



"Life has no meaning. Each of us has meaning and we bring it to life. It is a waste to be asking the question when you are the answer."

Joseph Campbell

May, 2016

Uber and the Environment

SAGE Meeting every third Wednesday, May 18, 2016 at the Lethbridge Public Library downtown, 7 to 9 p.m.

Coulee Clean-up. April 22nd to May 31st. Sign up with Curtis at the Helen Schuler Nature Centre.

May 3 - Lethbridge Green Drinks. 4:00 pm Owl Acoustic Lounge 411-3 Ave S. Informal gathering to discuss environmental issues, projects and solutions. First Tuesday of each month.

See the LSLA invitation for **Applefest** in this newsletter.

Coulee Clean-Up

From the Helen Schuler Nature Centre:

Have you registered your group for this year's Coulee Clean-Up? Now is the time to sign up and pledge your support of this city-wide conservation initiative.

This year the City of Lethbridge's Helen Schuler Nature Centre (HSNC) has partnered with Pratt & Whitney Canada, B93, and Country 95 to promote the annual city wide Coulee Clean-Up.

Residents wanting to participate are asked to register with the Helen Schuler Nature Centre at 320 - 3064, for collection bags and safety equipment.

Uber is one of a number of 'Transportation Network Companies' transforming how many people move around in the city.

In principle, an App is used to request a ride from a location; an Uber driver would respond with personal information to the request and drive to the location; the rider would give the driver the destination to complete the interaction. Once the rider reaches the destination, both the driver and the rider rate each other, establishing a record of acceptability for both. At the destination, since both drivers and riders have been pre-screened, no money

"The Coulee Clean-Up begins on Earth Day (April 22) and will continue through until May 31," says Curtis Goodman, Resource Development Coordinator for the Helen Schuler Nature Centre, **"as of now we have volunteers registered to help clean-up 36 coulee areas throughout Lethbridge and we can still use all the help we can muster to tackle the remaining 57 areas."**

The objective of Coulee Clean-Up is to remove accumulated litter and debris from Lethbridge's natural areas. Coulee Clean-Up has several goals including the beautification of our natural landscape, encouraging community participation in environmental protection, and above all nature appreciation. The an-

need be exchanged in the car. Prices are estimated prior to the ride and will vary depending on supply of transportation for the demand allowing riders to decide to wait for a less expensive time.

It is difficult, given the recent and rapid growth of this industry, to determine the impact on GHG emissions as there is little data on the models of app-based vehicles being employed, or on the behaviours of riders. A [University of California, Berkeley](#) research team in collaboration with Uber is investigating the environmental conse-

quences of TNCs to determine "how long the trips are (as well as the time driving to pick up a passenger); whether the rider would otherwise have driven alone, taken public transportation or not have taken the trip at all; and the fuel efficiency of the vehicles involved."

quences of TNCs to determine "how long the trips are (as well as the time driving to pick up a passenger); whether the rider would otherwise have driven alone, taken public transportation or not have taken the trip at all; and the fuel efficiency of the vehicles involved."

Interestingly, in Edmonton it was found that 36% of trips started or ended near public transportation nodes suggesting some potential to efficiently integrate public and private transportation to service the needs of a municipality.

Another opportunity to reduce emissions would be through UberPOOL, a car-pooling opportunity that groups a number of riders to a destination thus reducing the use of single-occupancy vehicles and potentially reduce the need for many to purchase a vehicle at all.

Some additional benefits being discussed include the reduction of drunk driving in some centres where Uber is operating; and reducing the potential for discrimination based on the destination of the rider. If a driver refuses a rider, the event is evaluated and the driver possibly reviewed for discriminatory behaviour.

Uber is presently meeting with the City of Lethbridge to explore opportunities in the community.

Annual event is a great opportunity to spend time outside exploring the river valley as it provides the chance to enjoy the outdoors while making a difference in our community. Everyone is encouraged to sign up to take part in this year's Coulee Clean-Up. Sports teams, corporate teams, and volunteer organizations are invited to take part as a group where they can pick their coulee then choose a date/time to pitch in. Individuals can also join one of the scheduled drop-in clean-up sessions.

Contact the Nature Centre to make arrangements for your participation: 403-320-3064.

For your viewing pleasure ...

Frans de Waal: **Moral Behaviour in Animals**

TED talk November 2011

<https://www.ted.com/>

Primatologist Frans de Waal presents some vintage and new video of animals to prove how unique humans are not. Considered pillars of morality, traits such as cooperation, empathy, fairness and reconciliation are evident in many non human animals.

There are great vintage 1937 clips of two young chimpanzees working together and of elephants outthinking their testers. And who can ever tire of the classic outrage of one capuchin given only a cucumber for his work while his buddy one cage over is paid in grapes. One hopes the capuchin paid an unfair wage for labour at least scored some grapes after the test was concluded, unlike some other primates in the wage economy. It's an experiment used prudently by Margaret Atwood in, *Payback: Debt and the Shadow Side of Wealth*.

Follow up on de Waal's work on morality with his recent publication in The New York Times;

What I Learned From Tickling Apes. 8 April 2016.

"Evolution is a gradual process of descent with modification, whether we are talking about physical or mental traits. The more we play down animal intelligence, the more we ask science to believe in miracles when it comes to the human mind. Instead of insisting on our superiority in every regard, let's take pride in the connections."

Interesting Links:

Review: Curb, Energy Monitoring for an entire home.

<http://techcrunch.com/2016/04/20/review-curb-energy-monitoring-for-an-entire-home/>

Determinants of households' investment in energy efficiency and renewables: evidence from the OECD survey on household environmental behaviour and attitudes.

<http://iopscience.iop.org/article/10.1088/1748-9326/10/4/044015;jsessionid=B81A674FAE4512DCFB7112038FC01BEF.c3>

Uber's Free-Market Environmentalism

<http://www.valuesandcapitalism.com/ubers-free-market-environmentalism/>



Garbage That Never Goes Away

Many volunteers in Lethbridge are engaged in the Shoreline Clean Up this summer and this video series on Midway Atoll let us know just how important that work is.

"Midway Atoll is a collection of three small islands in the North Pacific, and one of the most remote places on earth ... here, about halfway between the U.S. and Asia, on an island teeming with life and wonder, it is the proverbial canary in the coal mine.

Midway Atoll is located near the apex of what is being called the Pacific Garbage Patch, a swirling soup of millions of tons of plastic pollution. In fact, much of this plastic can not be seen, but it can't be avoided as it comes ashore on these pristine beaches and in the stomachs of the birds. The islands are literally covered with plastic garbage, illustrating on several levels the interconnectedness and interdependence of the systems on our finite planet."

Midway: Plastic Beach

2010

<https://vimeo.com/8177268>

Food or plastic? Everything that moves in the water and on the shoreline is selecting for one but consuming both. And as apex consumers, it surely is in our diets as well.

Midway: a Message from the Gyre

Short film by Chris Jordan

2011

<https://vimeo.com/25563376>

Southern Alberta Group for the Environment (SAGE)

A Leading Voice for a Healthy and Environmentally Sustainable Community.

Visit us at: <http://sage-environment.org/>

If you are interesting in getting involved, contact us at:

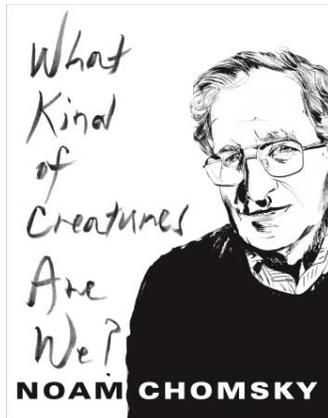
sage-communications@sage-environment.org

What Kind of Creatures are We? & The Meaning of Human Existence

The linguist, Noam Chomsky, explores contemporary theory of language, human nature, and human potential.

Chomsky is known for his work on the concept of universal grammar and the thesis of minimal computation, as the brain associates language to communicable ideas. He offers mounting evidence that the fundamental properties of language, as developed in humans 50,000 to 100,000 years ago, is essentially an instrument of thought and only incidentally a means of communication. The importance of this perspective is that language (and thought) are emergent properties of human evolution.

From the question of language, Chomsky explores the limits to understanding - effectively, the very cognitive nature that allows us to understand limits this very ability to understand. He states: "The last decade of the twentieth century was designated "the Decade of the Brain." In introducing a collection of essays reviewing its results, neuroscientists Vernon Mountcastle formulated the guiding theme as the thesis of the new biology that 'things mental, indeed minds, are emergent properties of brains, [though] these emergences are ... produced by principles that ... we do not yet understand'" (p.35).



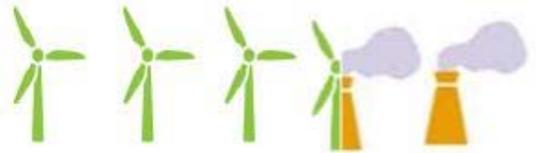
From the cognitive aspects of human nature, Chomsky applies them to culture and the common good: "But of course humans are social beings, and the kind of creatures we become depends crucially on the social, cultural, and institu-

tional circumstances of our lives. We are therefore led to inquire into the social arrangements that are conducive to the rights and welfare of people, to fulfilling their just aspirations - in brief, the common good" (p.60).

In Chomskian style, he skewers the greedy, the corrupt, and those who obstruct substantive democracy. Chomsky works to widen the floor of the cage - "the cage of existing coercive institutions that can be widened by popular struggle" (p.67).

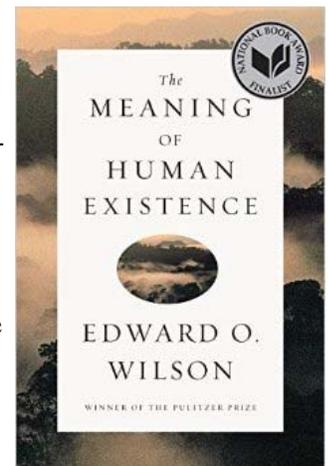
The book circles back to conclude with a reiteration of the mysteries of nature, and human nature.

Edward O. Wilson's *The Meaning of Human Existence* travels the same terrain as Chomsky's book as it emphasizes the human emergence from nature and human aspirations. Comparing humans to other 'eusocial' species on the planet, Wilson surmises that "The competition between the two forces can be succinctly expressed as follows: Within groups selfish individuals beat altruistic individuals, but



groups of altruists beat groups of selfish individuals. Or, risking oversimplification, individual selection promoted sin, while group selection promoted virtue" (p.33). In other words, altruism (the emergent result of a large brain) provides greater fitness in the natural selection of groups.

E.O. Wilson is ever optimistic about humanity: "We were created not by a supernatural intelligence but by chance and necessity as one species out of millions of species in Earth's biosphere. Hope and wish for otherwise as we will, there is no evidence of an external grace shining down upon us, no demonstrable destiny or purpose assigned us, no second life vouchsafed us for the end of the present one. We are, it seems, completely alone. And that in my opinion is a very good thing. It means we are completely free. As a result we can more easily diagnose the etiology of the irrational beliefs that so unjustifiably divide us. Laid before us are new options scarcely dreamed of in earlier ages. They empower us to address with more confidence the greatest goal of all time, the unity of the human race."



AN APPLEFEST MESSAGE FROM THE LSLA

AppleFest!2016 will be a Low Cost / No Cost Alternative way to spread the message of sustainability, encourage greater sharing, learning and cheap fun!

The AppleFest! is open to all NGO's, individuals or groups that are interested in helping out by organizing and/or facilitating in the tasks outlined below.

Employing a Team's concept:

The most ideal size of a team is three. At this size decisions are made quickest, people are most easily heard. A Team will determine the who / what / how of a part of the AppleFest. A good team member keeps fairly close contact with the others so they make their work easier but also don't get in their way when the team member needs to do a task!

Facilitators:

Getting a team of three other people to meet at the same place and the same time is no easy task...and keeping them on track even more difficult sometimes. As a facilitator you don't get to 'vote' but you do get to make sure people mean what they say and say what they mean.

The idea of a having a facilitator on every group is novel and came about by my discovery that "gee there sure are a lot of people out there who call themselves facilitators". Well, here's a perfect chance to practice these (yes there are several!) very important life skills!

Setup / Take down Team:

People who want to help for 2-3 hours early morning and the late afternoon. Not everybody wants to be there all day and I definitely get that! Ideally, the setup team will have access to vehicles to move items in and out of the park.

Promotions Team:

Getting the word out, talking to people, making displays, giving brochures, designing brochures, making signs and posters, presenting the principles of sustainable living, urban gardening, solar energy, etc....to the public. This year it's on August 27th, 2016

Vendor Team:

Looking at those who want to sell or exchange their stuff. Allow businesses? What level? What charge per table? Or free? I personally believe this should be handled by LSLA members.

Musicians Team:

What's more environmentally friendly than going unplugged? What is the ideal size of a gathering to encourage audience participation? How many musicians can play in Galt Gardens in a day? And would they do it for free? The MT will answer these questions.

Apple Pickers Team:

This team won't be so much in charge of picking apples as they will be in helping apples get picked. There is lots of phone calling (hello Mrs Smith you heard we pick apples? Yes I can help you with that. Or, hello Mrs Smith did the apple pickers show up? Did they leave your yard in as good or better condition? Did you get the share of apples you wanted? Etc, etc..) The most difficult part of this is getting people to come out and pick apples. So this team may spend a lot of time recruiting families, small church groups, kids organizations, sports teams, etc... As well, you could spend a lot of time up a tree!

Food Team:

The Food Team is important! They will collectively look at the best ways to feed people. Today the norm is a food truck. But there are lots of ideas out there.

Recycle / Garbage Team:

Garbage happens.

Children's' Entertainers Team:

Self-explanatory.

And we are looking for free performances / presentations / workshops from individuals in which sustainable and renewable and human development technologies are addressed. Here are a few examples.

- Building a wicking bed
- Taking care of honey bees
- How to grow mushrooms at home
- Sharing gardening tips
- Yoga sessions
- Making apple cider
- Aquaponics on display
- Fun with cob
- Singing
- Building your own environmentally friendly toilet
- Wild edibles
- Working with leather
- The uses of hemp
- Twig furniture
- Generating hot water with a parabolic reflector (we have one)
- Vermiculture
- Building low cost yurt
- ..your idea or skill you want to share



**A leading voice for a healthy and
environmentally sustainable
community.**

Box 383 Lethbridge AB T1J 3E9

19 April 2016

Hon. Lawrence MacAulay
Minister of Agriculture and Agri-Food
House of Commons
Ottawa, ON K1A 0A6
Lawrence.Macaulay@parl.gc.ca

Dear Minister MacAulay:

Re: Prairie Farm Rehabilitation Administration (PFRA) Community Pastures

The Southern Alberta Group for the Environment (SAGE) is a non-profit, volunteer organization that advocates and advances environmental sustainability in our region. We are writing to ask that you halt the transfer of any more PFRA Community Pastures to the provinces and that there be a Strategic Environmental Assessment of the decision made by the previous government to end the Community Pasture Program of the Prairie Farm Rehabilitation Program and transfer the lands to the governments of Saskatchewan and Manitoba.

As we live in a prairie region, we are well aware of the value of our nation's remaining native grasslands for biodiversity (including about 90 Species at Risk), for carbon sequestration, for soil and water conservation, for livestock production, for outdoor recreation and for preserving and interpreting our cultural heritage (indigenous and homesteading). Nationally, native grasslands occupy less than 20% of their pre-settlement extent. Community Pastures in Saskatchewan comprise a significant amount of what remains. Privatization of these lands will likely result in degradation and outright loss of these significant values.

We are deeply concerned over the impending demise of PFRA pastures, including sale of native grassland parcels already undertaken by the government of Saskatchewan. We are pleased to see a recommendation from the Federal Standing Committee on Finance (March 2016) that "The federal government consider re-establishing the Prairie Farm Rehabilitation Program." We encourage you and your colleagues to act on that recommendation.

Yours sincerely,

A handwritten signature in black ink, appearing to read "B. Barber", written in a cursive style.

Braum Barber
Chair

cc:

Hon. Catherine McKenna, Minister of Environment and Climate Change Catherine.McKenna@parl.gc.ca
Hon. Ralph Goodale, MP for Regina-Wascana Ralph.Goodale@parl.gc.ca
Hon. Carolyn Bennett, Minister of Indigenous and Northern Affairs Carolyn.Bennett@parl.gc.ca
Right Hon. Justin Trudeau, Prime Minister of Canada, Justin.Trudeau@parl.gc.ca

March 24, 2016

To Distribution List

Subject: Structure Retention Directive

The department is proposing to release a new directive providing the department's expectations on structure retention within harvest areas. This directive will provide clarity on establishing the structure retention objective in forest management plans.

The directive will ensure continuous improvement in Alberta's forest management planning and operations and demonstrates Alberta's commitment to using sound science and implementing sustainable forest management principles. One key component of this directive is the specifying of the minimum allowable target for merchantable area retention at 10% of the harvested area.

The department anticipates implementation of this directive on May 1, 2017 subject to consultation.

If you wish you may provide written comments to the department by Tuesday May 31, 2016. A backgrounder document is also attached to provide additional context.

Comments and questions may be directed to:

John Stadt (John.Stadt@gov.ab.ca)

Yours truly,



Darren Lapp, MBA, MF, RPF
Executive Director

Digital attachments:

Structure Retention Directive
Backgrounder to Structure Retention Directive

cc: Barry White, Director, Forest Program Management Section, FMB

Backgrounder to Structure Retention Directive

What is “Structure Retention”?

Structure Retention is the forest management practice of retaining trees and larger shrubs within harvest areas. Structure Retention is a stand-level strategy that focuses on what is retained within harvested areas and does not refer to landscape-level strategies such as those addressing amounts of old and young forest and species composition.

What is the purpose of “Structure Retention”?

The purpose of structure retention is to provide legacies of the pre-harvest forest in the young forest that will be established following harvest. Natural disturbances in forests such as fire leave a wide range of structural attributes from patches or clumps of live trees to standing dead trees. These structural attributes include wildlife trees, tree cover and shelter, and sources for future dead and dying trees that will eventually contribute to coarse woody material on the ground. This structural complexity following disturbance provides habitats for many species of plants and animals. Forest harvesting without retention of this structural complexity results in a young forest with fewer habitats for species dependent on tree cover, old and large trees, and coarse woody material. Structure retained within harvested areas allows these species to continue to live in and move through harvested landscapes. Therefore structure retention is a key component of “sustainable forest management” which strives to ensure that biodiversity values and ecological integrity of forest landscapes are maintained in the context of forest harvesting.

What is the existing policy relating to Structure Retention?

The *Alberta Forest Management Planning Standard* (hereafter “Planning Standard”) provides Alberta’s expectations for forest management planning and what needs to be included in a Forest Management Plan. The “Performance Standards” in Annex 4 of the Planning Standard provides the management objectives that must be included in a forest management plan. These objectives focus on maintaining biological diversity, ecosystem productivity, soil and water, and social values and were derived from the Canadian Council of Forest Ministers definition of sustainable forest management.

Objective 1.1.2.1 in the Performance Standards requires a forest management plan to set a target for retaining stems, clumps and islands of trees within harvested areas. The percent volume or area that will be retained as structure retention not prescribed in the Planning Standard, but instead is determined through the planning process and is informed by science, local knowledge, and consideration of social, economic, and ecological factors.

In addition to the Planning Standard, the *Alberta Timber Harvest Planning and Operating Ground Rules Framework for Renewal* (hereafter “Operating Ground Rules”) provides standards for Structure Retention that applies in the absence of direction from a forest management plan.

What new direction is provided in the Structure Retention Directive?

The directive for the first time clarifies expectations of setting the structure retention objective and introduces the following key requirements:

- Specifies the minimum allowable target for merchantable area retention at 10% of the harvested area over a five year period. No minimum target level was specified in the Planning Standard.
- Specifies the minimum level of merchantable area retention within any individual harvested area at 5%. Previously no minimum individual harvest area level was required as long as the overall retention target was achieved.
- Allowance of proximal retention patches, in which a retention patch is connected to the harvested area boundary. Limits proximal retention to no more than 25% of the structure retention in the harvested area. Previously, proximal retention patches were usually not permitted.
- Allowance of contribution of merchantable trees in required riparian buffers to structure retention target with the provision that no more than 25% of the total structure retention target can be within required riparian buffers. Previously, contribution from riparian buffers to structure retention targets was not permitted.

Clarifications include:

- A clear description of the purpose and objectives of structure retention.
- Clarifies that the structure retention target is expressed as a spatial area percentage of the merchantable harvest area. Previously target could also be expressed as volume, and the Planning Standard was not clear that the retention target referred to merchantable retained trees only.
- Clarification that the annual allowable cut will be reduced by the merchantable volume retained within the structure retention target. Previously, in some areas the volume associated with structure retention was charged as timber production annually.
- Requirement that a “Structure Retention Strategy” be submitted with the Forest Management Plan. This was already common practice.
- Clarification that structure retention shall not be harvested for one forest rotation. This was already common practice.
- Clarification on how to convert single tree retention to area.
- Clarification on how structure retention is monitored and reported.

What is the basis for the 10% structure retention target?

The retention of merchantable structure within harvest areas reflects an intentional strategy to manage for biodiversity values as it requires reducing potential harvest levels. Therefore setting an appropriate retention level requires considerations of what is required for the maintenance of biodiversity while still allowing harvesting to occur. This consideration has led to extensive research internationally and both Alberta and forest companies operating in Alberta have significantly invested into this research over the last few decades. Examples of Alberta-based research initiatives addressing structure retention questions include the EMEND experiment in northwest Alberta and the Healthy Landscapes Program of fRI Research coordinated out of

Hinton. Nationally, the Sustainable Forest Management Network, of which Alberta was the largest provincial funder, supported many projects and studies addressing structure retention. Recently several international studies examined structure retention practices in many countries, provinces and states and made recommendations on best practices to maintain biodiversity. For more details on these research programs and studies, see the “Supporting References” section at the end of this document.

On the basis of this extensive body of scientific evidence, and with the goal to ensure that Alberta’s management of its forests continues to address Albertan’s values, a minimum target of 10% merchantable area was selected. This value is explicitly recommended in several international assessments (for example see Gustafsson 2012) and is also consistent with studies examining the range of variation of retention following natural disturbances.

Why specify only merchantable trees in the structure retention target?

Biodiversity and habitat values are enhanced through many forms of retained structure in harvested areas including both merchantable and non-merchantable trees. This Directive requires the submission of a “Structure Retention Strategy” in which many aspects of retention can be described including the retention of non-merchantable trees. However, since forest harvesting targets merchantable trees for removal, the availability of the biologically beneficial attributes of these trees could become significantly reduced within harvested areas unless specific provision is made to retain them. The generally greater height and diameter of merchantable trees provide unique habitat attributes while the trees are standing, and after they die and becomes snags, and even later when they fall and become coarse woody material.

Supporting references and research programs:

D’Eon, R. 2006. Variable retention: maintaining biodiversity through planning and operational practices. SFM Network Research Note Series No. 25. Sustainable Forest Management Network. Edmonton Alberta.

EMEND experiment. 1998-present. Ecosystem Management Emulating Natural Disturbances. Website: <http://www.emendproject.org/>

Fedrowitz, K., et al. 2014. Can retention forestry help conserve biodiversity? A meta-analysis. *Journal of Applied Ecology* 51(6): 1669-1679.

Gustafsson, L., et al. 2012. Retention Forestry to Maintain Multifunctional Forests: A World Perspective. *BioScience* 62(7): 633-645

Healthy Landscapes Program at fRI Research. 1996-present. (Previously known as “Natural Disturbance Program”). Website: <https://friresearch.ca/program/healthy-landscapes-program>

Mori, A. S. and R. Kitagawa 2014. “Retention forestry as a major paradigm for safeguarding forest biodiversity in productive landscapes: A global meta-analysis.” *Biological Conservation* 175(0): 65-73.

Serrouya, R. and R. D’Eon 2004. Variable Retention Forest Harvesting: Research Synthesis and Implementation Guidelines. Sustainable Forest Management Network, Edmonton, Alberta, Canada.