs associated with harvesting trees of these small and medium diameter sizes. For the 10–20 cm category, the costs of harvesting, transporting, and milling a cubic metre of wood are quite a bit higher than the same costs for trees in the 20–30 cm diameter category. The research made it pretty clear to us that, all other things being equal, you are economically better off harvesting medium-sized trees instead of small trees. Of course, in the beetle harvesting areas we may not have any choice in the matter.

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DG: I’ve heard bits and pieces of the “Hungarian Forestry Mafia” story, but I thought I’d ask you for the whole story.

LJ: As you know, we had a revolution in Hungary in 1956. I was a student at the Hungarian Forestry School, located in the town of Sopron (pronounced “Shopron”), when the Russian army was brought in to suppress the revolution. In the face of Russian tanks, resistance was futile. The entire forestry school, both students and faculty, decided to flee across the border to Austria. Canada’s Minister of Immigration, Jack Pickersgill, heard about the situation from Austrian authorities, and championed the cause of bringing us to British Columbia. In January of 1957, 200 of us students and 14 faculty arrived in Powell River, where we were provided with temporary housing and began some intensive language training. Dr. Norman McKenzie, the President of the University of British Columbia, helped to engineer an “adoption” arrangement between the University and our transplanted Sopron school. We began classes at UBC in the fall of 1957; by 1961, 140 Soproners had graduated in forestry. A large number of these went on to postgraduate training. So the “Sopron factor” has had a big influence on British Columbian forestry.

DG: Now tell me about the beautiful wooden Sopron Gate in front of the Forestry Building at UBC.

LJ: It is a gift from the Sopron Alumni in recognition of the helping hand that Canadians and UBC extended to us. One of my hobbies is wood carving, so I carved the gate in the classic Transylvanian-Hungarian folk art style.

DG: Thanks very much, Les. I feel like we just barely scratched the surface in this interview, and perhaps we can do another one in the future.

Acknowledgements

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Recommended Reading

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Test Your Knowledge . . .

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How well can you recall some of the main messages in the preceding perspectives paper?

Test your knowledge by answering the following questions. Answers are at the bottom of the page.

1. What does Les Jozsa believe is British Columbia's best marketing asset in the competitive global timber industry?
 - A) wood quantity
 - B) wood quality
 - C) productivity
2. Which of the following intensive silviculture tools does Jozsa see as valuable in terms of cost-benefit, provided growing conditions are favourable?
 - A) fertilization
 - B) improved genetics
 - C) tree selection
 - D) all of the above
3. Jozsa summarizes research results that indicate, when all else is equal, it is more economically beneficial to harvest medium diameter (20–30 cm DBH) trees than small diameter (10–20 cm DBH) trees.
 - A) True
 - B) False

ANSWERS

1. B 2. D 3. A