

Living in a Land Grant University: Transportation, Teaching and
Service

Dr. Ken Casavant

Distinguished Faculty Address

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President and Mrs. Rawlins, it is a pleasure to be here among friends, colleagues and family in a University that means so much to me. It is impossible for me to say just how honored I feel to give these remarks tonight, especially since this is the oldest award given at Washington State University and it is one that is decided on by the faculty. For this honor I thank the faculty and the University, and especially thank you who have turned out tonight.

Like any good researcher upon hearing of this selection I did a bit of background work, talking both to past presenters and to members of the committee that chose me for the presentation. The past presenters were unanimous in stating that they felt no bounds on what they could talk about, that they could have as much fun as they wanted, that they could personalize it as much as desired and that there were no constraints on the time allowed. As you will see, I have taken their comments to heart. The members of the selection committee responded that I had been chosen because of some degree of success (maybe they were a bit more laudatory than that) in all areas of teaching, research and service, rather than being solely outstanding in one area of the triad. They felt that an address dealing with that theme might be useful to the attendees. Again, as you will see, I have taken their comments to heart as well.

So, my goal today is to show, selfishly, that economics can be useful in research, teaching and service activities. I offer a quote from John Maynard Keynes for your consideration: “The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. I am sure that the power of vested interests is vastly exaggerated compared to the gradual encroachment of ideas.” Let’s see how we do today.

Further, and maybe more importantly, I will attempt to show that teaching, research and service are mutually interdependent, that they are joined at the head and the heart and not just at the hip and that Washington State University as the Land Grant University offers the opportunity to participate fully in all three. Finally, I will suggest that our Strategic Plan adds impetus to that effort. I will look to my teaching, research and service program to make the point of how synergistic these activities are to each other,. If in passing I have, as Sam McManis said, “informed the mind and engaged the heart”, I will have succeeded tonight.

In developing those themes, and having a bit of fun, I will give some personal background, review the Land Grant Mission, and then spend time on each of the areas as developed in my career here at Washington State University. I will close with a reflective look at what our Strategic Plan offers for future direction for individual faculty members.

Personal Background

I come to you from North Dakota, just like many outstanding people like my Dean, Jim Cook, and his wife, Bev. As the picture shows, we, me on the right, my two brothers, my father, and of course, Shep our cattle dog were rather hardy folks. Like much of life in a difficult part of the country, Shep had no pedigree but always had a function, working on the farm. I believe the flavor of the picture also indicates the need for a solid work ethic, something given to me by my father and mother and my life in North Dakota. You should also note that behind us is the reason that I learned to move very fast as a young man. That outhouse, seemed, in winter, to be located in the next county, especially at 30 degrees below zero.

Along the way, I learned the importance of team work, sometimes the hard way. It is apparent that, in baseball, we had to work on

the team aspect of the game and that without teamwork, success is difficult to achieve. I know, as I look at the many coauthors I have had over the years, these early lessons stayed with me.

Notre Dame Academy, a French speaking, Roman Catholic Boarding school, as depicted here, gave me academic and spiritual training. Our graduating class of 13 included one of the most important people in my life, Dorothy, my wife. We had met in the first grade where I have to admit, she was a “hottie.”. By the time of our senior year she had agreed to date me and only six years later she agreed to marry me. You guys think getting tenure is tough? Try getting Dorothy to marry you.

Incidentally, Dorothy and I have been commissioned by the Sisters of Mary of the Presentation Order to write the history of Notre Dame Academy. Dorothy had done her job, spending months in the courthouses and House of the Sisters; now, it is just up to me to finish the writing and rewriting of the text...sometime, somehow.

Dorothy and I came to Washington State University after me doing my Bachelors and Masters degrees at North Dakota State University. My Bachelors was fun, including being kicked out of school as a sophomore for bad grades and distractions on campus (something that I have used as an example for my own students), and my Masters program woke me up to the importance of transportation, economic theory and the joys of teaching. My major advisor, Dr. David Nelson, gave me the love of both teaching and transportation and then led me to Washington State University to study under Dr. James Nelson, a nationally known transportation economist.

My performance as a graduate student here at Washington State University was good enough to bring on the best month in my life. In 1969, in one month I passed our preliminary examinations for my Ph D, was offered a job on the faculty and found out Dorothy

was pregnant with Michele, our first child. You could say that it has been down hill since that time but I don't, except for the slight bit of hair that I have lost.

Finishing my Ph D, developing a transportation research program that was of relevance to the state of Washington, and performing in the class room, led me to receipt of tenure and promotion in 1976. Fitting in those times, and not necessarily these times, we celebrated the event, on the field near the Livestock Pavilion, including some libations and relaxed apparel. I should note that the graduate student on the left, Dr Charles Logsdon (whose son is attending WSU today) has been the energy economist for the state of Alaska for the past 20 or so years and Dr Mike Wise, on the right, worked at Clemson University and has been Director of the Peace Corps in three different countries.

As my last bit of personal background let me offer my proudest accomplishments while here at Washington State University, my family. The three ladies in my life have been my stability, conscience and source of growth. They and my son in law surprised me yesterday by coming in unexpected from Boston and Kansas. I would like to introduce and acknowledge Dorothy, Colette, Michele and Gustavo, the latter three who almost gave me a heart attack when they walked into my office.

Land Grant Mission

My idea of the land grant mission may vary from yours or the literature, but bear with me. These universities were formed to bring applied education and opportunity to the common man and women, especially in agriculture and the mechanical arts. The Jeffersonian ideal was to be made available to all. The Morrill Act of 1862 provided the initial land grants and public funding to establish and open these universities. But, the knowledge base available to the students and producers at that time was found to be

static. A commitment at the Federal level led to the Hatch Act of 1887, providing a source of research funding that enhanced the body of knowledge available for the classroom and the communities.

It became evident that, even with public education, many producers and citizens were not accessing the Universities and probably never could nor would. Consequently one of the greatest programs ever established, in my estimation, arose as a result of the Smith-Lever Act of 1914 and the establishment of the Cooperative Extension Service. Initially reaching out with the established body of knowledge to those out in the states, county agents and specialists became a formidable team of educators. As time went on these agents and specialists worked with the researchers, and now doing much of the research themselves, to identify information needs, fill the voids and bring those findings back to the non University clientele.

It is this unique combination of teaching, research and Extension/service that is the model underlying Washington State University, it is its past and, as I will suggest, its future. I do feel that they are three legs of the stool; missing one causes imbalance and loss of function. A dramatic number to note is that 40% of PhDs are granted by Land Grant Universities; now, that is an awesome source of teaching, research and service for society.

Transportation As An Applied Research Program

For the past 39 years I have been working on something that has no value....Was it a mistake? Let me explain. Transportation by itself has no value; it is only useful when it answers needs from the marketplace or public interest. Economists talk about it being a derived demand, meaning that value of transportation only arises as the value of the people or product being moved arises.

Dorothy and I did have dates in North Dakota; that's her behind the wheel in this picture. But these photos indicate that transportation problems have changed over time. Getting there no longer is the problem; getting there efficiently and competitively is.

But, what does efficient and effective transportation do? It lowers the costs of production, increases the prices to producers, increases marketing opportunities, changes cultures, ties nations together and more. Everything in this room or that you are wearing was touched by a truck and maybe other modes of transportation.

In a recent seminar honoring Dr. Rod Bertramson the theme was "Geology from the Highway". The speaker pointed out that geology in the region shaped our resource base and transportation corridors—look at the location of our rails, roads and waterways. Transportation then helps shape the economy, resource values and terms of trade in that region.

In the inland empire of eastern Washington it was the stimulus for the agricultural development of the region, allowing our wheat producers to annually sell 80-90% of their production overseas to international customers. In other commodities and products the US has been losing competitive advantage in production because of our competitors' lower land and labor costs; our transportation system efficiencies had helped us maintain over all competitive position. Now, as our system is under stress and other countries such as Brazil and China make major transportation improvements, our overall competitive position is under attack.

Any economist has to use some numbers to be credible, especially when they are near home when giving their remarks. Let me point out that one in four jobs in Washington is trade related. Currently, tonnage on our roads has increased 118% since 1980 and is growing. We move 283 million tons by truck and an additional 75

million tons by rail. Our tidewater ports handle 108 million tons on an in and out bound basis. It is projected that containers through our ports will increase 131% by the year 2020. Grain is expected to increase 50% in the same time frame. And this comes at a time of increased congestion on our eastern highways and in our port facilities. Do I see many careers in transportation and logistics becoming available to our students in our transportation program? I certainly do.

My early interests in transportation arose because of the \$1.10 per bushel paid by shippers in North Dakota, compared to the \$.30 per bushel for eastern Washington. We found that the Pacific Northwest region had been blessed by a complete transportation system, meaning all modes, and the competition among the modes was yielding benefits to the shipper in the region. But, we also found that depending on the commodity 10-40% of the value of the commodity could be taken up by transportation costs. What is unique and appealing is that any savings in transportation for the shipper goes directly into their bottom line or their pocket book, similarly for the consumer.

As a young faculty member I initially teamed with my colleague Dr. Des O'Rourke to look at the transportation and marketing problems of sweet cherries in the state of Washington and we received my first grant for this effort, a whopping \$13,000. Then, over time my efforts turned to deregulation and its impacts, fee and fine systems for trucks, user fees, impact of drawdown of the Snake River dams on producers and society, benefits of rural airports, rural transit design etc. I should mention that, like three or four of my agricultural and resource economist colleagues, some of the findings of these studies, such as the impact of Lower Snake River dam draw-downs have not always met with favor from some of our traditional clientele, even to the point of a group of irrigated farmers flying up to Pullman and requesting that President Smith

and Provost Bataille give me my walking papers. Folks, isn't tenure a wonderful thing....when it is needed.

Over time my research program broadened from agriculture to all transportation economic and policy issues. I received a grant in the mid 90's of \$1.2 million, slightly above the initial \$13,000 sweet cherry grant (by 150 times), to undertake the Eastern Washington Intermodal Study (EWITS), a six year effort dealing with transportation needs, available services and resulting need for investment. The success of EWITS brought forth a new project, Strategic Freight Transportation Analysis (SFTA), a \$2 million six year project that we have currently underway.

These projects have been fun and productive. In both these projects a major component was an origin and destination truck transportation survey, using a newly developed, extremely technical, transportation technique called "stop em and ask em". Around 60,000 trucks were stopped and interviewed at about 30 locations four different times during the year in the two studies inquiring as to origin, destination, weight, commodity, route traveled, among other information. About 300 great Lions Club members served as our interviewers. I am pleased to say that no one was run over and only one heart attack occurred....and the comment we received was "don't worry, Joe will be okay and we are still taking our surveys". Since that time we have been asked to talk about the data collection method nationally and internationally, and have recently completed a project for the Oregon Department of Transportation dealing with data collection methods.

The EWITS Project produced over 40 reports, six data bases, 32 presentations and a lot of heavily used material. The selected reports that are being shown now indicate the breadth of the work, and the people that lead that effort. Dr. Bill Gillis, a graduate of our department, operated a consulting firm at that time.

Fortunately for Washington State University, he is currently the Director of the Center to Bridge the Digital Divide here on campus. The studies on city bypass, location of new businesses and the origin and destination analysis are still being requested.

The work by Ken Erickson on the impact of NAFTA on transportation investment needs in the future has also been one of our most popular pieces. By the way, Ken and my colleague, Dr. Eric Jessup, helping me today, were both my graduate students and both received the honor of being chosen Fellows of the Eno Foundation, the top honor in the field.

We are currently, in order to get ready for the next ten years for our transportation program, working to set up a Regional Center for Freight Mobility, combining University of Washington, Washington State University and North Dakota State University (yes, we don't get too far from our roots, do we?). It will be an initial five year \$10 million effort, to be reauthorized for the following five years, for an additional \$10 million.

I would be remiss if I didn't mention that our transportation research program has allowed me to serve a teaching and service role over seas as well. I have designed the physical distribution system in Alaska for grains movement, and analyzed the marketing and transportation systems in Bolivia, El Salvador, Mali, and Sierra Leone. I do have to admit my thought, as I was in the back of a Land Rover for three days, carrying our own water and gas, bouncing over the Sahel dessert on my way to Tombuccto, was "I hope they never notice that they are paying me to do this." Yes, my position at Washington State University has gotten me "from here to Tombuccto".

A major effort was a six year project designing the physical distribution system for limestone in Portugal. In that project I also conducted two week long short courses in transportation and

logistics for the managers of the Portuguese limestone and chemical firms. Again, I have remembrances of Dorothy coming to visit me on her birthday, of renting a street car and driver for the day and, with many of the friends I had made over there, spending the day eating, singing, drinking fine wine, and touring all over Lisbon with no planned routes. (Did I mention that a job at a Land Grant University in Pullman is a fairly attractive option....especially if you make it so.)

Teaching: Broad and Applied

Let's visit a bit more about teaching. Just as I look to three components in the Land Grant Mission I see three components in teaching and learning: subject matter, student and instructor. I have to admit that I am somewhat of a traditionalist in my approach to educating the students. You need to start with a firm command of the material and the delivery technique chosen to best transfer that material and its critical analysis to the student. The instructor, in my experience, is always "on the stage performing", utilizing the best way to reach the student. I often will find my delivery changing within the hour of the class, as I sense the responsiveness, confusion or attitude of the class.

This has worked very well for me, allowing me to win various awards. In fact, this is Rod Bertramson, Director of Resident Instruction at the time, presenting me with the R. M. Wade Award for Teaching Excellence. I am sure he is saying "more power and the best of luck to you", as he usually did, or possibly, "damn, that beard and hair are too long."

But, early on, I was not content with in class teaching. I felt that there was room for scholarly research in the teaching function, without being in a College of Education (Incidentally, I do feel all instructors should have this interest in teaching scholarship outside the classroom.) I kept getting good student evaluations but always had several or more students that the evaluations revealed that I

had missed or the course had failed them. I developed a tool, Colleague Aided Evaluation (CAE), somewhat similar to the current peer evaluation, as an attempt to reach earlier in the course those students who were not connecting.

The technique and the initial testing, done with my colleague, Dr. Ken Duft, were simple. The instructor of the course briefed the colleague on what concerns he/she had about the progress of the course, noting potential issues. With this briefing the colleague came in to the class, unannounced, and conducted an interview with the students, utilizing informally the issues identified by the instructor. The benefits include those students who were bothered by something, now had the chance to talk about it and also find out if their fellow students felt the same way; some did, some didn't. The instructor, when debriefed by the colleague, was able to make decisions about how or if changes should be made. This technique, since published, has been well received and I still get requests for information and advice.

I continued my combining of research and teaching over the years, resulting in almost ten articles dealing with related subjects. Several were particularly fun. One of my colleagues had a bad first outing in a distance delivered course. He came to me and we dissected his course evaluations and restructured the course in direct response to four consistent themes. He then taught the course and collected evaluations. We published the finding that evaluations can be very active elements in course design and delivery and instructor response to the evaluations can generate statistically significant changes in student perceptions and performance in the course. (Yes, student evaluations are not just a popularity contest!)

Another research project, with another colleague, Dr. Tom Wahl, utilized four evaluations throughout the semester course, with students identified by number only. The dynamics of the course

became apparent and the shifting tides of student understanding and acceptance became evident. A specific finding was that the means of responses should be relied on sparingly, and the variance around those means held useful information.

Other articles investigated the impact of having high school economics on the performance in an economics course in college, the impact of gender, maturity and background on ability to learn economics over the course of the class, and the variables that affected the attitude towards genetically modified organisms, GMOs, and other bio foods, and how this attitude might affect approaches to teaching learning of related subjects.

Service: A Natural Partner To Teaching and Research

A good research program and productive teaching can lead a faculty member nicely into service work, whether in the formalized delivery of Cooperative Extension or in public activities. I know it did in my case.

It was my background in transportation economics that lead to the request that I do the first feasibility study on public transit in Pullman. No action occurred as a result of that 1976 study so I became interested in the Pullman City Council and became a member after an appointment and subsequent election. In 1978 a refined study was produced, a referendum was held and the current system was put in place, a system that celebrated its 25th anniversary this last month. Watching the system grow in performance is a reward that a father often gets from his children but seldom from his service work.

Transportation also brought me out of the university into the community, serving on the Pullman Airport Board as a citizen representative for over 15 years. During that term we were able to gleefully destroy our old embarrassing terminal and build the very adequate facility we use to day.

In a way transportation research led to my appointment by then Governor Lowery to the Northwest Power and Conservation Council, and later to service on the Governor's Natural Resource Cabinet. I had been originally chosen because of my earlier "reasonable and non biased" evaluation of the potential impacts of river drawdown on the shippers of the region. My service on the North West Power Planning Council, as it was then known, was an education in politics rather than just policy. Leaving the Ivory Tower for a while was one of the best things I have done, and one of the most frustrating. Salmon versus power, and at what cost, is an issue that is still with me as I still serve and chair the Independent Economic Analysis Board of the Power Council.

Service and teaching are also a natural nexus, with or without transportation research. Over the years many of my students moved into civic leadership positions and would request me as a speaker. "The Sex Life of the Anchovy" became a stock presentation, in one year for eight talks out in the state. The sex life, read migration patterns, of the anchovy changed in several years and the catch went way down. Anchovies produce oil and as the production of this oil went down the price of soybean oil, a substitute, went up in response to the demand. As a result, the amount of soybeans planted increased and the amount of wheat planted in the Midwest decreased. Yes, this increased the price of wheat in the Pacific Northwest, proving once again that it is important to worry about the sex life of the anchovy.

About this time my interests in my community lead me to be elected President of the Pullman Chamber of Commerce. Town and gown issues were alive, and not so well, at the time and I hope our dialogues at that time helped. We also developed the Chamber's Public Service Award and I had the pleasure of presenting it to then Speaker of the House, Tom Foley. As my dad might have said, "what damn fool would vote against someone

from your district when he is Speaker of the House.” Well, it seems we had enough damn fools, didn’t we?

Concern about higher education and transportation in the district led me to run for the Washington House of Representatives. Two good things happened. First, running a political race provided experiences that I still use in my career. The second good thing was, I lost by 400 votes. Now I realize that, with my two daughters being in grade and high school, it would have been a tremendous burden on them, Dorothy and my career at Washington State University. Yes, two good things did happen.

The future is bright for faculty wanting service opportunities at Washington State University. I just returned this weekend from Malawi, in South Africa where, lead by our old friend, Dr. Bill Gillis of the Center to Bridge the Digital Divide, we have introduced a Post Graduate Diploma Course in Transportation Operations Management. This Diploma Course consists of 15 courses taught electronically in transportation management areas of economics, planning, finance and engineering. Our expectations are that this land locked nation will find many benefits of the educational opportunity and that a Masters Program may be coming in the future. I believe you can see how this type of course is an active manifestation of the Land Grant Mission in one effort: research on transportation, teaching and service. I hope you agree.

Finally, let me reflect on how pleased I am with the Strategic Plan we have adopted, not just because I chaired the Efficiency and Effectiveness Design Team, but because the plan is reaffirming the legitimacy of the Land Grant Mission for Washington State University.

Look to the Vision and Mission statements as I presented here. The “undergraduate experience”, the “world-class research”, and the “engagement” aspects of the Vision statement are, indeed, the

three legs of the stool that I hold so dear. Further, we can look to the Mission statement for similar guidance. “Learning, inquiry and engagement” are a different brand of the same stool, the one that has made so much positive impact on our nation over the last 140 years.

In summary, the circle seems complete. Our research efforts have evolved, our Extension/service efforts have been broadened and our teaching experience is rich and satisfying. The Vision statement and attendant goals of our Strategic Plan do reaffirm our role as a Land Grant University, with its emphasis on teaching, research and Extension/service/outreach.

I hope my remarks today sharing some of my experiences allow and encourage junior and senior faculty to embrace the Vision statement and the Land Grant philosophy. I further hope my remarks will entice the administration, at all levels, to evaluate and reward actions for the Land Grant Mission, not solely the counting of output in Journals because it is easy. Washington State University has scholarly work and scholarship in all the legs of the stool.....all faculty members can participate in what is an extremely rewarding experience.

Personally, I look forward to the next ten years as that affirmation is realized and goals achieved, at the individual faculty level and for this wonderful institution as a whole. I thank you for your attention, interest and kindness, for tonight and for the past 37 years. And, I thank my family for being here with me during those times. Thank you very much.

