

AANDC, Perspective, Indicators & Outcomes

Christopher Horsethief, PhD

Ktunaxa Nation Council

April, 1 2015



Introduction

- The general conclusions of this research are as follows:
 - When First Nations are involved at all levels of research, meaning design through analysis, and individuals are related to data in community building ways THEN First Nations research participants are more likely to pursue meaningful participation .
- This report will support these assertions in the following sections:
 - 1 – There are inherently problematic issues with social measurement across Western/Indigenous epistemic boundaries;
 - 2 – The impact of collective trauma on First Nations group dynamics exacerbates research issues; and
 - 3 – Embracing an awareness of both epistemic issues AND group dynamics issues is required for maximum engagement, and therefore optimal research efficacy.

Section 1: Social Metrics



- *There are inherently problematic issues with social measurement across the Western/Indigenous divide.*



Generally Western research transcends a single cultural view, while Indigenous knowledge is completely dependent on local context. Because Western views can so easily be applied across contexts, missionary educators found it easy to push western methods into Indigenous contexts. This picture demonstrates the imposition of linear uniformity on previously cyclical and individualistic prayer.



Rethinking data gathering

- This begins with my tenure at the Ktunaxa/Kinbasket Independent School System, and cumulated with the 2014 FY (March 31, 2015) research contracts. This includes:
 - KKTC Traditional Use Study
 - The KNC Nation Rebuilding Projects
 - The Ktunaxa Nation Census
 - 20 years of consulting for KNC and members bands
- Consistently, the elders were “uneasy with these research projects”. They would say:
 - *We already know what answers they are looking for, but they don't address our needs. They take the information, and give it back to us as binders and books. We already have names for our world... we don't need genus and species. We don't need to know what you need to know.*

The nature of social measurement



- So let's take a closer look at "social measurement". A great definition was offered by Bulmer, in 2001. Here it is:
- MEASUREMENT is any process by which a value is assigned to the level or state of some quality of an object of study. This value is given numerical form, and measurement therefore involves the expression of information in quantities rather than by verbal statement. It provides a powerful means of reducing qualitative data to a more condensed form for summarization, manipulation, and analysis. Classical measurement theory argues that numbers may perform at least three purposes in representing values:
 - (1) as tags, identification marks, or labels;
 - (2) as signs to indicate the position of a degree of a quality in a series of degrees; and
 - (3) as signs indicating the *quantitative* relations between qualities.

We are reducing things we want to understand to things we do understand. Like describing analog signal, in it's infinitely descriptive form, with a digital "1" or "0".

The problem with measurement & perspective



- When a scientific framework is offered as a blueprint for social science measurement, there is a tendency to associate measurement with positivist processes; representing qualities as quantities.
- Bulmer (p. 456) argued treating social sciences research, such as sociology and political science, like strict positivist scientific measurement can cause anxiety and ambivalence. This was partially due to Campbell's (1988) ideas that:
 - “definitional operationism as a description of best scientific practice... allow(s) no formal way of expressing the scientist's preponent awareness of the imperfection of his measuring instruments.”
 - I interpret this as follows: If we use definite, purposeful words to describe a thing which we are learning about, then we may be assigning qualities and values to it when we do not fully understand it. This may not always be accurate.
 - If this is the case, and if both those “studying” and those “being studied” have equal share in the resulting discussion then there is no power differential. The perspectives hold equal positions. But where colonization and science overlap there is a power differential.



Measurement by fiat

- Cicourel (1964) called this "measurement by fiat," which does no justice to the complex theoretical importance of sociological phenomena. He posed:
 - Measurement by fiat is not a substitute for examining and re-examining the structure of our theories so that our observations, descriptions and measures of the properties of social objects and events have a literal correspondence with what we believe to be the structure of social reality (1964: 33).
 - Again, my interpretation is that if we reduce complex contextual nuance to our best analytic guesses, then the numerical values we place on social gradients might bias our interpretation of what we are studying... kind of like a short-sighted logical fallacy of the "false dilemma". It may help us to study surface details, but keeps us from the understanding necessary for a thorough interpretation of structure.
 - *To extend the previous metaphor, it's like reducing complex qualities (which are themselves the result of many relationships) to simple numerical quantities.*

We've limited the phenomena we are studying to ideas we already know, or our best guesses about what they should be. This may suffice for detail, but does not in understanding the structure that supports detail.

Surface detail and old, deep structure



- Native scholar George Tinker (1993) introduced the concepts in terms of a community's "surface structures and old, deep structures" (loc. 602-603).
 - The surface structures can buffer social activity (conversation, trends, fashion, social expression) that moves faster than than deeper structures (language, spirituality, culture, meaning, identity purposefulness).
 - The surface is where we make contact, and the deep structures are where we negotiate meaning. For instance, two cultural groups meet and exchange details across surface structures (ideas are communicated), and sustained communication allows mediation in the deep structure (language changes to accommodate new ideas, culture evolves to incorporate new concepts into stable patterned behavior).
- If we push the deep structure too fast, then disorder results. The harder we push old, deep structures the more entropy increases. This happens faster in the deep structures (as opposed o the surface structures) because the old structures are where trust is born and raised. If you threaten them, you threaten the foundational qualities of cooperation.
- Research measurement by fiat and definitional operationism make the disorder worse, because the language of research (which is a surface structure to research subjects) is viewed by the outside world as the authority – even where it is being used to learn about things the researchers have no understanding of.



The high/Low context divide

- Assigning qualities and values to the phenomena we are studying can tend to give us a false sense of “understanding”. This false sense of understanding can put us in the troublesome position of thinking research language, whether academic verbiage or scholarly prose, empowers us to be authorities on that which we are studying.
- If the research setting is in the physical sciences, then fine. We are the masters of quarks and gravity because quarks and gravity can't argue back – they do not have a culture or identity which holds their worlds together.
- But social sciences, such as anthropology or ethnography establish researcher superiority among living, breathing cultural beings. And the measurement by fiat and definitional operationism are used to make meaningful value assessments on research, including research subjects/participants. *These flesh and bone people do, however, have a culture or identity which holds their worlds together, and if we tinker with Tinker's deep structures we perturb the centers of meaning and trust.*

Surface detail makes sense when we view it through low-context perspectives because they are built on low-context relationships that “travel easily”. Deep structures do not travel easily, because the context that they require do not travel easily and often differ between situations – especially cultural situations such as spirituality, philosophy and language..



Emic and etic perspectives

The terms “emic” & “etic” were introduced by Morris (1999):

- Here emic interpretations exist within a culture, that are ‘determined by local custom, meaning, and belief’ (Ager and Loughry, 2004: n.p.)
- While etic refers to generalizations of human behavior ‘that are considered universally true, and commonly links cultural practices to factors of interest’.
- In subsequent papers, Friedman (2012), and Akane (2011) extended the ideas:
 - An 'emic' account is a description of behavior or a belief... meaningful... to the actor; ... an emic account comes from a person within the culture. Almost anything from within a culture can provide an emic account.
 - An 'etic' account is a description of a behavior or belief by a social analyst or scientific observer... in terms that can be applied across cultures; that is, an etic account attempts to be 'culturally neutral', limiting any ethnocentric, political, and/or cultural bias or alienation by the observer.

Stated succinctly, emic is *coming from within the cultural perspective* and makes most sense from within that high-context perspective. While etic is *coming from outside the cultural context* and makes low-context sense in various settings. However, low-context sense isn't “deep”... it's things like fun, festivals and foods.

Nuance and context to this point...



- In summary, I have introduced several concepts related to research in First Nations communities, as well as terms that connect those concepts to practices. A brief summary follows:
 - Social measurement attempts to reduce qualities to quantities, moving theoretical discussions from high-context to low-context.
 - This sort of measurement by fiat, or definitional operationism can result in a bias where etic terminologies of methodologies are used to describe emic properties.
 - This doesn't just leave divergences between Western science and Indigenous ways, it can leave gaps between the researcher and the research subjects.
 - When these relationships are sustained, and the conversation is low-context "best-guess" instantiation, the researchers can operate in a false sense of reality, where researchers and colleagues force themselves into a false dilemma of "having to choose between surface details they agree is real, scientific, proper, and absolute AND higher contextual structure which they may not completely understand.
 - If this process is left unchecked, meaning research is one-sided and directed by forces outside the community being researched, the research becomes a low-context, highly transferrable etic process that is preferentially viewed above the high-context, not-easily-transferrable emic structure.

Which sounds like a formal theory of colonization



- Smith (1999) argued that colonial imperialism is a system that sustains itself by drawing knowledge and physical resources back to its center, while at the same time distributing materials and ideas outward, often by force.
- Under this system she argued that Indigenous categorization of useful localized knowledge is “discovered, extracted, appropriated and distributed” (p. 58) by the colonizer, and rerouted to the imperial center.
- This systemic “management” of knowledge allows Western powers to reaffirm their role as the “center of legitimate knowledge, the arbiter of what counts as knowledge and the source of civilized knowledge” (p. 63).
- I extend this argument, positing colonial researchers arrived, observed, claimed, and named across an array of contexts such as Latin, French, or English, and from Western views such as mathematics, genetics, anthropology, and other information and research taxonomies.

This has happened over an extended period of time, where Western research has been preferentially seated above cultural context. It has been a consistent “decontextualization” of Indigenous knowledge. And for most of our history the ethics have been driven by “self-regulation” of the researcher.

Great for researchers, not great for Native peoples



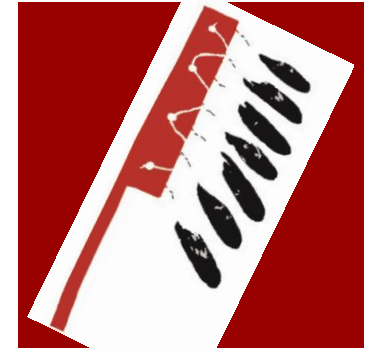
- This process has been great if you are Western, European, Male, Protestant or Catholic, motivated by low-context, or morphologically simple, or easily transferrable information, or view yourself as having dominion over the land.

Its' even better if you are a missionary...

- Consider the Esoteric Language Niche Hypothesis (Wray & Grace, 2007) argued exoteric tendencies of colonizing languages such as English, French, and Spanish and trade languages such as Hindi and Swahili serve to promote low context translation and reduce the eloquence, diversity, and redundancy found in Indigenous dialogic structures.
- Niche languages, and by extension the cultures they are inextricably linked to, travel poorly but accumulate localized knowledge that can not be reduced to simple quantities – as might be championed by social measurement.
- This systemic ignorance against esoteric nuance has been referred to as “epistemic violence” by Duran (2006). It is the foundation of colonizing dialogues such as “cross-cultural sensitivity” (p. 14), where one group tolerates an outside group – but only through their internal frame.

They do not truly accept contextually nuanced information as being valid – just because the group being studied sees it as valid.

Changing the dynamic from subject to participant



- But a funny thing started happening in the 1990's... Indigenous researchers began to decolonize Western, Canadian, Provincial, and English based research methodologies. (KNC, 2011) Ktunaxa people were finished being “research subjects”.
- For the Ktunaxa it started with Ktunaxa archaeology, proceeded through linguistics, then ethnobotany, fire ecology, ethnology, ethnomusicology, geography, etc. Ktunaxa researchers were “adding context back into the research environment”.
- There was a general shift in the Ktunaxa community to elevate Ktunaxa cultural, linguistic, and socially generated – **HIGH CONTEXT** -- knowledge to the same level as English, Latin, Canadian, American, Western, British Columbian, etc.
- This is what Duran (2006) refers to as epistemological hybridism...
 - ... the primary argument of the Ktunaxa Nation Council is that the otherwise woefully terrible statistical analysis not only uses the wrong data to assess, review, and refine policy – but uses the wrong language to collect and manage the data. Furthermore, inclusion of Ktunaxa generated data serves to increase the accuracy of the data, and therefore the efficacy of policy.

The key shift here is that the community being researched (the Ktunaxa) began playing a long-term role in research design, evaluation, redesign, execution and analysis. KNC reduced the gap between researcher and research subject, essentially promoting itself to RESEARCH PARTICIPANT.



Decontextualizing ethics

- Formal research projects regarding the Ktunaxa people have taken many forms over hundreds of years. The case can also be made that ongoing research about the Ktunaxa culture, its collected Ktunaxa cultural knowledge, and protocols resulting from its application have existed from time immemorial.
- Where external research represents the interests of the world from a perspective outside the Ktunaxa collective, internal research has the advantage of time tested and dynamic history. External research comes from several Western sources, including academic (ethnographers, linguists, anthropologists), Federal and Provincial government (policy analysis, statistics, survey), religious (missionaries, Jesuits, residential school faculty), and health (hospital, doctors, provincial and ministerial).
- Additionally, many internally Ktunaxa designed and executed research projects have also taken place. These include the Ktunaxa Census, the Social Metrics and Social Investment qualitative interviews, TKL's Cultural Connections panel, Indian Names discussions, Ktunaxa language and grammar interviews, the dictionary sessions, TUS, etc.
- There have also been research projects that fall between these two ends, including academic research by Ktunaxa graduate students, survey research implemented by Ktunaxa entrepreneurs, and informal surveys or interviews completed by family members.



Recontextualizing research

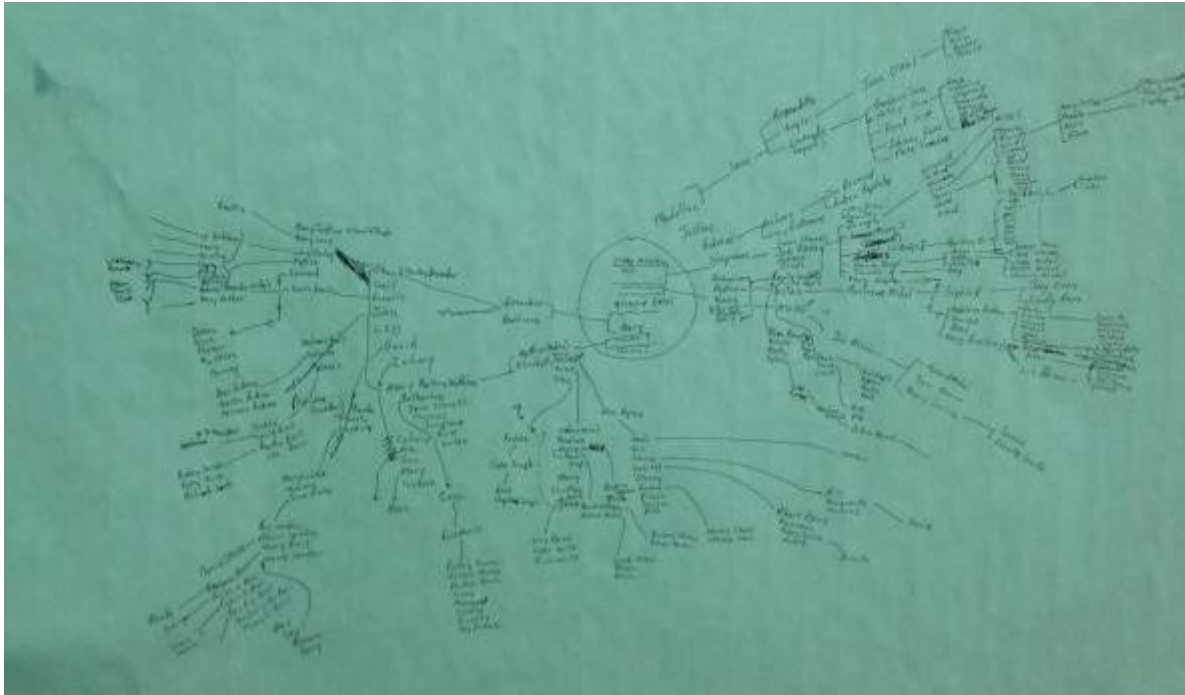
- Where Western research has concepts of bias, reliability, and significance, dynamic ongoing Ktunaxa research has equally important counterparts. Where Ktunaxa cultural information works -- meaning it is properly applied and its outcome feeds back into the stability of the Ktunaxa collective -- it is kept and encoded into the collective memory of the Ktunaxa community.
- Where it hasn't worked, the continually problem-solving Ktunaxa adapt and change their routines in a way that helps decision-making. Individual researchers or their sponsoring institutions have largely determined the relevance of "right" and "wrong" in external research. This has been true of short-run research projects as well as long-run initiatives.
- Alternatively, the right and wrong of long-run Ktunaxa decision-making history are based on the usefulness of information and the appropriateness of its recall and implementation in problem-solving routines.

One area of particular importance to Western researchers is ethics. Ethics is the philosophical discussion of systemic notions of right and wrong; It is the set of principles of what is moral behavior. It is important to understand that Western notions of ethics have changed dramatically over the past centuries, because the way the Western world has viewed science, humanity, and spirituality has change drastically.

Section 2: Embracing History



- ***The impact of collective trauma on First Nations group dynamics exacerbates research issues.***



This genogram was created at a workshop designed to get Ktunaxa people talking publicly about genealogy again. In the late 1990's an external genealogical researcher demonstrated the social measurement "don'ts"; She alienated community members from their data, forced etic practices on research "subjects", and decontextualized family data. In summary, community members were dispossessed of their information by a researcher's "self-regulated" ethics. No genealogical research took place since. She did unprecedented harm.

A brief timeline of Ktunaxa research



■ Research Period 1 – Approaching the 20th Century

- Ethical research in this era was related to the character of the researcher, not equality, systemic treatment, informed consent, or confidentiality, or benefits to the participant community.
- “A visit to the Kootenais: Extracts from a letter of Fr. U. Grassi to Fr. Valente, Attanam, Jakima Co., Wash. Ter. Dec 14th, 1872” by U. Grassi, 1872.
- This is early research revealing primarily commercial based perspectives on “Indians”. The author uses the term Indians to denote the idea that researchers are only interested in seeing the broad qualities that define a race of people. There are not specific languages of dialects, only general qualities as they relate to fur trade and conflict. Self-regulating researchers from this era see “Indians” as generalizable or representative research subjects.

A brief timeline of Ktunaxa research



■ Research Period 2 – Early 20th Century

- Ethical research in this era was related to the character of the organizations sponsoring the research, not equality, systemic treatment, informed consent, or confidentiality, or benefits to the participant community.
 - *“Path Finding in the Kootenay Country” by Baillie-Grohman, 1900.*
- This research is overpowered by the ethnocentrism of the researcher's perspective. It is profoundly offensive. The researcher uses phrases to describe generic Indians such as “debased remnants of once powerful and warlike” that “spread dismay and death” (p. 306). This type of research attitude is prevalent in self-regulated ethics leading up to the Residential School System.

A brief timeline of Ktunaxa research



■ Research Period 3 – Pre World War II

- Ethical research in this era was related to the systems of data collection and analysis of the researcher, not equality, systemic treatment, informed consent, or confidentiality, or benefits to the participant community.
 - *“The Avalanche” by Claude Schaeffer (1934)*
 - After meticulously describing chief Paul David's camp moving through an avalanche area, Schaeffer described in detail (but detached third person) voice the avalanche and people it swept down a mountainside. He noted, “after the excitement (of the avalanche) was over, the Kutenai tried to start on their journey again and put on their packs. Then they heard a Kutenai speaking, loudly, “we went through this past once before and we encountered a blizzard in which one of our people was frozen to death”. Here the researcher’s perspective as a detached outside observer is obvious, using terms such as “they” and “their”. When the people are mentioned in first person tone Schaeffer is citing statements made from within the community, not his own perspective. Thus the subjects are dispossessed of their knowledge.

A brief timeline of Ktunaxa research



■ Research Period 4 – World War II

- The research world changed dramatically with the realization of World War II atrocities committed by the Third Reich. Institutions of higher learning, as well as governmental regulating bodies, began to seek formation of bodies constituted by members of the research community with greater range of knowledge and experience with the issues of research ethics. Ethical research in this era was related to the collective values of the researchers conducting research, not equality, systemic treatment, informed consent, or confidentiality, or benefits to the participant community.
- *“Ethnography of the Kutenai: Memoirs of the American Anthropological Association #56” by H. H. Turney-High, 1941.*
- Turney-High was faculty at the University of South Carolina that spent significant time writing about the Ktunaxa. His research and publications denoted strict coherence to systemic data gathering and analysis. Like other researchers of his time, Turney-High dedicated significant resources to citation, references, as well as descriptions of research participants (including their names and locations). His research not only contributed to his academic endeavors, it also has been used as a firm foundation for other works this time.

A brief timeline of Ktunaxa research



■ Research Period 5 - Postwar to Belmont

- Ethical research in this era was related to the collective values of the researchers conducting research and systems being studied, but not necessarily equality, informed consent or confidentiality. Several issues emerged from this period, spawned by Krugman and Giles's studies of mentally disabled children intentionally infected with hepatitis, the Tuskegee syphilis study where subjects were not made aware of potential treatments, and Milgram's experiments which misled participants about the impacts of their actions on pseudo-patients. These incidents, in part, led to the Declaration of Helsinki and the Belmont Report.
- *"The Sturgeon Nose Canoe" by Adney and Chapelle, 1964.*
- This is an article on sturgeon nose canoes. While the article isn't perfect, it does indicate a dramatic shift of methodology. It does decontextualize cultural information. It does apply it to non-Ktunaxa research interests... but it does so by adding its distinctiveness to a broader class of research. Specifically, the research triangulates other boat-ship building knowledge. It is combined with schematics, blueprints, and other scientific data. The Ktunaxa variable is now a variable in scientific research, but still form an etic or outside perspective.

A brief timeline of Ktunaxa research



■ Research Period 6 - Belmont to Tri-Council

- Ethical research in this era was related to the collective values of the researchers conducting research and the systems being studied, to the equality of worldviews and cultural perspectives, informed consent and confidentiality of participants, and the benefits to the participant community. At this time the Tri-Council produced a statement in 1998 establishing the fundamental guidelines on ethical practice and scientific integrity.
- *"Relationship between Vital Attributes of Ktunaxa Plants and Natural Disturbance Regimes in Southeastern British Columbia"* by Shirley Mah, 2000.
- This research manuscript provides information on cultural practices in the Ktunaxa traditional territory. The interviews for this Masters thesis were conducted in person over an extended period of time, and involve multiple elders and staff persons. Not only is there a comprehensive discussion of the data collection techniques, there is also inclusion of community perspectives in the analysis. The author also provides significant acknowledgment to the interview participants, the Ktunaxa Elders Working Group, and the KKTC Traditional Use Study team.

A brief timeline of Ktunaxa research



■ Research Period 7 - Recent Developments

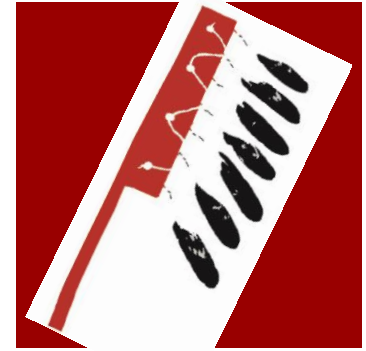
- Ethical research in this era was related to the collective values of the researchers conducting research and the systems being studied, to the equality of worldviews and cultural perspectives, informed consent and confidentiality of participants, and the benefits to the participant community.
- *“Leadership Development for Today’s Ktunaxa Youth: Command Structure Versus the Crazy Dog Society” by Christopher Horsethief, 2013.*
- Another emic research project detailing the activities of Ktunaxa people, by Ktunaxa people, and incorporating the perspectives of Ktunaxa people into the web of scientific research. It takes the research from my 2012 article one step further. It liberally cites and acknowledges Ktunaxa community members as the experts... essentially it makes them the Scientific experts. My dissertation, along with the doctoral works of other First Nations students, represents a trend mandating science to take note of the true sources of Ktunaxa scientific information. These open the research to several items listed above, including community deciding its contributions and acknowledgment, and community members participating in the dissemination of results, including publications that recognize the contribution of the community and its members.

A brief timeline of Ktunaxa research



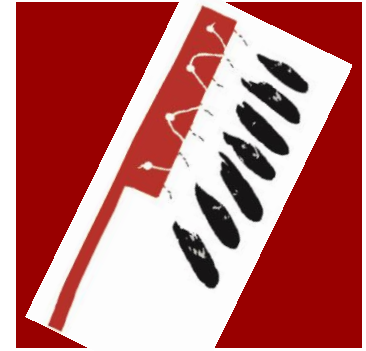
- A summary to this point.
 - The Ktunaxa people, as individuals, or as a formal political or cultural group have played an active role in scientific and academic research. Many PhD's and MA's owe their entire research anthology to Ktunaxa community members. Their research has been from a etic, low-context perspective.
 - As the research methodologies evolved, so did the ethical expectations of the institutions conducting research. The pertinent shift over time from the Ktunaxa perspective is the role of the Ktunaxa people; it has changed from subject, to participant, to co-owner. The community being researched began playing a long-term role in research design, evaluation, redesign, execution and analysis to ensure surface details match up with deep structures.
 - In doing so KNC reduced the gap between researcher and research subject, essentially promoting itself to RESEARCH PARTICIPANT. Whether the outside world has agreed, the Ktunaxa have seated Ktunaxa ways aside Western research.
 - This is active "recontextualization" of Indigenous knowledge. For most of our history the ethics have been driven by "self-regulation" of the researcher. Now they are jointly negotiated by the research institution and the Ktunaxa. This saves a valid place for Indigenous nuance and context... but more importantly it reduces the gap between research and Ktunaxa. It promoted a new way of gaining knowledge. It empowered Ktunaxa people to be something more than subjects.

Rethinking Ktunaxa “impact analysis”



- From the internal “emic” Ktunaxa perspective community members have been continually and progressively relegated to roles of “impact victim”. Stated another way, many researchers that came to the Ktunaxa community engage in default “impact analysis”... which perpetually victimized the Ktunaxa people. How did environmental policies impact your sustenance gathering? How did the Residential School impact your language use? How does Reserve life curtail your access to traditional plants? How were you impacted by “X”?
- Because of the preferential ranking of Western research, and the colonial practice of decontextualizing and subverting contextual Indigenous knowledge – the Ktunaxa have grown use to and distrusting in external research.
- This is the Ktunaxa’s version of “analysis paralysis” where an endless collection of research initiatives have focused on everything that is wrong with the community. We have, collectively, assumed a chip on our shoulder. We assume every research initiative focuses on *our* issues.
 - *Several working elders posed the question, “why can't we measure good qualities like purposefulness, belonging, wisdom or problem-solving?”*
 - *Elder Leo Williams asked a researcher, “how do you measure the smile on a child's face?”*
 - *One of Leo's nephews alter asked, “how do you measure the sparkle in an elder's eyes?”*

Since 2012 we have been studying collective trauma



- The phrase commonly used to describe the trauma causing event is ***the Traumatogenic event.***
- This is a specific event or process that perturbs a social or cultural system well beyond its coping mechanisms – it is distinct from social or cultural change. Change requires survival and fitness in surface detail.
- Cultural changes occur frequently as members of societies develop strategies in reaction to changes in environmental constraints.
 - In non-crisis conditions we use familiar tools and strategies, in familiar ways.
- For traumas to emerge at the collective level, social crises must become cultural crises.
 - Crisis requires “novel” innovation, solving unfamiliar problems that threaten the trust structures that hold a group together as a collective... things spirituality, family, sense-making systems, sources of purposefulness, belief systems, etc.
 - Collective trauma prompts reactions to natural disasters, historical events, political processes *that are rapid, overwhelming, and far-reaching (Sztompka, 2004).*

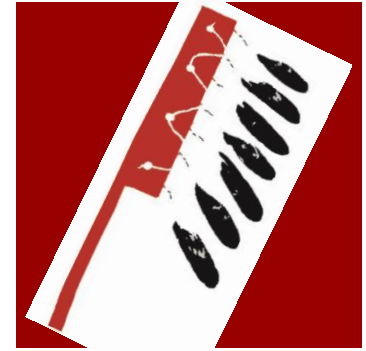
Collective trauma is Invasive and overwhelming, believed to overwhelm several essential ingredients of a culture as a whole.

Collective trauma and community dynamics



- ❖ Collective trauma studies (Alexander *et al*, 2004) didn't start in First Nations communities. They are not a kind of "impact analysis" research mentioned earlier, which Native peoples tend to be skeptical of.
- ❖ They are the result of an evolution from Post-Holocaust Jewish communities, speech communities in the former Soviet Union, residents of Ireland's Industrial Schools, to other residents of missionary education, and eventually First Nations...
- ❖ The most relevant conclusion to this point is that when a collective has its deep structures disturbed by invasive, sustained, and far-reaching traumatogenic events often issues emerge that have to do with the ways members of the collective "trust". *From this research we know several common symptoms exist...*
- ❖ *In the Americas Native scholars and researchers are leading, including Robbie Paul, Maria Yellow Horse Brave Heart, and Christopher Horsethief. Many of us, for the first time, are playing an active role in research – not a reactive.*
- ❖ We design, gather, analyze, synthesize, and evaluate using rigorous research frameworks. More importantly, we use the insights from the research process to inform change initiatives in other information encoding and recall situations.

Common symptoms of collective trauma are all related to trust



- ❖ Most commonly we have found strong evidence of several of Alexander *et al*'s (2004) common symptoms of collective trauma, including 1) the distrust syndrome, 2) bleak picture of the future, 3) nostalgic or over-romanticized sense of the past, and 4) political apathy. Briefly, these can be summarized as:
 - ❖ Sztompka (2004) described the *distrust syndrome* as “a morning-after (realization) with . . . a profound collapse of trust” (p. 178) where the traumatized group emerges from recent traumatogenic events to realize promises of change are slower than expected or altogether non-existent.
 - He described the *bleak picture of the future* (p. 180) as distorted frames of reference blurring allegiances to tradition or ethnic nationalism which diminish the confidence of the traumatized; when standard methods of coping fail there is a pessimistic tendency of the group to abandon other reserve strategies.
 - He described the *nostalgic image of the past* (p. 180) as community members failing to move toward collective stability because they over-romanticize memories of the past. This results in the belief “that they were living worse than before” (p. 181).
 - He described *political apathy* (p. 181) as the scenario where carriers fail to explore political solutions because they do not trust the originators of possible liberation policy. Sztompka noted, “In spite of more open political opportunities, the use of them by common people is very limited” (p. 181). Here distrust builds in traumatized individuals until they engage in electoral absenteeism or weak grassroots organizing.

Distrust and decontextualization



- The argument can be made that the **bleak picture of the future**, **nostalgic image of the past**, and **political apathy** are related to the ***distrust syndrome***. Below I will summarize this relationship in a research setting:
 - ❖ If we can't trust, then we can't work together. If we can't work together we can't solve problems together. If we can't solve problems together we are reinventing the wheel over and over and over again. *We struggle to "build trust" and create "a research community"*.
 - ❖ If we have can't trust, we struggle to visualize future states where we are partners, and we tend to focus on how bad tings will be. *(bleak picture)*
 - ❖ We have trouble thinking about what we could accomplish because we are holding on to images of the past, and solving problems using old tools means solving problems badly. *(romantic past)*
 - ❖ If we can't trust, and can't envision the future, then we won't take part in process... we "vote with our feet". *(political apathy)*

Trust is a crucial component of cooperation, and if deep trust structures are damaged the ability to cooperate can be damaged. If this distrust is combined with a history of decontextualization, the two can cause nonlinear growth. They make each other worse. They feed each other. From the Ktunaxa perspective, they work together. You took our context, reduced its importance, now we don't trust you. We don't trust you, we won't give you meaningful access to our cultural context. We can't build trust. We can't work on a relationship.

Distrust syndrome and research



- In a research setting, the collapse of trust structures impacts the relationships between researchers and First Nations.
- For some Ktunaxa community, it seems like our maladies are the capital that Western social science is built on. This is particularly true where addiction, incarceration, welfare, linguistics, and ethnography are concerned.
 - Increasingly specific analytical frameworks and units of analysis demonstrate our problems or issues with frightening – and even embarrassing – specificity.
- Others are outraged when experts' opinions outweigh Ktunaxa elders' and fluent speakers' opinions... just look at what researchers are paid compared to what elders and community cultural consultants are paid. At the end of the day researchers are given degrees and doctorates – elders usually get a handshake.
- The end result is a general Ktunaxa distaste for Western research, regardless of if it is for academic or political research. The distrust syndrome, and its resulting symptoms of collective trauma can leave Ktunaxa:
 - *Unable to see the opportunity in Western research*
 - *Unwilling to participate in survey, statistical, or interview research*
 - *Willing to participate "in jest", or "not honestly", or "in misleading ways"*
 - *Each of which introduces bias, sometimes intentionally, into the research setting.*

What we see is a tool for exposing our faults... again



- Every time there is a change at the Federal, Provincial, local or institutional level the questions are asked again...
- Or when a new theory about child neglect, or sexual abuse, or addiction, or welfare, or taxation, or family dysfunction, or mortality, the questions are asked again...
- Or when a change to a methodology, a statistical model, or a mathematical approximation of a social quality, or new way to measure pain, the questions are asked again...
- Which reinforces the dynamics that make Ktunaxa people wary of the research perspective.
- Over the past year several researchers estimate less than 10 % survey or interview participation on cold calls. That number increases to 50% if several follow up calls are made, including meetings in-person or in-home.
- But recently Ktunaxa researchers discovered an approach which increases the participation rate into the high 90%.
- It involves two elements:
 - First, addressing the history of Western researchers in our community AND addressing the decontextualizing nature of Western research methodologies; and
 - Second, we place the individual research participants back into the emic research context.

Section 3: Engagement

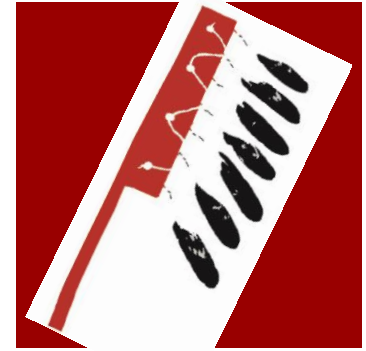


- ***Embracing an awareness of both epistemic issues AND group dynamics issues is required for maximum engagement, and optimal research efficacy.***



This is what engaged research looks like. This is a shot of Ktunaxa community members playing an active role in research. They are collecting data using Ktunaxa developed instruments, for Ktunaxa developed programs.

Factors prohibiting engagement...



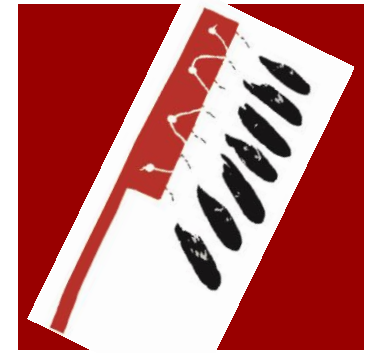
- Beginning in the early summer of 2014 researchers involved with the KNC Census were comparing engagement strategies with other academic researchers and Health Canada survey-takers.
 - Besides an ordinal ranking of comparative strategies, the researchers shared “what worked” in terms of engagement. The informal conclusions from these discussions follow:
 - Some Ktunaxa community members would agree to interview times and places, seeing value in the research when they were talking to the researcher – however when the researcher showed up for the interviews the interviewees had changed their mind about the importance or the relevance of the research.
 - Some Ktunaxa community members would be engaged in partying or (video)gaming activities and would perpetually postpone interviews, even when interviewers would arrive – even if the interviewer called to double check the participant's availability.
 - Some “axe-grinders” would engage the interviewer in debates about the usefulness of the research, essentially refusing to engage in research – even if the interviewer called ahead to assure the interviewee was available.
 - Some Ktunaxa community members felt “interviewed to death”, with KNC, university and government researchers in their community.
 - Some Ktunaxa made appointments, then other events or circumstances caused them to postpone – sometimes forever. These included weather, community events, family issues or social engagements.
 - Many Ktunaxa cited “not ever seeing the data”, or “not seeing the reports prepared with the data”, or “not having access to the data” as reasons for deciding not to participate, even if they originally decided to participate.
 - Others explicitly connected the researcher to previously conducted research they had never “seen the fruits of” or cited “we don't ever see what happens with our input last time, so we don't want to see what happens this time”.

Factors encouraging engagement...



- Don Sam and I decided to develop an engagement strategy that didn't focus on addressing the individual concerns about data. When the original Census takers started contacting people for interviews between January 2014 and June 2014, they only got participation above 50% if they called several times to schedule, reschedule and followed up. Don and I wanted to change the way people thought about Ktunaxa data. We wanted participants to:
 - Feel a new connection to research, and to see data does have an impact on their lives.
 - See the usefulness of research, specifically how Ktunaxa programs and governance structures use data to deliver more effective services.
 - Empower participants to play a new role in the research process, by changing the perspective from always being the subject of an impact analysis study to a perspective that can drive new ideas, new variables, and new models.
 - Experience the research perspective first-hand, therefore reducing divergences between community needs and researcher needs. Often this required participants to "think about what data might look like, and how it might be made to work for us".

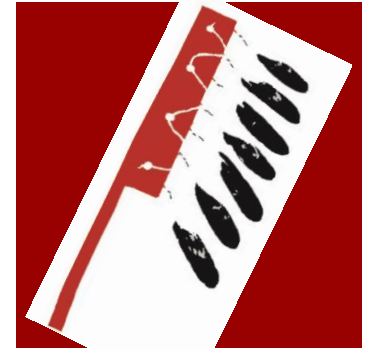
We jokingly said we wanted people to "like" research, so...



Appreciative inquiry led us to review recent research projects that were shared with the community. This poster is from a set of posters from 2013. The posters were successful because they changed the perspective of community members; they placed them in the middle of Ktunaxa traditional knowledge, they focused community members Indigenous Ways of Knowing and presented deep cultural knowledge about Ktunaxa cosmology; and they empowered Ktunaxa people to know more about our animals (names, families, shapes).

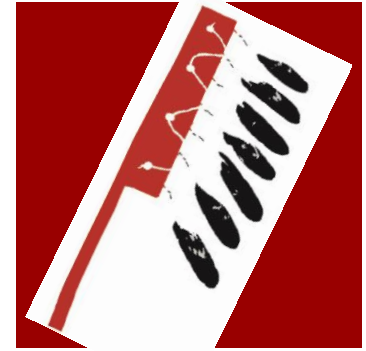
More importantly we explained that recent Western studies in education showed higher language acquisition when low-impact, high-contrast resources were used. Further, I explained that I recently started using this strategy to revise my own approach, and that my language learning activities were more successful. **These served to emphasize a new relationship between etic research and emic interests.**

Ktunaxa elders and ethic social measurements



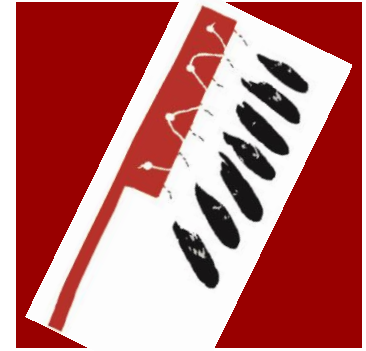
- We went as far back as we could remember Ktunaxa people embracing research projects. We remembered the Traditional Use Site Inventory Project Elders Committee, and how they worked routinely to answer questions posed by:
 - Archaeology Branch Ministry of Forests,
 - Health Canada,
 - Graduate students, and
 - INAC.
- Generally their relationship was that the Ktunaxa would get something if we gave information... This was perceived as economic “blackmail”.
 - *The elders balked at Western science “breaking the world down into manageable and measurable bits and pieces” then “giving it back to us as a collection of paper”.*
 - *However, the TUS directors allowed the Elders Committee some leeway in how sites would be studied, and how culturally sensitive information would be protected. This was a new dynamic for them. They weighed the economic blackmail against the chance to choose which aspects of the project to focus on (empowering them to play a leadership role), and determining what information to share (if their focus was paper, then the Elders chose field tips and in-person, in-field interviews)*

Into the sociological meatgrinder...



- The TUS Elders were comprised of a dozen cultural leaders and fluent speakers. Many had worked on land claims, court cases, and educational/ curriculum design projects. Many had lived off-Reserve, and were familiar with academic certification and research.
- They were acutely aware of “atomism” and “units of analysis”, and talked about the consequences of breaking accumulated knowledge into Western frameworks.
 - When Ktunaxa Ways of Knowing were broken into pieces they “*undid*” or “*untaught*” *coyote’s heroism*.
- “Empirical social research has been dominated by the sample survey... using random sampling of individuals, the survey is a **sociological meatgrinder**, tearing the individual from his social context and guaranteeing that nobody in the study interacts with anyone else.” (Freeman, citing Barton, 2004)
 - *Social research of this kind “neglects the social part of behavior; the part that is concerned with the... influence they have on one another” (p. 1).*
 - *The Ktunaxa elders seemed to grow attached to research projects that allowed them to explore social context: who did we interact with the land? How did we interact with the animals? How did we interact with each other?*

AANDCIs



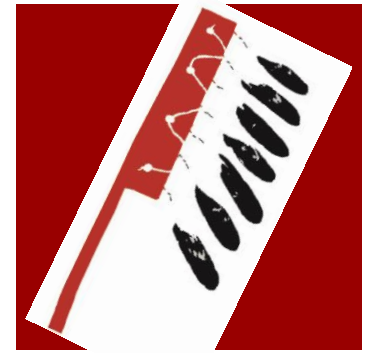
- Unfortunately, the AANDC Indicators don't leave much room for rethinking context.
 - They are fairly "black and white", with little room for context.
 - They are standardized, and therefore inherently etic and surface.
 - They are hegemonic, with firm expectations to reduce the complexity of answers.
 - They have set instructions, which further reduces answer variation.
- We understand this... the AANDCIs are not a person-/band-/organization-level front end survey. They are for Bands and Organizations to report program-level information. From our perspective they:
 - Start with a general set of administrative information, that focuses on what the report is...
 - Move to a more specific set of information that describes what community is submitting the report...
 - Then a series of questions that identify the individual that is filling out the report...
 - Then general "surface" dimensions of the indicators are introduced...
 - Then describe the project's progress toward specific end-states...
 - And end with the formal "declaration", which repeats information describing what community representative is submitting the report.

Surface

- [illegible]

Declaration

AANDCIs



Treaty Related / Interim Measures Report				
General Information				
Recipient Name				
Recipient Number				
Contact - Given Name				
Family Name				
Email Address				
Telephone Number				
Project Name				
Project Number				
Type of Report:				
Interim				
Final				
Project Description				
Project Description				
Project Results				
Project Expenditures as related to Project Budget				
AANDC Funding				
AANDC Funding Expended				
Surplus/Deficit				
Attachments				
Indicate the name(s) of supporting document(s) being submitted and the method of submission.				
Name of Supporting Document				
Method of Submission				
Declaration				
Person Authorized by the Band Council - Given Name				
Family Name				
Title				
Date (YYYYMMDD)				

Surface

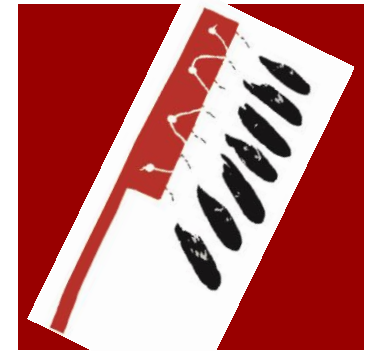
- [illegible]

Declaration

Surface

Declaration

AANDCIs



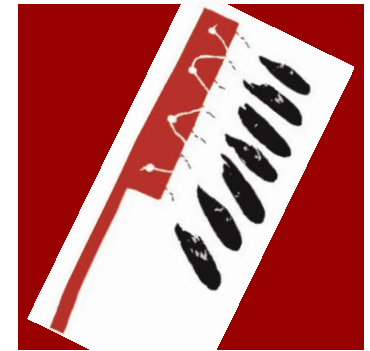
Child and Family Services Maintenance Report				Total Number of Child Placements			
Child Information				Total Number of Days			
Child #				Total Care Cost			
IRS Nuber				Total Additional Child Expenses			
Non-Registered Temp. No.				Total Maintenance Cost			
Child's Family Name				Kinship Care			
Child's Given Name				Total Number of Child Placements			
Date of Birth				Total Number of Days			
Gender (M, F, NR)				Total Care Cost			
Financial Summary for DCI				Total Additional Child Expenses			
Foster Homes				Total Maintenance Cost			
Total Number of Child Placements				Post Adoption Subsidy			
Total Number of Days				Total Number of Child Placements			
Total Care Cost				Total Number of Days			
Total Additional Child Expenses				Total Care Cost			
Total Maintenance Cost				Total Additional Child Expenses			
Group Homes				Total Maintenance Cost			
Total Number of Child Placements				Children and Family Services Prevention Activities			
Total Number of Days				Individuals and Families			
Total Care Cost				Number of Children			
Total Additional Child Expenses				Number of Families			
Total Maintenance Cost				Groups and Communities			
Institutional Care				Number of Sessions			
				Number of Participants			

Surface

.

Declaration

Decontextualizing...



Aboriginal Community Data Initiative – 2006 Census – Akisqnuq First Nation

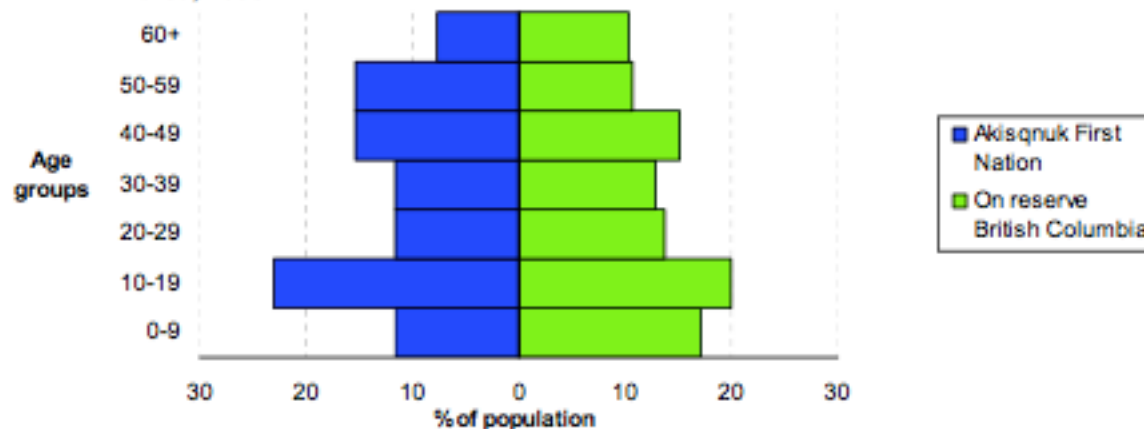
Age and Sex

Median age

In 2006, the median age for the Aboriginal population on Akisqnuq First Nation lands was 31.0 years compared to 29.2 years for the Aboriginal population on reserve in British Columbia. Median age is the age at which half the population is younger and half the population is older.

Age distribution

Chart 1 Age Pyramid, Aboriginal population on Akisqnuq First Nation lands and comparison area, 2006



These indicators lead us to the kinds of graphs and charts that are exemplified here. First Nations have called these measures “dipstick surveys” or “slice of life surveys”, which denoted the surface nature if their usefulness.

While we do see there is a place for the instruments from a recordkeeping or funding perspective, community member can't use this kind of reporting.

It is disconnected, sterile, and dispossessed of identity. They are the epitome of the sociological meatgrinder because they are devoid of relational data, which is the cornerstone of “old, deep structure”.

Emic Ktunaxa metrics and old, deep structure



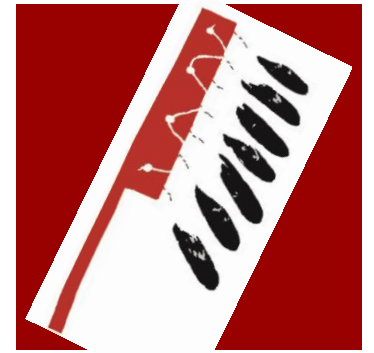
- We decided to move away from metrics focusing on negative benchmarks and budgets, in favor of “community indicators”; the relationships between people, their environment, and each other.
 - ?itnumuɕtiɪ - to have or make the the rules
 - ka ·knumuɕtiɪ - my rule, expectation, or schema
 - ?a ·knumuɕtiɪnis – your rule, expectation, or schema
 - ?a ·knumuɕtiɪis Annema – Anne's rule, expectation, or schema
 - And when things are pluralized (?aɬ qapiɪ), we see a new ending:

?a ·knumuɕtiɪɪ

In the dictionary we see “policy”.

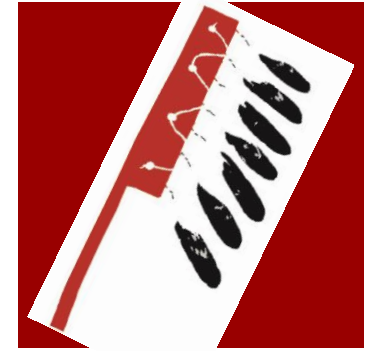
These are our collective “rules, expectations, or schema”.

Our “policy” allows us to solve problems together



We went back to the beginning, honoring the elder's ideas that “we had a way of organizing our world”.

- *ka ·q̣tsmak'nikmaṭ* - The people, their roles, and jobs
- *ka ·kikiṭ haqwata* - The ways we have been given
- *ka ·q̣tu ·kaqwata* - Our language we use to communicate
- *ʔ̣ḳitiwṭiynam* - Our process of becoming “wise thinkers”



Ktunaxa social metrics

- So we just reversed the process. Rather than reducing crucial community themes to quantities, we asked for detailed qualitative data.
- We reversed atomism by rejecting floating/disconnected quantitative data to qualitative interviews associated with specific community members, and triangulated data with previously recorded interviews.
- We reversed the dispossession process by “possessing” individuals... stated another way, we gifted them with data. We asked them to describe social metrics, then we associated this information with them, and declared them the source of the information. We “gave it back to them”.
- The first set of metrics focused on:
 - Learning
 - Social communication
 - Cultural communication
 - Decision-making
 - Policies or expectation
 - Respect
 - Life and death processes

The DVD



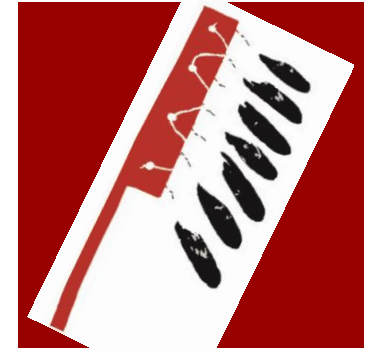
- These critical themes were presented to the community in the form of a DVD. For many community members, this was the first time this kind of information was publically available. More importantly it was the first time people were encouraged to talk publically about these topics.
- They addressed specific themes raised from the first set of interviews, and offered ground to discuss topics like:
 - Indian names
 - Social roles
 - Special cultural roles
 - Apprenticeships
 - Phases of life
 - Grieving
 - Progressing from un-wise to wise thinking
 - Access to dances and lodges
 - Appropriate ways to communicate regarding cultural information



More social metrics

- The DVD was considered a success and a second set of interviews was conducted. This time we moved the topics from less “up-front” cultural issues to the traditional philosophical process behind traditional decisions and behaviors.
- From the second round of interviews we focused in on the following topics:
 - Rules for consumption; conservation of resources
 - Rules for interacting with neighboring tribes; specifically in overlap territories
 - Communication; etiquette in requests and responses for attendance
 - Economics; decisions under uncertainty
 - Uncertainty; versus ambiguity
 - Risk; decision-making
 - Investment; pregnancy
 - Gift-giving vs give-aways
 - Insurance and retirement

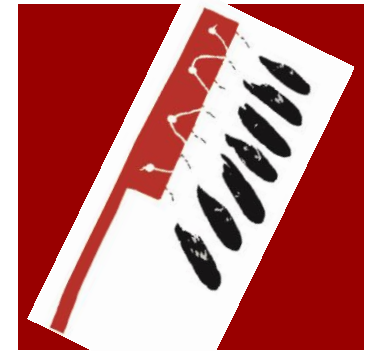
More importantly, we asked for interviewee’s requests for interview topics. In other words, we empowered them to raise issues they thought were important.



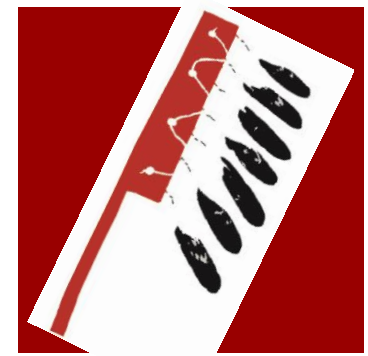
Even more social metrics

- A third set of follow-up discussion happened at community workshops. These topics were identified by community members, and then discussed publically as a group. The following topics surfaced from the third round of interviews:
 - Respect; one way respect versus mutual respect; the link between respect and accountability
 - Family issues: specifically child removal
 - Traditional crowdsourcing of information; when it was appropriate to share information when it was not
 - Decentralized/centralized communication and decision-making
 - The chief's information gathering process
 - And what to do when the chief, the right hand, and the whip are ignored...
 - When you were sent away for acting against:
 - *ka q̣tsmak'nikmaṭ* - The people, their roles, and jobs
 - *ka kikiṭ haqwata* - The ways we have been given
 - *ka q̣tu kaqwata* - Our language we use to communicate
 - *ʔkikiṭiwṭiynam* - Our process of becoming "wise thinkers"

Then we started to draft sample indicators



1. Family: location of family, highest level of educational attainment in the immediate and extended family, patterns of housing volatility and transportation issues of family, influential or inspirational family members, factors leading to success in educational goals;
2. Social: functional social networks active in facilitating communication between learner and family/community/Nation, social networks providing access to resilience recourses, social structures ameliorating pressures of vulnerability traps (encouragement for pattern recognition/pattern breaking, alternative schema for decoupling strategies in crisis), and
3. Cultural: offering access to foundational cultural systems such as family histories and incorporated/intertwined family histories, lineage information and relevant history for family planning, information regarding functional problem-solving which may buffer learner from immediate perturbation (cultural strategies for analyzing and reestablishing trust, violation, communication and/or connectedness, preserving purposefulness through traumatic experience) or extended community perturbation (understanding community wide disturbances such as changes to communication structures, leadership choices, or mediating forces for threats or crisis).



Sample indicators

- The number of resources available for crisis situations, such as dorms emergency housing, emergency childcare, meal assistance, etc.
 - Total number crisis resources
 - % of local institutions with policies or plans for learner crisis
 - Categorical variables for crisis consideration or preparedness
 - Scale of accessibility to crisis resources
 - Qualitative metrics (word frequency/tag cloud/sentiment analysis) of themes such as what crisis they have experienced? What resources they perceive as friendly in crisis? Specifically what programs they have witnessed themselves or family using in crisis in learning environments?
- Indication of ease accessing additional resources linking learner to situation, such as affinity groups (student unions), direct lines of communication with critical personnel (Education coordinators, FN liaisons, educational councilors or planners).
 - Total number educational resources
 - % of local institutions with relevant educational resources
 - Categorical variables for crisis consideration or preparedness
 - Scale of accessibility to additional resources
 - Qualitative metrics (word frequency/tag cloud/sentiment analysis) of themes such as what makes school feel like home? What kinds of amenities would align sense of learning with sense of belonging? What themes best describe affinity for learning environments?



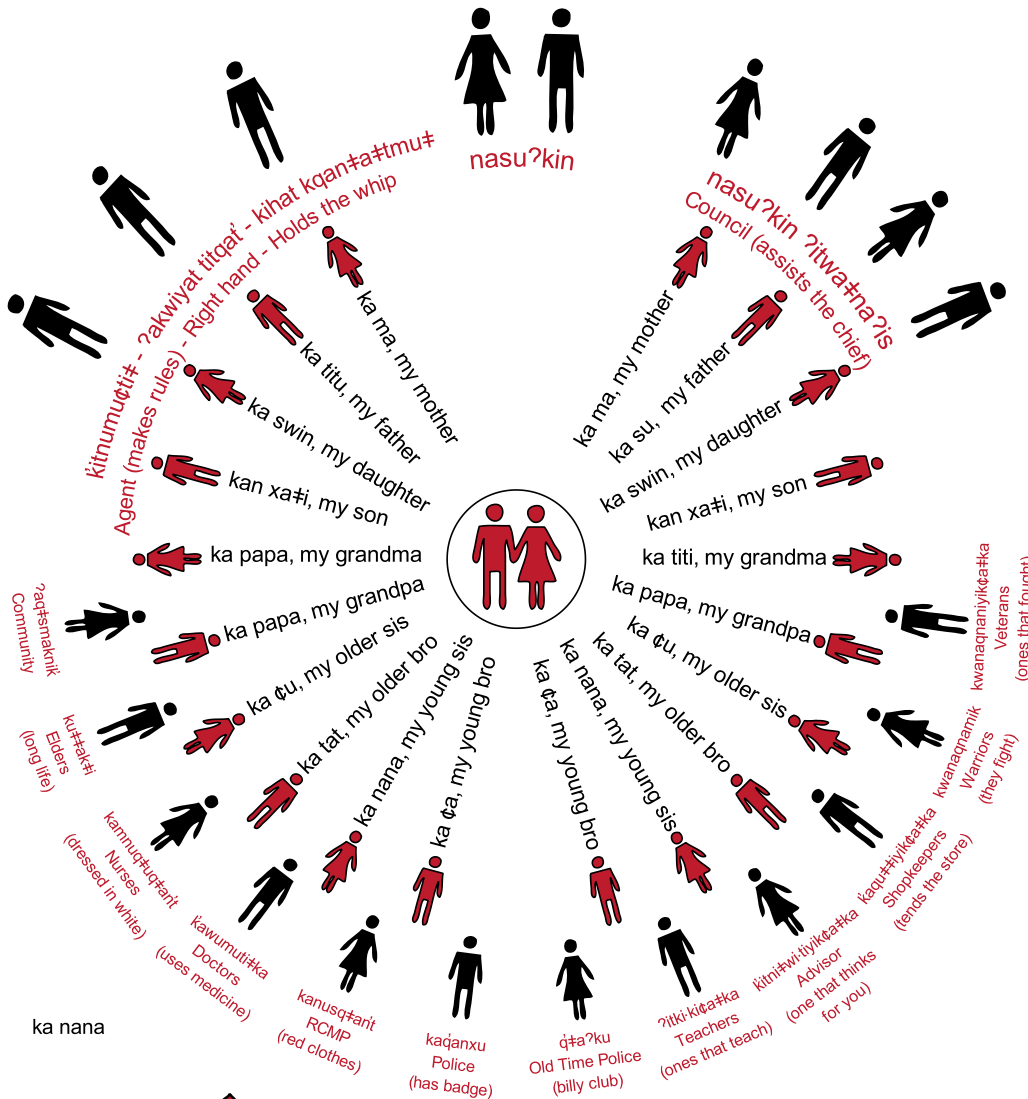
The ecology of research

- The focus has been on moving from disconnected numbers, to things that “are really, really important to the Ktunaxa way of life. The idea is to move away from the atomism, and to move back into multiple “dimensions”.
- Where Western research uses increasingly specific and isolated units of analysis, we want an increasingly relational set of data.
- We want an “ecology of data”, because:
 - You can’t learn about communities by studying individuals...
 - You can’t learn about families by studying individuals...
 - You can’t even learn about individuals by studying individuals...
 - You can only learn about these by studying relationships.

Qata≠ sukum xuniyikaʔni

With this approach you're not wrong...

“you are unable to be correct”.



One suggestion was to get this information back into the community in a useful way.

We continued to use the high-contrast colors (red, and black on white), low-impact medium (poster), and assigned a community ownership icon (the eagle staff in the same color scheme).

This poster is now in building and houses in all the communities.

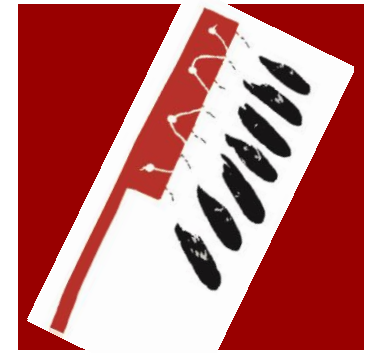
t̥i·lxawit̥ikimik - A close family
 qanit̥aʔmaʔ - A family's lifestyle
 ʔa·kniknamuʔnam - A person's relatives
 ʔiʔi·qanuqkar̥xuʔmik - To learn family history
 ʔa·kuq̣ʔikamaʔ - Extended family or a litter of animals
 ʔa·kuḷpukam - Unspecified person's family (refers to roots)

A comparison of research approaches



- Another way to see the AANDCIs is in terms of their relationships to themes.
- The Ktunaxa Social Indicators were community designed and community driven. They reduced the divide between the high-context Ktunaxa perspective and the low-context etic research respective.
- Essentially, the Ktunaxa Social indicators “compromised”, giving up some high-context for common ground.
- But they still managed to connect information across domains. Stated another way, they connected many parts of the social world where AANDCIs promoted centralized structures.

AANDCIs and Social Determinant domains



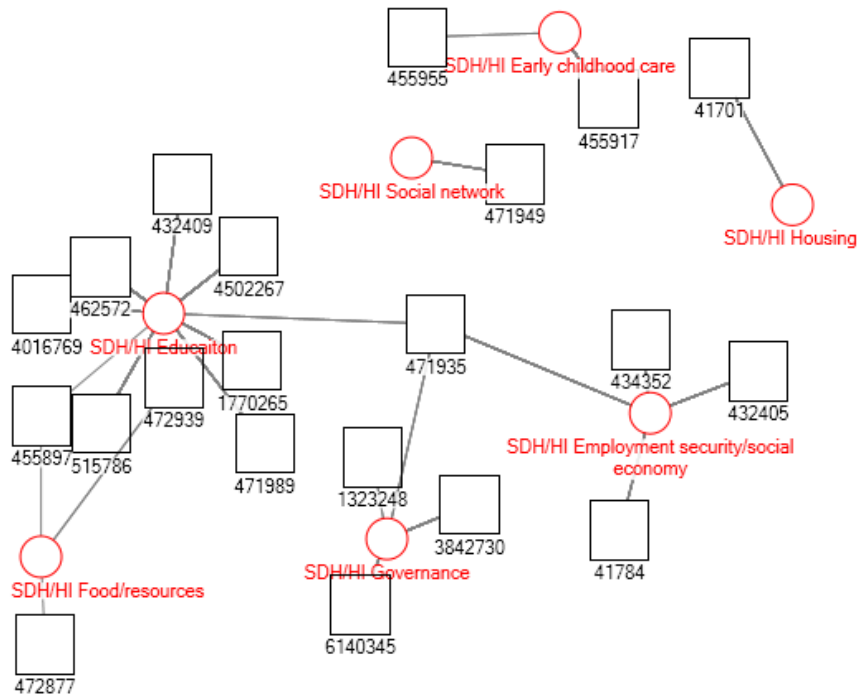
A sociogram is a visual representation of relational graph theory. It is a mapping of the unit of analysis of network science; the link. The link denotes a relationship between two graph components.

In a genogram, or a network representation of genealogical information, links family members by their relationships. A link implies a direct relationship between a parent and a child.

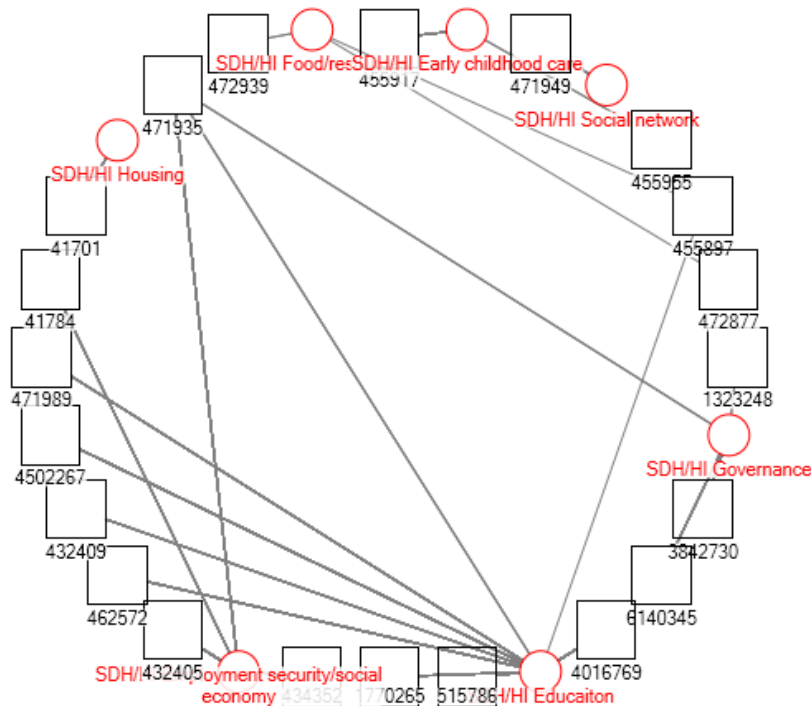
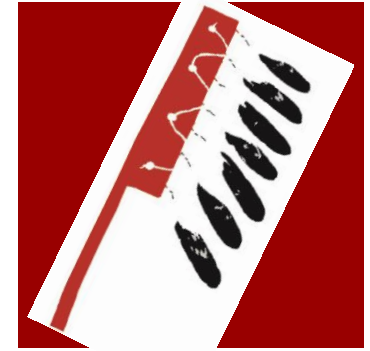
In this illustration we can see the AANDCIs (represented by number) and the Social determinants of health they are related to.

In this case the AANDCIs are linked to 7 of the 9 indicators: Early Education (8), Employment Security (4), Governance (4), Food/Resources (3), Early Childhood Care (2), Housing (1) & Social Network (1).

Note, nearly half of the AANDCIs are linked directly to Education, and Social Networks, Early Childhood Care and Housing are not connected to the overall network of Indicators.



AANDCIs and Social Determinant domains



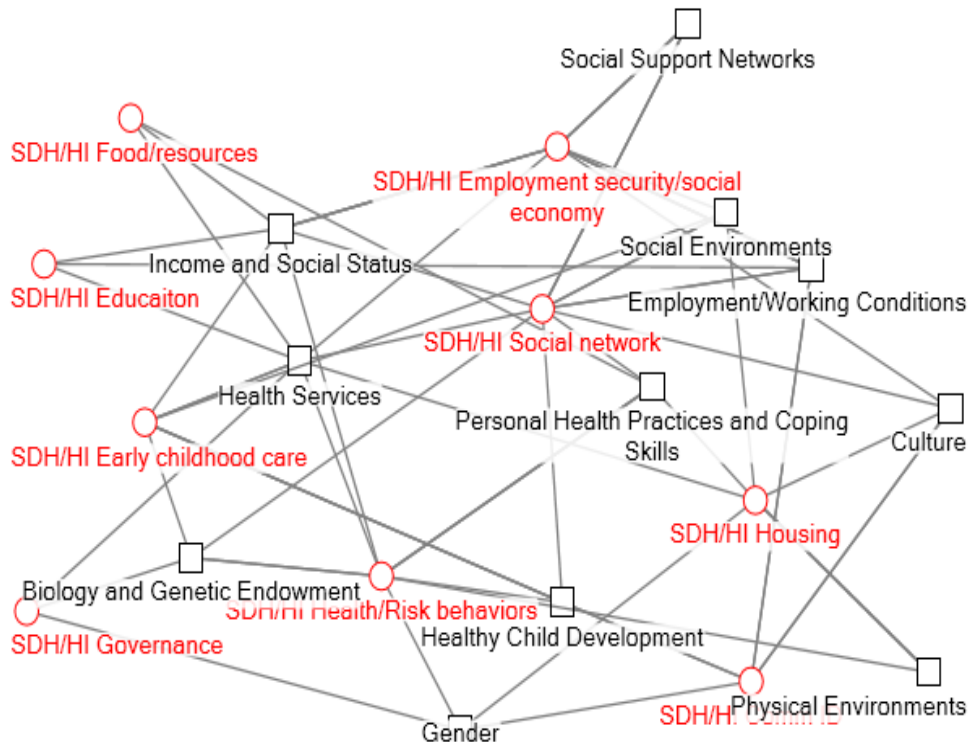
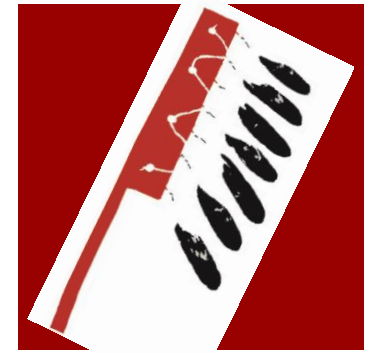
Notice 471935 links several of the Indicator areas together. If it is removed the analytical playground falls into several smaller islands. This is the epitome of disconnected, decontextualized data.

This is the Lands an Economic Development Services Program. Fittingly, the Lands related Indicator links several key areas together (Economy, Education and Governance). If we were to remove Land from the equation, only education and resources remain connected. Every other domain becomes disconnected from the overall analytical context.

The Circle Algorithm shows network components that reach across the network to maintain critical links between research domains.

Atomism may be represented by the absence of links across the network: the far reaching domains are separated making multi-dimensionality of analysis difficult.

Ktunaxa Social Metrics and Social Determinant domains



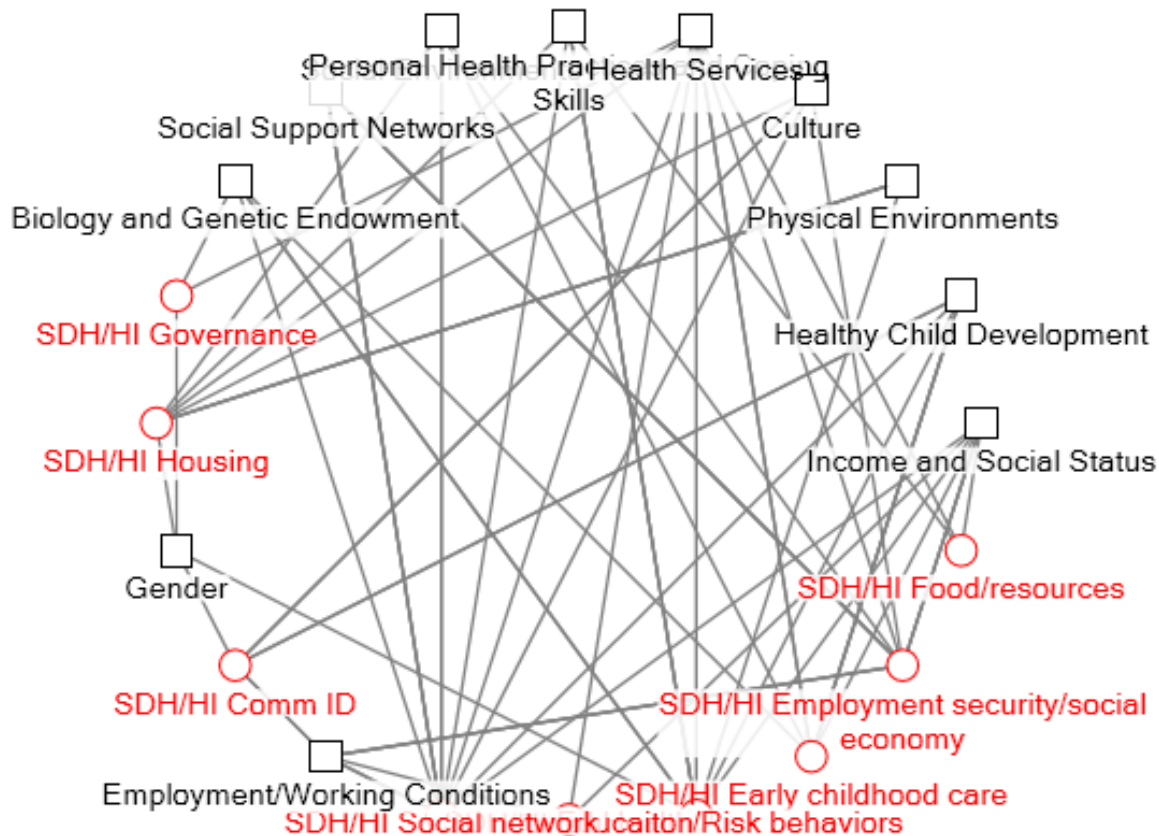
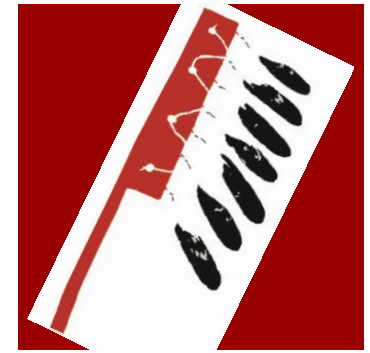
In this sociogram 33 primary Ktunaxa Social Metrics are linked to the same Social Determinant domains. Here each of the 9 Social Determinants are linked.

Also not that the network is “complete” meaning that any component of the network can be reached by any other part of the network. There are no non-communicating islands. This completeness facilitates an ecology of research.

Also note the distribution of links is less centralized, with the most connected determinant domain less than 3 times the least connected domain: Social network (8), Employment/security (6), Housing (6), Health/risk (6), Childhood care (5), Food (4), Food/Resources (3), Education (3), and Governance (3).

Also note, the social network is the most connected domain, which echoes the idea that community metrics are high-context and ecological, as opposed to low-context disconnected social measurements.

Ktunaxa Social Metrics and Social Determinant domains



If we arrange the components into a circle algorithm we can see much more activity across the center of the network.

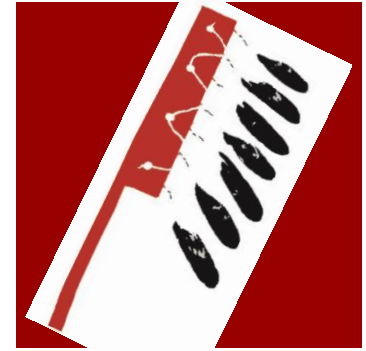
When a network reaches across the circle it represents a decentralized arrangement, with activity across research domains happening relatively easily.

Another way to think about this is that the Ktunaxa research model represents the opposite of atomism. It is an instantiation of a research ecology.

- [illegible]



A few more instances of engagement



- When Ktunaxa researchers showed potential interviewees this graphic of the family names of participants they placed themselves in the context of the research. It added a dimension for them to consider: Is my family on there? Why are we not as large as other names? What might it look like of I take the survey? How do I get to be a part of this graphic?

*** The names were originally drawn by a random number generator.



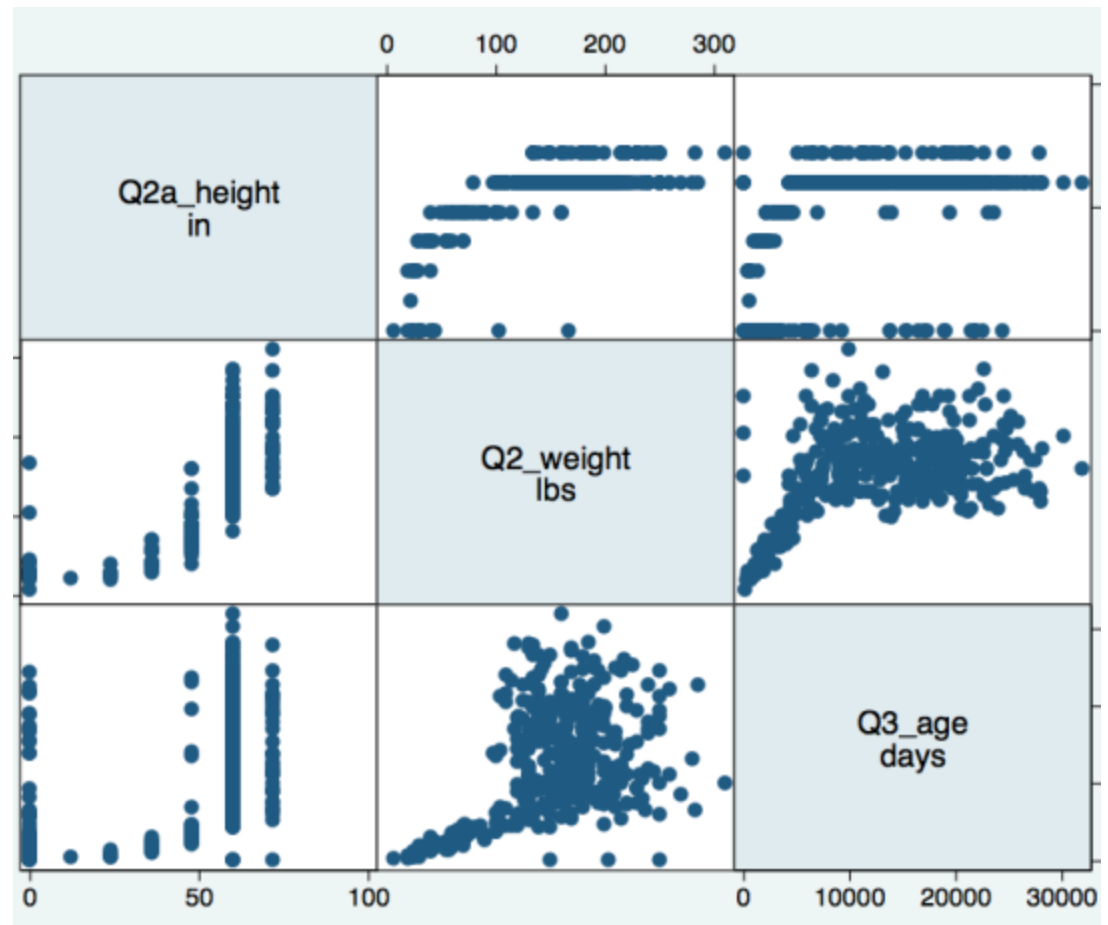
A few more instances of engagement



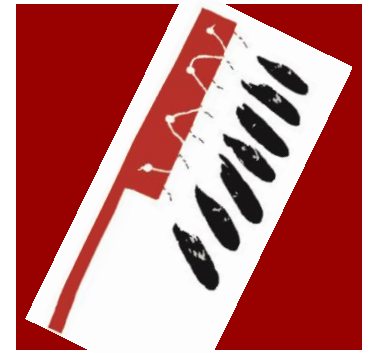
Another way Ktunaxa researchers garnered interest was to present graphics like this scatterplot.

After hearing researchers' explanations of correlation, the researcher would ask why the height and weight distribution might level off. Generally research participants would make the connection between growth rates and age.

Then researchers would pose scatterplots, and more accurately regression analysis, as a method for demonstrating pancreatic function. Some were even asked to envision where their point on the plot would be.



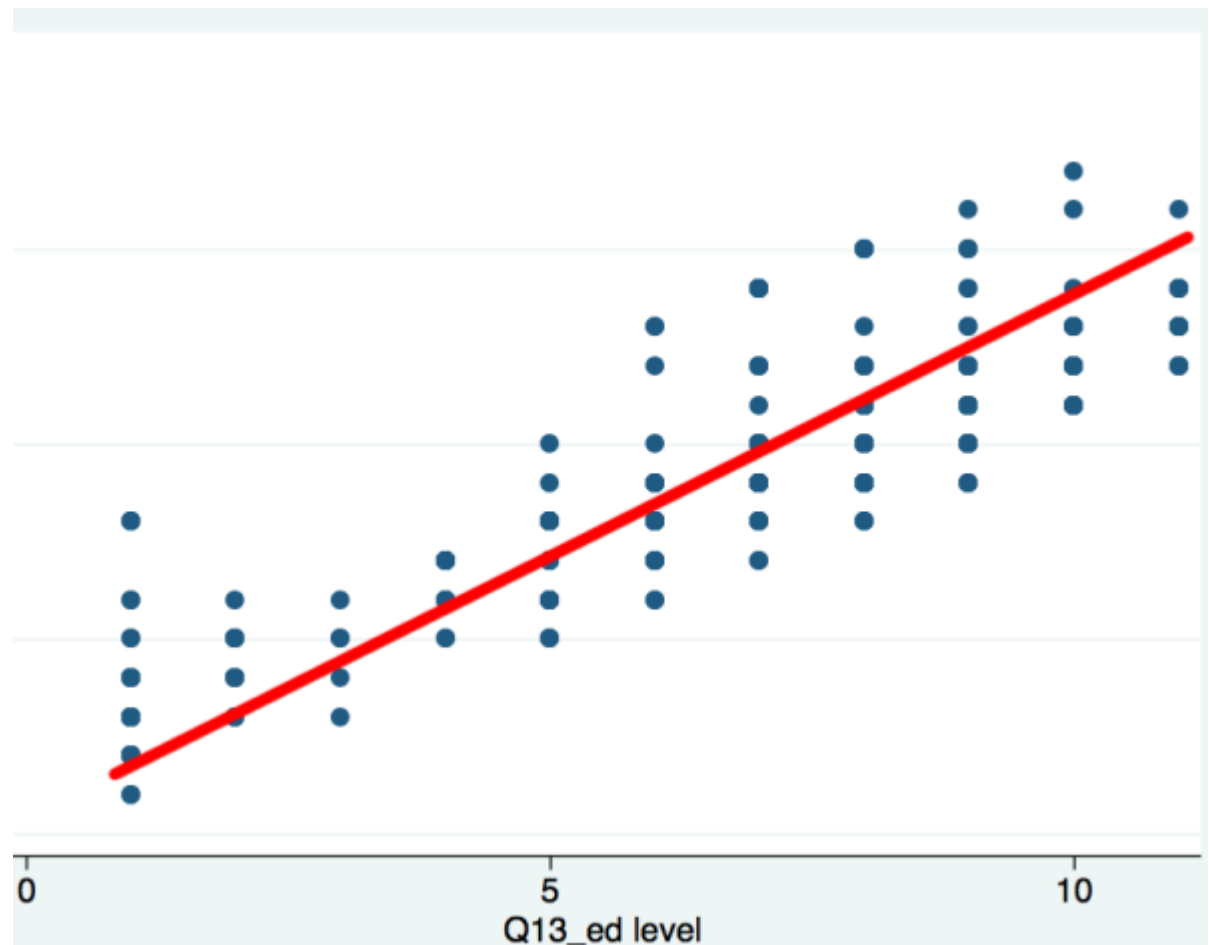
A few more instances of engagement



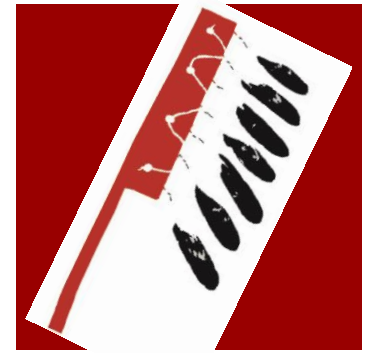
Another graphic that Ktunaxa researchers presented to potential Census takers was the education/income model.

It was often presented in a humorous way by asking parents if they wanted a way to encourage their kids to stay in school. Again, interviewees were asked to indicate where they would place a dot for their answer. Then it was compared to the trendline.

The trendline was helpful for demonstrating the linear relationship between variables.



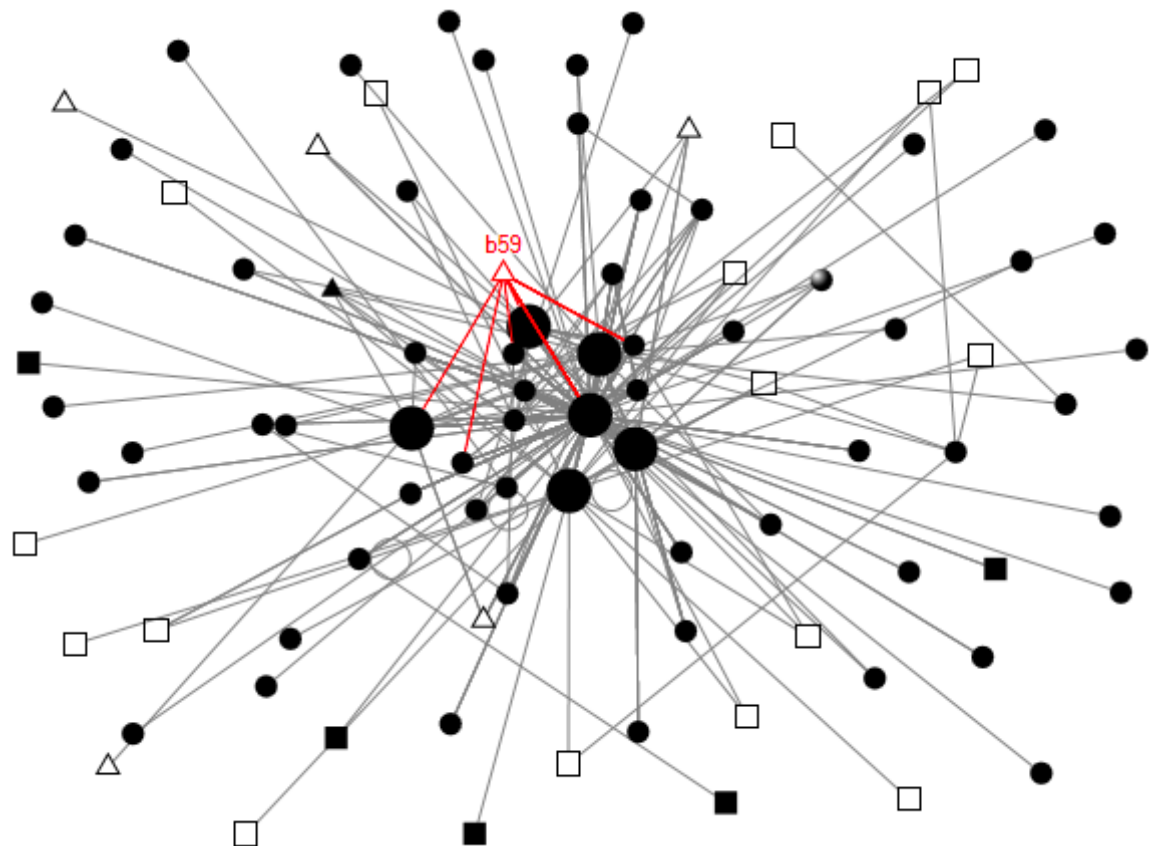
A few more instances of engagement



Finally, Ktunaxa researchers would demonstrate how data from our online social networks helped to identify important themes being discussed by members of popular online groups.

This force directed algorithm was explained as social gravity, where more important network components were drawn to the dense center.

B59 was a blog about Indian Names and this information was used to demonstrate how Ktunaxa people could contribute to research without being dispossessed of the data.





Where do we go from here?

- We need to continue to move past the decontextualized and dispossessed ground meat.
- To rely less on descriptive statistics (which focus on unidimensional metrics); and
- We need access to our data for inferential statistics (which demonstrate correlation and estimation between two or more variables).
- We need to train and keep a corpus of researchers, with knowledge of sampling, validity, bias, and reliability.
- Focus on variation in the data, not variation in the data gathering processes.
- We need to continue to empower community members to play an active and forward-thinking role in data collection and model development, where they can relate their perspective to the world of analysis.