

INCLUSION OR EXCLUSION: MAPPING INDIGENOUS KNOWLEDGE

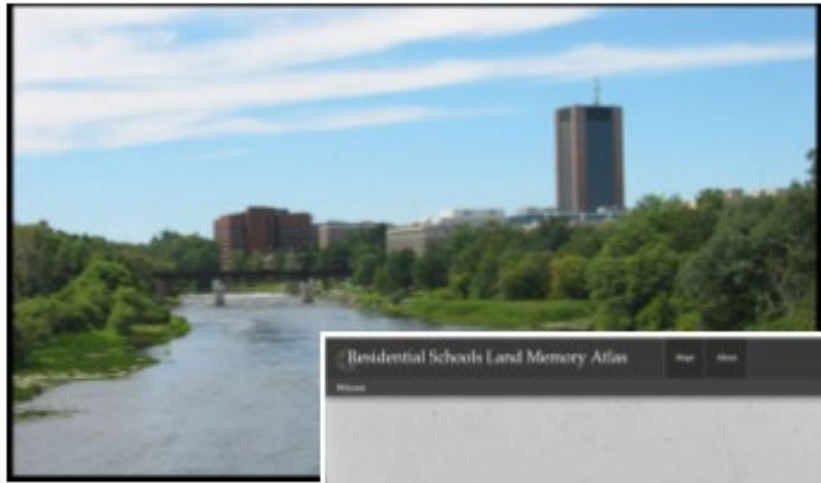
**D. R. FRASER TAYLOR,
OFFICER OF THE ORDER OF CANADA
FELLOW ROYAL SOCIETY OF CANADA, KILLAM PRIZE WINNER 2014
PAST PRESIDENT, INTERNATIONAL CARTOGRAPHIC ASSOCIATION (ICA)**

**CHANCELLOR'S DISTINGUISHED RESEARCH PROFESSOR, INTERNATIONAL AFFAIRS,
GEOGRAPHY AND ENVIRONMENTAL STUDIES**

**DIRECTOR, GEOMATICS AND CARTOGRAPHIC RESEARCH CENTRE, DEPARTMENT OF
GEOGRAPHY AND ENVIRONMENTAL STUDIES, CARLETON UNIVERSITY**

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Geomatics and Cartographic Research Centre (GCRC)



Carleton
University,
Ottawa,
Canada



From Cartography to Cybercartography Locational Digital Mapping and Storytelling



Fraser Taylor and the tangible table at GCRC

INTRODUCTORY REMARKS

- GOOD DAY, EVERYONE. IT IS A PLEASURE TO PARTICIPATE IN THIS PANEL DISCUSSION ON THE IMPORTANT TOPIC OF ETHICS IN MAPPING.
- THE THEME OF THIS SESSION IS INCLUSION. THE IMPLICIT INFERENCE IS THAT INCLUSION IS A GOOD THING . I AM GOING TO ARGUE THAT THIS IS NOT ALWAYS THE CASE WHICH IS WHY I HAVE TITLED THIS PRESENTATION INCLUSION OR EXCLUSION IN MAPPING INDIGENOUS KNOWLEDGE.
- I WILL BE DISCUSSING THE TOPIC OF MAPPING INDIGENOUS KNOWLEDGE, A TOPIC WHICH OUR TEAM AT THE GEOMATICS AND CARTOGRAPHIC RESEARCH CENTRE AT CARLETON UNIVERSITY HAS BEEN WORKING ON TOGETHER WITH INDIGENOUS COMMUNITIES FOR THE PAST TWO DECADES. YOU CAN SEE SOME OF OUR WORK ON THE WEB SITE [HTTPS://GCRC.CARLETON.CA](https://gcrc.carleton.ca)

ETHICS

- THE OVERALL TOPIC OF THIS MEETING IS ETHICS.
- AS FAR AS INDIGENOUS COMMUNITIES ARE CONCERNED, THE ETHICS ARE QUITE STRAIGHTFORWARD:
 - MAPPING INDIGENOUS KNOWLEDGE MUST FIRST AND FOREMOST BE FOR THE ADVANTAGE OF THE COMMUNITIES INVOLVED AND WHAT IS MAPPED AND HOW THIS IS CARRIED OUT ARE ISSUES TO BE DECIDED FROM THE BOTTOM UP NOT FROM THE TOP DOWN.

INDIGENOUS MAPPING

- THIS IS A FUNDAMENTAL CHANGE IN POWER RELATIONSHIPS, WHICH MANY CARTOGRAPHERS MAY HAVE DIFFICULTY COMING TO TERMS WITH.
- IT IS NOT PRIMARILY A TECHNICAL ISSUE ALTHOUGH THERE ARE TECHNOLOGICAL ELEMENTS SUCH AS THE CHOICE TO USE OPEN SOURCE SOFTWARE AS OPPOSED TO VARIOUS PROPRIETARY ALTERNATIVES.
- IF INCLUSION MEANS A LOSS OF CONTROL BY INDIGENOUS COMMUNITIES, THEN INCLUSION IS NOT A GOOD IDEA.
- IF INCLUSION CAN BE ACHIEVED WITHOUT LOSS OF CONTROL AND TO THE ADVANTAGE OF THE COMMUNITIES CONCERNED, THEN A CASE CAN BE MADE FOR PURSUING IT.

CARTOGRAPHIC COLONIALISM AND INDIGENOUS PEOPLES

- FOR CENTURIES INDIGENOUS COMMUNITIES HAVE BEEN SUBJECTED TO WHAT I CALL CARTOGRAPHIC COLONIALISM.
- WHAT WAS MAPPED AND HOW THAT MAPPING WAS CARRIED OUT WAS DECIDED FROM THE OUTSIDE WITH LITTLE OR NO INPUT FROM THE COMMUNITIES CONCERNED EXCEPT TO PROVIDE THE KNOWLEDGE THE EXTERNAL POWER NEEDED TO PURSUE ITS OWN OBJECTIVES.
- THESE OBJECTIVES INCLUDED LAND ACQUISITION, FORCED RESETTLEMENT AND RESOURCE EXPLOITATION, AND CARTOGRAPHY PLAYED A MAJOR ROLE IN THIS PROCESS.

CONSIDER PLACE NAMES

- THE MOST VISIBLE REMNANTS ARE THE PLACE NAMES STILL APPEARING ON MANY MAPS.
- THESE WERE OFTEN THE NAMES OF “EXPLORERS” OR THE SITES OF MILITARY OR COMMERCIAL ESTABLISHMENTS CREATED BY THE DOMINANT EXTERNAL POWER IN PURSUIT OF THEIR POLITICAL OBJECTIVES.
- AFTER CENTURIES OF ABUSE THINGS ARE BEGINNING TO CHANGE BUT CHANGE HAS BEEN SLOW.
- I NOTE WITH INTEREST THAT CALIFORNIA IN SEPTEMBER THIS YEAR PASSED A BILL TO REMOVE THE USE OF DEROGATORY PLACE NAMES USING THE S WORD AND THIS WAS FOLLOWED AT THE FEDERAL LEVEL IN OCTOBER.

INDIGENOUS KNOWLEDGE

- WE CANNOT CHANGE THE PAST, BUT WE CAN TAKE STEPS TO ENSURE THAT THE MISTAKES OF THE PAST ARE NOT REPEATED. IF INDIGENOUS KNOWLEDGE IS TO BE INCLUDED IN MODERN MAPPING IT MUST BE ON TERMS WHICH ARE VERY DIFFERENT FROM THE PAST. MORE OF THE SAME SIMPLY WILL NOT DO.
- INDIGENOUS KNOWLEDGE IS INCREASINGLY RECOGNIZED AS A PARALLEL AND EQUAL KNOWLEDGE SYSTEM TO THAT OF WESTERN SCIENTIFIC KNOWLEDGE. IT HAS MUCH TO CONTRIBUTE IN ITS OWN RIGHT ESPECIALLY ON ENVIRONMENTAL TOPICS, AND IS MUCH MORE THAN AN AFFIRMATION OF WESTERN KNOWLEDGE.
- CO-CREATION OF KNOWLEDGE IS A STEP IN THE RIGHT DIRECTION BUT OFTEN DOES NOT GO FAR ENOUGH. WE MUST LEARN MORE OF THE RICH PROCESSES BY WHICH INDIGENOUS PEOPLE RELATE TO THEIR ENVIRONMENT.

THE ATLAS OF ARTIC BAY

- A KEY STEP IS TO LISTEN TO WHAT INDIGENOUS PEOPLE HAVE TO SAY. HERE THE PROBLEMS OF SEMANTICS LOOM LARGE BECAUSE MANY OF THE TERMS AND EXPRESSIONS IN INDIGENOUS LANGUAGES DO NOT TRANSLATE WELL INTO ENGLISH AND AS A RESULT ARE OFTEN NOT FULLY UNDERSTOOD.
- WHAT HAPPENS WHEN INDIGENOUS COMMUNITIES ARE GIVEN THE POWER TO CREATE THEIR OWN MAPS? I USE AS AN EXAMPLE THE CREATION OF THE ATLAS OF ARCTIC BAY ([HTTP://ARCTICBAY.GCRC.CARLETON.CA/](http://arcticbay.gcrc.carleton.ca/)) CREATED SOME YEARS AGO.
- BOTH THE CONTENT AND THE PROCESSES BY WHICH THE ATLAS WAS CREATED ARE INTERESTING. THE RICH PLACE NAMES AND THE STORIES BEHIND EACH PLACE NAME REPLACED THOSE OF THE COLONIAL ERA.
- PREVIOUSLY “EMPTY SPACES” ON MAPS WERE REPLACED BY LIVING HISTORY WHICH HAD MEANING TO THE LOCAL COMMUNITY.

RAP VIDEO – DON'T CALL ME ESKIMO

- THE OTHER TOPICS CHOSEN WERE ALSO INTERESTING.
- THE IMPORTANT DOG RACE, WILLYS GOLF COURSE, FRANK STREET THE FIRST STREET NAME IN ARCTIC BAY AND THE CREATION OF THE RAP VIDEO “DON'T CALL ME ESKIMO” WHICH WAS A LITANY OF ALL OF THE ECONOMIC AND SOCIAL CHALLENGES FACING YOUTH IN THE COMMUNITY ARE CASES IN POINT.
- THE VIDEO WENT VIRAL ON FACE BOOK IN ITS OWN RIGHT.
<HTTPS://WWW.YOUTUBE.COM/WATCH?V=9IXY-F1TOW8>



Arctic Bay kids add Dead Dog Lake to their atlas.



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THE ATLAS AND THE NUNALIIT PLATFORM

- THE PROCESS BY WHICH THE ATLAS WAS CREATED IS ALSO INTERESTING . IT WAS A TOTAL COMMUNITY EFFORT. THE ELDERS TOLD THE STORIES, AND THE YOUTH WHO WERE COMPUTER LITERATE ENTERED THESE INTO THE ATLAS USING THE OPEN SOURCE NUNALIIT PROGRAM PROVIDED BY THE GEOMATICS AND CARTOGRAPHIC RESEARCH CENTRE (GCRC).
- NUNALIIT MEANS COMMUNITY IN INUKTITUT AND WAS DEVELOPED SPECIFICALLY FOR EASE OF USE BY NON-EXPERTS IN THE LOW BANDWIDTH SITUATION PREVALENT IN THE CANADIAN NORTH AT THAT TIME.
- EVEN THE CHILDREN BECAME INVOLVED TO ENSURE THAT THEIR FAVOURITE DEAD DOG LAKE WAS RECORDED. THEY ENTERED THIS THEMSELVES. TRAINING AND TECHNICAL SUPPORT WERE PROVIDED BY GCRC. FOR THE FIRST TIME MAPS WERE BEING CREATED WHICH HAD REAL MEANING TO THE LOCAL PEOPLE.

FAIR, CARE AND OCAP PRINCIPLES

- EXISTING DATA SHARING PRINCIPLES TO ENSURE OPEN AND ACCESSIBLE INFORMATION HAVE BEEN DEVELOPED USING THE **FAIR (FINDABILITY, ACCESSIBILITY, INTEROPERABILITY, AND REUSE OF DATA ASSETS)** APPROACH
- BUT EVEN WITH THE SUBSEQUENT ADDITIONS OF THE **CARE (COLLECTIVE BENEFIT, AUTHORITY TO CONTROL, RESPONSIBILITY, ETHICS)** PRINCIPLES THEY DO NOT FULLY ADDRESS THE ISSUES OF EFFECTIVELY AND ETHICALLY MAPPING INDIGENOUS KNOWLEDGE
- IN CANADA INDIGENOUS ORGANIZATIONS HAVE DEVELOPED THE **OCAP (OWNERSHIP, CONTROL, ACCESS AND POSSESSION)** PRINCIPLES WHICH GO A LONG WAY TO ADDRESS THE CONCERNS EXPRESSED IN THIS PAPER.

FAIR GUIDING PRINCIPLES

- IN 2016, THE '[FAIR GUIDING PRINCIPLES FOR SCIENTIFIC DATA MANAGEMENT AND STEWARDSHIP](#)' WERE PUBLISHED IN *SCIENTIFIC DATA*.
- THE AUTHORS INTENDED TO PROVIDE GUIDELINES TO IMPROVE THE
 - **F**INDABILITY,
 - **A**CCESSIBILITY,
 - **I**NTEROPERABILITY, AND
 - **R**EUSE OF DIGITAL ASSETS.

CARE GUIDING PRINCIPLES

- CARE PRINCIPLES OF INDIGENOUS DATA GOVERNANCE WERE THEN DEFINED TO AFFORD INDIGENOUS DATA GREATER PROTECTION
 - **C**OLLECTIVE BENEFIT
 - **A**UTHORITY TO CONTROL,
 - **R**ESPONSIBILITY,
 - **E**THICS

OCAP FIRST NATIONS PRINCIPLES

- IN CANADA [THE FIRST NATIONS PRINCIPLES OF OCAP](#) WERE DEFINED TO AFFORD GREATER PROTECTION TO INDIGENOUS DATA, AND ARE AN IMPROVEMENT WITH
 - **O**WNSHIP
 - **C**ONTROL
 - **A**CCESS
 - **P**OSSESSION
- BUT THERE ARE STILL IMPORTANT LEGAL, ETHICAL AND SOCIAL ISSUES TO BE RESOLVED.

DATA SOVEREIGNTY

- IF INDIGENOUS COMMUNITIES ARE TO BE ETHICALLY AND EFFECTIVELY INCLUDED IN A NEW APPROACH TO MAPPING THEN THEIR DIGITAL SOVEREIGNTY MUST FIRST BE DEVELOPED.
- THIS SHOULD INCLUDE TRAINING AND RESOURCE SUPPORT WHILE GIVING PRIORITY TO THE EXPRESSED NEEDS OF INDIGENOUS COMMUNITIES.
- IN MANY CASES EXISTING CAPACITY IS NOT ADEQUATE AND WILL HAVE TO BE BUILT FROM SCRATCH.
- ONCE BUILT THERE WILL BE THE NEED TO MAINTAIN AND FURTHER DEVELOP DIGITAL SOVEREIGNTY AND THIS WILL TAKE TIME AND PATIENCE.

SYSTEMIC CHANGE

- ONLY WHEN WE HAVE REDRESSED THE EFFECTS OF CENTURIES OF CARTOGRAPHIC COLONIALISM CAN WE EFFECTIVELY AND ETHICALLY INCLUDE INDIGENOUS COMMUNITIES AND THE VALUABLE CONTRIBUTION THAT INDIGENOUS KNOWLEDGE HAS TO BRING TO THE KEY ISSUES SUCH AS CLIMATE CHANGE FACING SOCIETY TODAY.
- PROGRESS IS BEING MADE IN CANADA IN THE SPIRIT OF RECONCILIATION.
- IF INDIGENOUS PRIORITIES ARE MET FIRST THEN MEANINGFUL AND MUTUALLY RESPECTFUL PARTNERSHIPS ARE MORE LIKELY TO SUCCEED, REPLACING CENTURIES OF CARTOGRAPHIC COLONIALISM IS NO EASY TASK.

CONCLUSION

- I STARTED OFF BY POSING THE QUESTION OF WHETHER INDIGENOUS SHOULD BE INCLUDED OR EXCLUDED?
- THE ANSWER TO THIS QUESTION DEPENDS ON HOW THE ISSUES I HAVE OUTLINED IN THIS PAPER ARE ADDRESSED.



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