Surveys and Society

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Outline

- What questions do we ask? Categories and their validity

- Data collection: Where are we heading?

- Data analysis: What types of statistics? Averages, proportions and their consequences.

- Using survey data, elections, politics, policies, and polls.

How do we ask questions? Categories and their validity

Categories are "conventions about equivalences organized by statisticians to arrange and compare their research subjects".
Cournot in Desrosières (2006)

The use, overuse and misuse of categories

Life was so simple then...

- Mother tongue was unique. It was either French, English or other.

- "Race", skin colour was unique: white, black, yellow, red.

- Ancestry was either French, British, Aboriginal or... other.

- People were either married to a person of the opposite sex, or single.

- **And then came modernity.**

Categories,...

- With modernity, it became harder and harder to fit people into categories.

- History (in the US):
  - The counting of black slaves as 3/5 of whites.
  - The one drop rule.
  - Hawaii.

- The use of categories reinforces and solidifies the idea that these categories exist by themselves and are homogenous.

- What is a French-Canadian? What is a black or a white person? What is an Aboriginal?

Take the category "French"

As mother tongue or language spoken at home

- Not long ago, there was almost complete concordance between mother tongue and language spoken at home among French speakers in Quebec.

- This gave the image of homogenous "French Canadians" "born in maple syrup".

- However, Africans, Haitians, North-Africans, and French, Belgian, Swiss Europeans declare French as their mother tongue. There were only a few but today...

- In Quebec, one third of those who declare a language other than French or English as their mother tongue declare French as the language or one of the languages spoken at home.

- But our image of French Quebecers has not necessarily changed with the times.

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Take ethnicity and its measurement

- In the census "long form", now the National Household Survey, there are two broad categories. You are either
  - **Aboriginal**,
    - i.e. North American Indian, **Métis** or Inuk.
  - **Or non-Aboriginal**,
    - i.e., White, South Asian *(e.g., East Indian, Pakistani, Sri Lankan, etc.),* Chinese, Black, Filipino, Latin American, Arab, Southeast Asian *(e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.),* West Asian *(e.g., Iranian, Afghan, etc.),* Korean, Japanese, Other, please specify_____

- Everybody is asked whether they are a Registered Indian or a Band Member.

- So you can be white and registered Indian but you cannot be Indian, Métis or Inuk AND white or black,...

Who is Aboriginal?

- For Aboriginals, we have a panel, i.e., two declarations for the same indicators.
  - The census long form (2006) for 1/5 of the population.
  - The Aboriginal People Survey (APS) for 1/5 of respondents to the census long form who had mentioned either having Aboriginal ancestry or identity or being a Registered Indian or Band member.
- The number of people identifying as Aboriginal has risen by nearly 20% on each Census since 1985 (Guimond, 2003; Guimond et coll., 2007).
- **But how do we explain the following?**

How many Registered Indians?

Canada 2006

- According to the Register of Indian populations, in 2006, there were
  - 553,643 Registered Indians 15 years and older
  - **257,779** of those (47%) lived off reserve.

- According to the 2006 Census:
  - **246,060** registered Indians 15 years and older lived off reserve.

- According to the Aboriginal people Survey (APS 2006):
  - **287,000** Registered Indians 15 years and older lived off reserve, 17% more than in the census.
  - **In the Maritimes, there are 39% more.**
  - **In Quebec, there are 35% more.**

Why are there 17% more registered Indians living off reserve in the APS than in the census?

Population: people declaring themselves Indian, Métis or Inuk, either as an origin or as an identity, or being a status Indian or a Band member.

- From the census (2006):
  - **29%** identify as North American Indians and **23.7%** as Registered Indians compared to
  - 29.3% Métis
  - 3% Inuit

- From the APS (2006):
  - **36.1%** identify as North American Indians and **27.6%** as registered Indians compared to
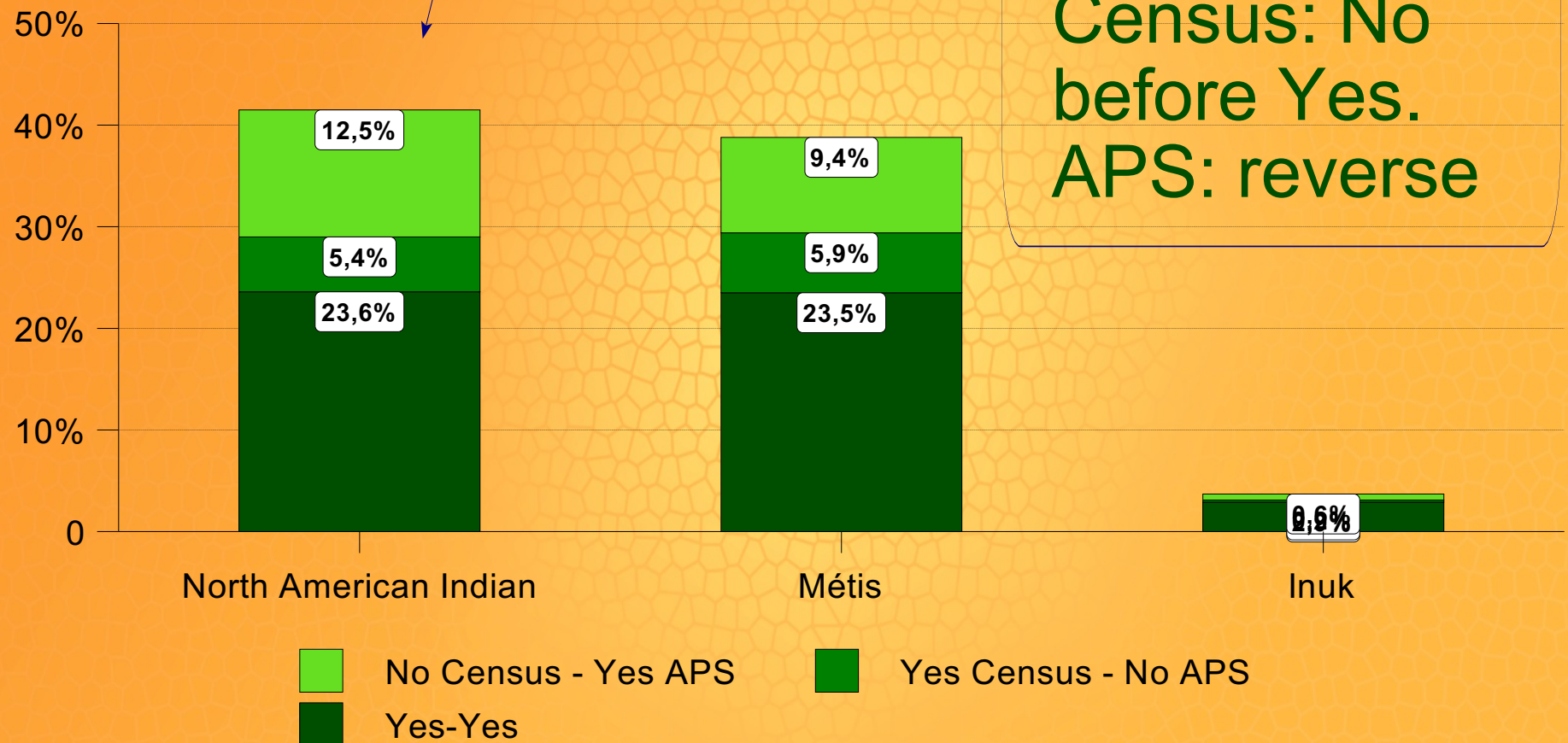 - 32.8% Métis
  - 3.4% Inuit.

Why more registered Indians in the APS? Identity

Census vs APS 2006: CANADA

Interpretation: 41.5% identify as FN in at least one survey Among those 41.5%,...

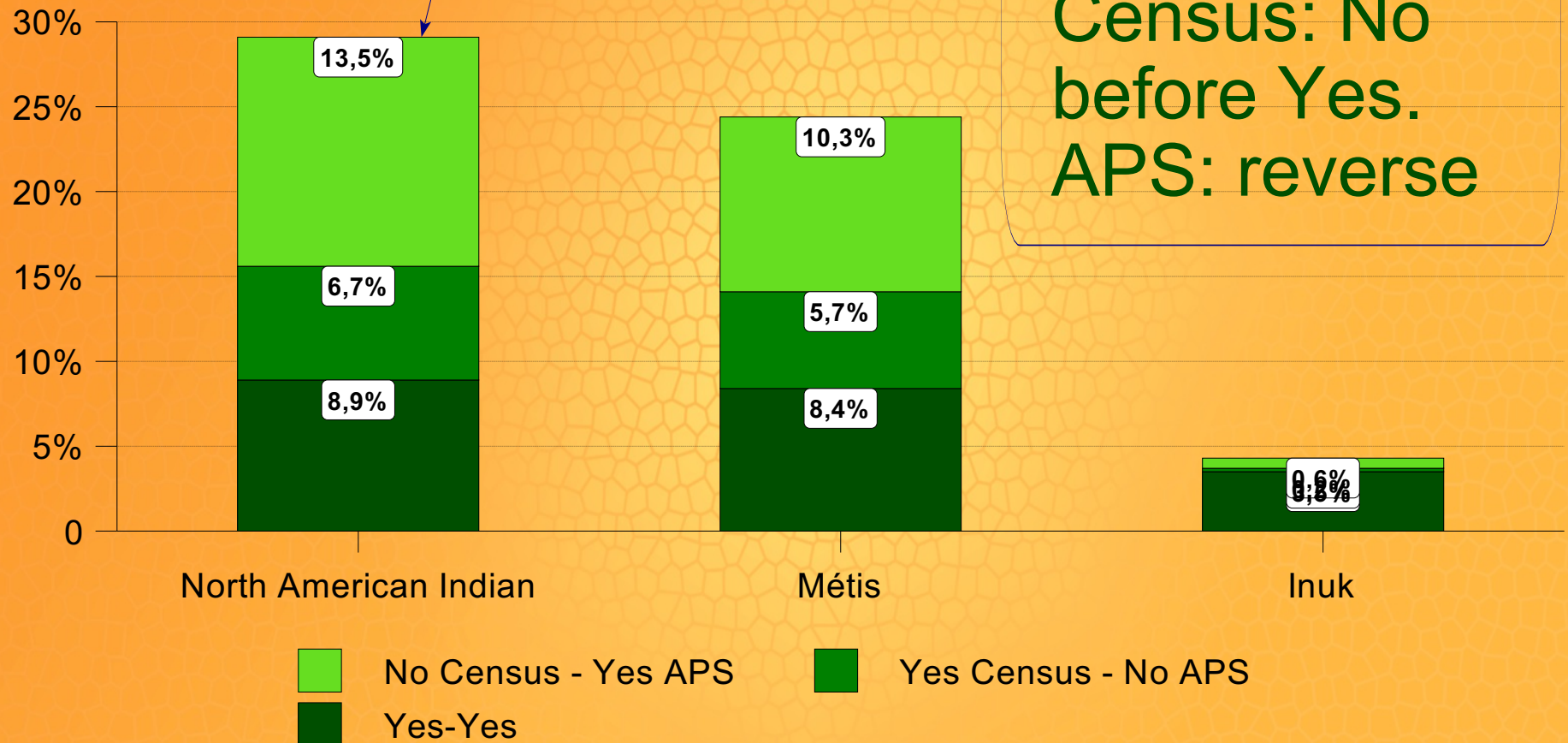Are you an Aboriginal? Census: No before Yes. APS: reverse

North American Indian
- 12,5%
- 5,4%
- 23,6%

Métis
- 9,4%
- 5,9%
- 23,5%

Inuk
- 0,6%

Legend:
- No Census - Yes APS
- Yes Census - No APS
- Yes-Yes

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Why more registered Indians in the APS? Identity

Census vs APS 2006: QUEBEC

Interpretation: 29% identify as FN in at least one survey Among those 29%,...

Are you an Aboriginal? Census: No before Yes. APS: reverse

Legend:
- No Census - Yes APS
- Yes Census - No APS
- Yes-Yes

Categories:
- North American Indian: 13,5% / 6,7% / 8,9%
- Métis: 10,3% / 5,7% / 8,4%
- Inuk: 0,6% / 0,8%

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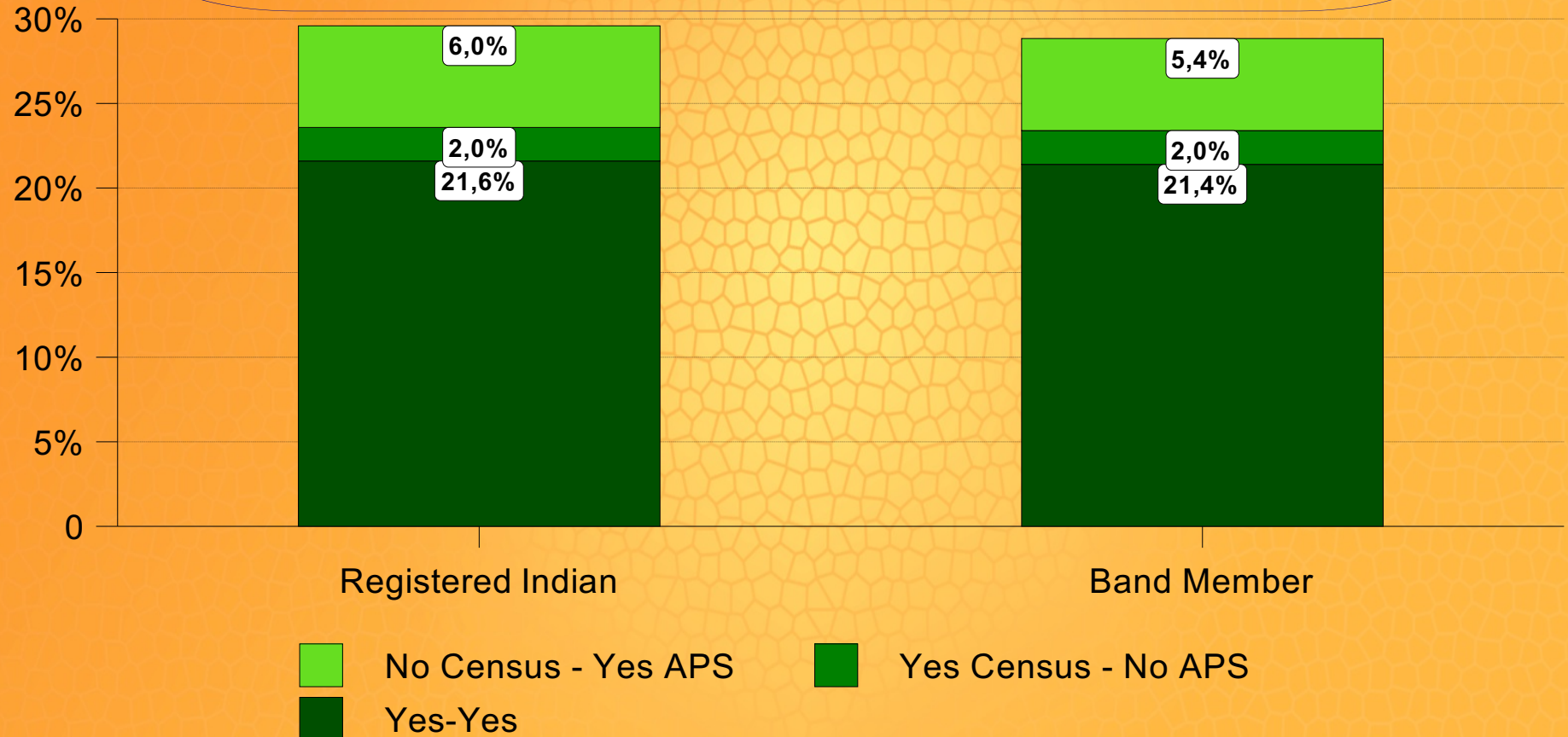
Who is Aboriginal? How many?

In Canada

- North American Indians living off reserve and Métis have a flexible, contextual, identity.
  - This phenomenon varies across regions.
  - It is predominant in Eastern Canada. It partly depends on the diversity of origin (Guimond et al., 2007).
- Note that Métis does not mean the same thing in French and in English.
  - In French, it has two meanings, Prairie Métis and mixed blood of all kinds.
- **But what about the legal status?**

Why more registered Indians in the APS in Québec?

Census vs APS2006: Registered Indians and Band members

- Census: Band member asked before registered Indian.
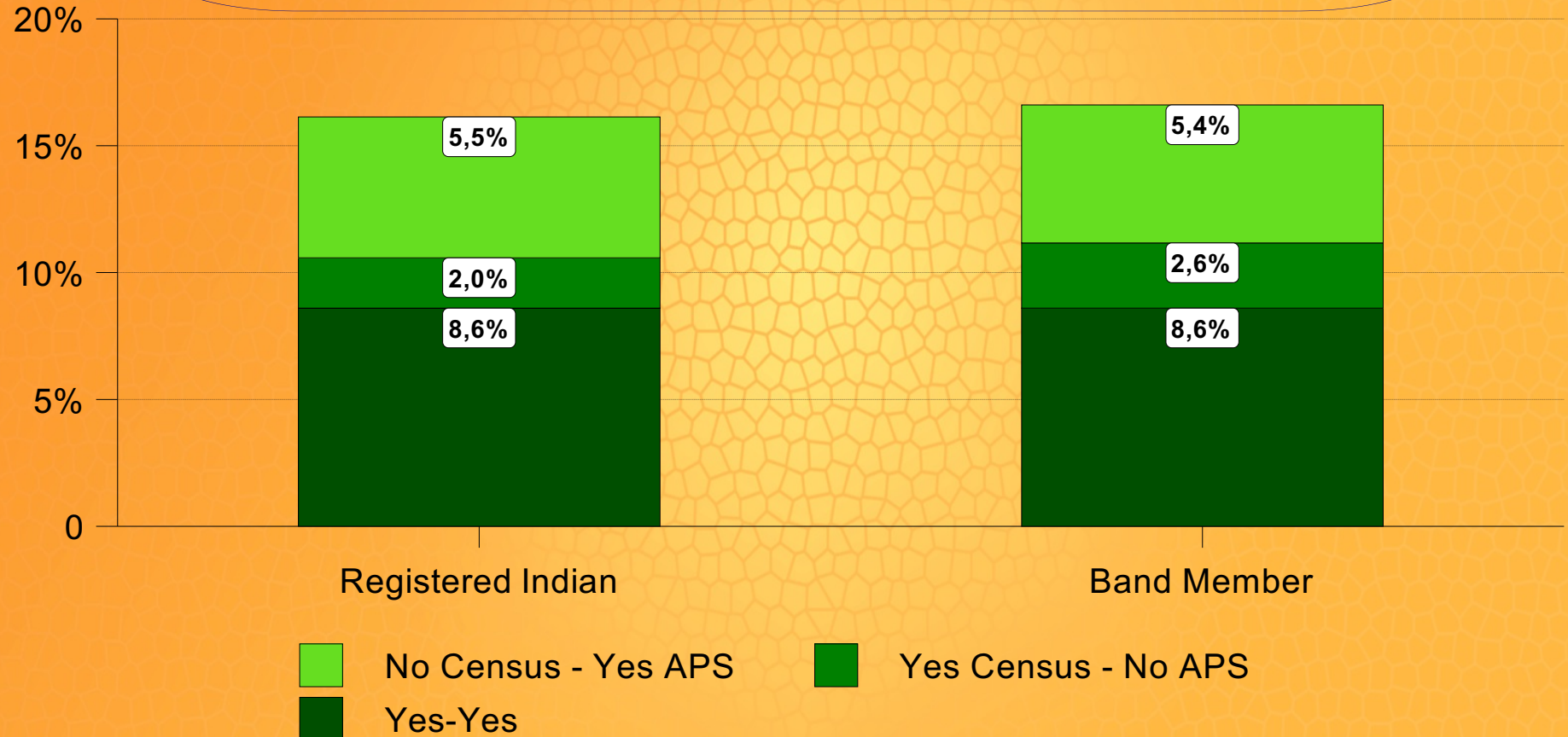- APS: Registered Indian asked before Band member

Legend:
- No Census - Yes APS
- Yes Census - No APS
- Yes-Yes

Registered Indian: 5,5% / 2,0% / 8,6%
Band Member: 5,4% / 2,6% / 8,6%

Finally, regarding categories,

- Which definition of Aboriginal, Métis? How do we provide an accurate image of a population that we cannot accurately define?

- Why do we have a very fine-grained differentiation of people living in Asia and no differentiation for Blacks, Whites, Latin Americans or Arabs?

- What if the numbers for Black or French-speaking people varied by 20-40% from one survey to the next?

- What impact on the published statistics?

- **How should we improve the questionnaires?** Ask ourselves what is the knowledge goal?

Collecting data

Where are we heading?

Modes of communication, modes of data collection

- It all started with face-to-face surveys at home.
  - At that time, it was possible for a stranger to knock on your door and ask questions.
    - However, at first, around 50% of respondents did not answer questions pertaining to voting intention.
- Then came the telephone, essential in Canada.
  - Starting with one telephone per household (s),
  - Going to 2-3 telephones per household (for children, fax),
  - Then cell phones for individuals,
  - Then cell phones only, per individual.
- What is the basis for the sampling frame? Households or individuals?

How does this affect survey research?

- It has become very difficult to create a telephone sampling frame of all Canadians.
  - Where we know the probability of inclusion (within the household and for the individual),
  - Taking into account the relative use of each telephone.
- **Why bother anyway?**
  - **People do not answer their telephone** anymore or at least not when the call comes from an unknown telephone number.
  - They think that people they do not know do not have the right to call them. **Home has become a sanctuary where nobody is allowed to bother you.**
- Try to use the Kish grid!

And then came the email

- A good way to reach people. They can decide to answer when they want. You do not bother them when they do not want to be bothered.

- A great improvement! A new means of communication, non-intrusive, flexible, inexpensive for inviting people to answer surveys on the Web.

- But... there are some flaws:
  - Sample members may also decide not to bother answering,... at no cost.
  - And the major problem: It is extremely difficult and expensive to create a probabilistic sampling frame of the whole population.
  - And the "do not email list" is coming.

And now...

- Why not use social media? Facebook, Twitter, and the like? Besides the fact that not all people are on social media,
  - All social media providers now block bulk requests, whoever the sender. It is considered spam.

- We realize that...
  - We have no intrinsic right to communicate with people we do not know.
  - People are building walls around themselves and only those they let in, in advance, may communicate with them.

- **What can we do? What should we do?**

What is the future if we have no further access to potential survey respondents?

- What about the National Household Survey, which replaced the census and which is no longer mandatory?

- Methods must change drastically.
  - Establish probabilistic panels, which we renew and to which we ask questions (very few) regularly?
  - Statisticians and survey researchers launch campaigns to inform people about what they do, why they should answer surveys, etc.

- One thing is sure, we must do something or survey research will disappear.

What statistics should we use?

A word about averages and proportions

What statistics should we use?

When you think about it,...

- Anyone not a white man born in Canada is, **on average, less** than this "standard"
  - It is automatic, historical.
  - When we study inequalities, we ask
    - "How are they less?" and
    - "Are the differences between groups decreasing with time?"
  - This gives the essentialism-based impression of the various groups.
    - Reinforced by the research subject, for example, poverty among women, immigrants, visible minorities, Aboriginals, etc.

- The focus is on the deficit. The image we get for each group is homogenous and negative.

What is a difference in averages ?

We think -- we know -- it may look like this:
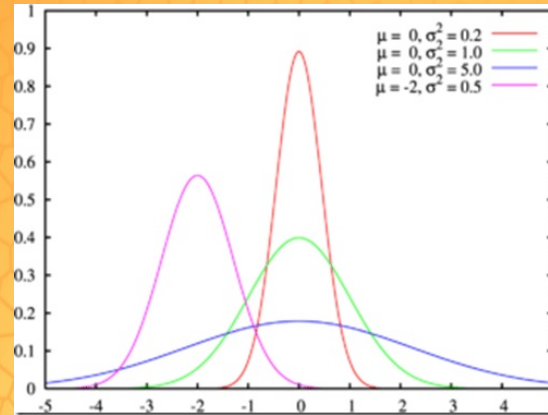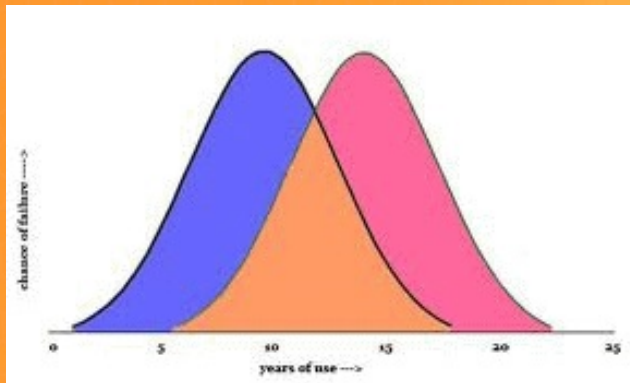
Users of our statistics understand the following:
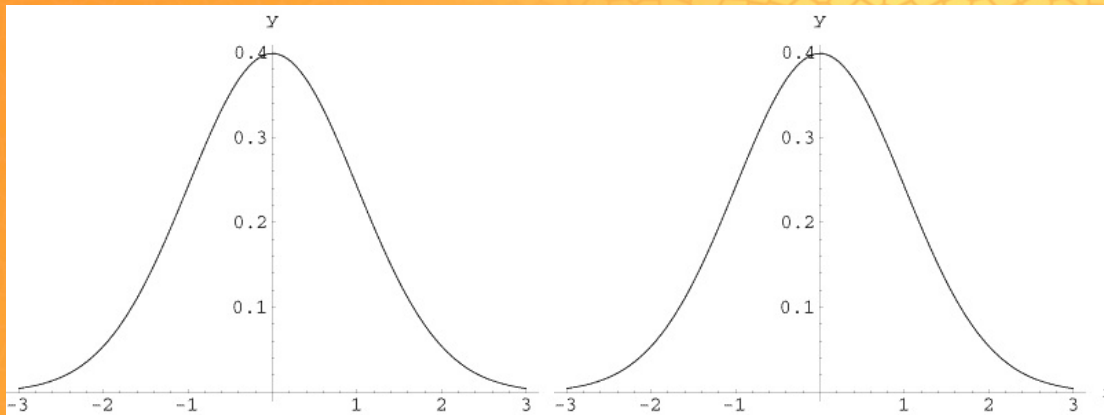
The social impact

- The category becomes homogenous in people's mind:
    - If women earn less, it is because...
        - They work fewer hours.
        - They have children.
        - They spend more time on household duties.
        - They are not good at negotiating their salary.
    - If Aboriginals earn less, it is because…
        - They have problems with alcool and drugs.
        - We give them too much money, it does not encourage them to find jobs.
        - It is their culture.
    - **In short, if they are among the "less", it is -- at least partially – their own fault.**

An example: How to compare First Nation and non First Nation Canadians?

- Can we compare, on average, Aboriginals with non-Aboriginals, when we know that...
  - Aboriginals often live on reserves, in remote or isolated areas.
  - A much higher proportion of non-Aboriginals live in cities.

- A solution,
  - Compare First Nation communities (reserves) with adjacent non-First Nations communities.

Compare what is comparable

Deslauriers, 2011; Deslauriers, Durand et Duhaime, 2011; Durand, Deslauriers et Duhaime, 2012.

- In Québec, 24 groupings including
  - 35 First Nations communities
  - 96 non-First Nations communities

- First observation:
  - Some First Nations communities have practically no neighbouring non-First Nations communities.
  - No information available about the Mohawks since 1986. In Quebec, they comprise 21% of Registered Indians and the majority of First Nations living near urban centers.

Let's look at differences in...

- Education
  - Missing information we would like to control for:
    - Parent's level of education.
    - Presence of a primary school, since when; distance to nearest high school.
    - Resources to study outside the community, where.

- Access to employment.
  - With constant level of education.
  - In similar economic environment.

- Income.
  - No control for resources from informal economy, hunting and fishing, etc.

- Housing, overcrowding and condition
  - No "owner" on most reserves.

Difference between FN and non FN neighbouring communities

High school diploma and employment (had a job -15 months) Source: Deslauriers 2011; Durand, Deslauriers & Duhaime, 2012)

Legend:

- Odanak (Y1)
- Timiskaming (Y2)
- Manawan (Y1)
- Whapmagoostui (Y1)
- Mingan (Y1)
- Mashteuiatsh (Y1)
- Total (Y1)
- Wolinak (Y1)
- Winneway-Kitcisakik (Y1)
- Obejiwan-Wemotaci (Y1)
- Wendake (Y1)
- Uashat (Y1)
- Gesgapegiag (Y1)
- Listuguj (Y1)
- Pikogan (Y1)
- Kebaowek-Hunter's Point (Y1)
- Nemiscau ++ (Y1)
- Pakuashipi (Y1)
- Betsiamites (Y1)
- Lac Simon (Y1)
- Kitigan Zibi (Y1)
- Chisasibi ++ (Y1)
- La Romaine- Nutashquan (Y1)
- Essipit (Y1)
- Kawawachikamach+ (Y1)

First observation

- Some FN communities fare better than their neighbours
  - Wendake
  - Essipit
  - Odanak
  - Listiguj
- A positive difference in education always goes hand in hand with a positive difference in employment.

The question: All else being equal, ...

- Does living on a reserve and identifying as FN have an impact?

- Regression allows for "all else being equal"...

- Two types of information:
  - Probabilities: of access to a high school diploma, to a full-time job, to a higher level income, to quality housing.
  - Proportion of explained variance.

Impact of individual factors

	Education		Activity		Income	Housing		
	9 years	High School diploma	Employment	Full-time job	Income higher than 75th centile	House needs repair	House overcrowded (1)	House overcrowded (2)
	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)
Intercept	3.711 ***	1.010 ***	7.793 ***	8.938 ***	3.174 ***	.284 ***	0.002 ***	.003 ***
Individual characteristics								
Age (Ref=50-59 years)								
20-29	4.378 ***	1.808 ***	2.274 ***	.439 ***	.128 ***			
30-39	4.173 ***	1.655 ***	2.524 ***	1.204 ***	.520 ***			
40-49	2.920 ***	1.305 ***	2.491 ***	1.349 ***	.782 ***			
Sex (Ref= male)								
Female	1.106 ***	1.273 ***	.367 ***	.271 ***	.354 ***			
Education (Ref= post secondary education)								
Less than 9 years			.148 ***	.627 ***	.207 ***			
9-11 years			.394 ***	.878 ***	.439 ***			
High school diploma			.490 ***	.898 ***	.437 ***			
Employment status (Ref=Mostly full-time)								
Unemployed					.064 ***			
Mostly part-time					.146 ***			
Aboriginality (Ref=Allochtone)								
FN identity	.355 ***	.412 ***	.561 ***	1.317 ***	.661 ***			

Factors at the collective level

	Education		Activity		Income	Housing		
	9 years	High school diploma	Employed	Employed full-time	Income higher than 75th centile	House needs repair	House overcrowded (1)	House overcrowded (2)
	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)	EXP(B)
Groupings (Ref=Odanak)								
Wôlinak	1.414 ***	1.525 ***	.827 ***	.989	1.623 ***	.745 ***	.956	
Pikogan	.840 **	.987	1.229 ***	1.196 **	2.072 ***	.919	1.789	
Lac-Simon	.890 *	.857 ***	1.096	1.176 **	2.182 ***	.910	2.582 ***	
Timiskaming	1.407 ***	1.132 *	1.089	1.703 ***	1.597 ***	1.155	1.604	
Kitcisakik	.686 *	.585 ***	1.576 **	.532 **	.876	2.769 ***	15.076 ***	
Kebaowek	1.180	1.439 ***	2.031 ***	1.036	2.819 ***	.698 *	.000	
Kitigan Zibi	1.064	1.110 *	1.001	1.217 **	1.742 ***	1.151	.689	
Manawan	.958	.652 ***	.866 *	1.313 **	1.458 ***	.888	5.688 ***	
Groupe d'Obedjiwan	.471 ***	.607 ***	2.107 ***	1.207	1.836 ***	1.920 ***	5.581 ***	
Némiscau	.629 ***	1.152	3.347 ***	.836	2.912 ***	1.129	2.937 ***	
Chisasibi	.628 ***	1.090	3.705 ***	.872	3.919 ***	1.727 ***	5.798 ***	
Whapmagoostui	.363 ***	1.142	8.375 ***	.526 **	4.827 ***	2.060 ***	6.454 ***	
Wendake	2.158 ***	2.016 ***	1.111 *	1.189 **	2.255 ***	.439 ***	1.215	
Pakuashipi	.345 ***	.887	10.669 ***	1.074	2.125 ***	1.546 *	1.795	
La Romaine	.246 ***	.652 ***	5.237 ***	.937	1.624 ***	1.588 *	4.668 ***	
Mingan	.650 ***	.968	2.741 ***	1.242	1.583 ***	.778	1.464	
Uashat/Maliotenam	.875 *	.944	1.296 ***	1.469 ***	2.547 ***	1.175 *	2.091 **	
Betsiamites	.759 ***	.708 ***	.602 ***	1.063	1.579 ***	2.006 ***	2.354 **	
Essipit	.763 ***	.653 ***	1.146 *	1.539 ***	1.189 **	1.619 ***	.000	
Mashteuiatsh	1.301 ***	1.149 ***	1.067	1.070	2.230 ***	.639 ***	.927	
Gesgapegiag	1.557 ***	1.043	1.124 *	1.242 **	1.714 ***	.811 **	.402 *	
Listuguj	1.426 ***	.955	.986	1.083	.894	1.648 ***	.821	
Matimekosh	.660 *	1.150	10.070 ***	1.534	3.134 ***	3.528 ***	2.651 **	
Community type (Ref=Neighbouring commun.)								
First Nations	.798 ***	1.100 **	1.189 ***	1.214 **	.719 ***	1.843 ***	19.646 ***	22.663 **
N (unweighted)	250 170	250 170	250 170	201 465	249 970	174 625	174 725	174 725
Statistiques (-2 LL, dl)	(151983,978, ***)	(314867,294, 33)	(200851,742, 36)	(165941,57, 36)	(241409,078, 38)	(99691,697, 29)	(13933,02, 24)	(14269,005,5)
R2 Cox & Snell	.066	.065	0.115	.080	.317	.026	0.03	.029
Nagelkerke	.135	.088	0.190	.134	.429	.058	0.29	.273

a. ***, **, * significant differences at levels de 0,001, 0,01 et 0,05 respectively.

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We show that

Education

- Being young and female raises the probability of access to a high school level.

- FN just over 50% less likely to have access to a high school diploma than non-FN living in the same sectors.

- Living in any region that is not a Service Center decreases the probability of access to a high school diploma.

- Some groupings, Wendake near Quebec City, for example, fare better than others.

We show that

Employment and income

- Education level is the main factor related to access to a full-time job and a higher income.

- For equal levels of education, in the same sectors, FN people's disadvantage disappears.
  - In fact, FN people living in reserves are more likely to have a full-time job than non FN people living in the same environment with the same level of education.

What proportion of differences between FN and non FN do we explain?

	9th Grade	High School	Employed	Employed Full-Time	Income > 75e centi>
Individual Factors	5,3%	1,4%	17,8%	12,6%	41,7%
Geo Zones	8,5% (+3,2%)	4,2% (+2,8%)	18,0% (+0,2%)	12,9% (+0,3%)	41,8% (+0,1%)
Groupings	11,5% (+3,0%)	7,9% (+3,7%)	18,8% (+0,8%)	13,2% (+0,3%)	42,6% (+0,8%)
Reserve	13,0% (+1,5%)	8,4% (+0,9%)	18,9% (+0,1%)	13,4% (+0,2%)	42,8% (+0,2%)
FN Identity	13,5% (+0,5%)	8,8% (+0,4%)	19,0% (+0,1%)	13,4% (+0,0%)	42,9% (+0,1%)
Individ. Factors alone	11,0%	5,2%	18,0%	12,8%	42%
Collect. Factors alone	6,6%	6,7%	1,5%	0,8%	2,5%

- Collective factors are more important for High school diploma.

- Individual factors (including education) explain most of the variance in employment

- **Factors associated with FN (reserve + identity): explain between 0.2% et 2% of the variance.**

- **There is a lot more differences within categories than between categories.**

Explained variance

Employment and income

- Almost all variance explained for access to a job (18%), to a full-time job (12.8%) and to higher income (42%) comes from individual characteristics.

- All things being equal, where you live and identifying as FN does not explain much.

- **In short, access to education, particularly in remote and isolated areas, is the heart of the "problem".**

What about housing?
The catastrophe

Contribution to explained variance - Housing

Initial model	Factors introduced in the model	Condition		Overcrowding (modèle a)		Overcrowding (model b)	
		% de total explained variance	% of added explained variance	% de total explained variance	% of added explained variance	% de total explained variance	% of added explained variance
Household factors		0.2%	--	--	--	--	--
	Geographical zones	2.0%	1.8%	13.7%			
	Groupings	5.4%	3.4%			19.3%	
	Types de community (FN vs non-FN	5.8%	3.8%	27.3%	13.60%	29.0%	9.70%

- The likelihood of overcrowded housing is nearly 20 times higher on a reserve
- The houses are twice as likely to require serious repairs.
- Living on a reserve explains around 10% of the variance in housing between FN and non-FN communities.

Consequences?

- There are no more FN and non-FN ("whites").

- There are people living in communities
  - More or less remote and isolated.
  - With more or less access to services,...
    - Like a road or a high school.
  - In a more or less diversified economic environment.

- It is not a question of FN culture anymore. We ask:
  - How do we improve access to education in remote and isolated area?
  - How does education become necessary and useful in remote and isolated areas?
  - How do we solve the housing problem?

What about percentages

Canadians think that..

- Percentages play a similar role as averages.

- We go from
  - "40% of Canadians think that..."
  - To "Canadians are divided" or "Canadians are ambivalent".
  - From "A majority of Canadians think that"...
  - To "Canadians think that..."

- Canadians wanted to elect a minority government.

In conclusion, the kinds of statistics that we publish,...

- ... may reinforce the tendency to...
  - Seek broad and unique explanations.
  - Essentialize differences between groups.
  - Partly because of the way we present statistical information and the way it is interpreted.
  - It has an impact on members of these groups.

- Which means that we have to
  - Think about the choices we make when analyzing survey data,
  - Use appropriate models
  - Explain them better to the general public and to decision-makers.

The use of polls

- Pre-electoral polls and their impact.
- "People agree" as the heart of a policy.

Pre-electoral polls

- Probably the most public and publicized use of polls.

- How do they fare in predicting the vote?

- What is electoral polls' influence?
  - On the voters?
  - On the militants?
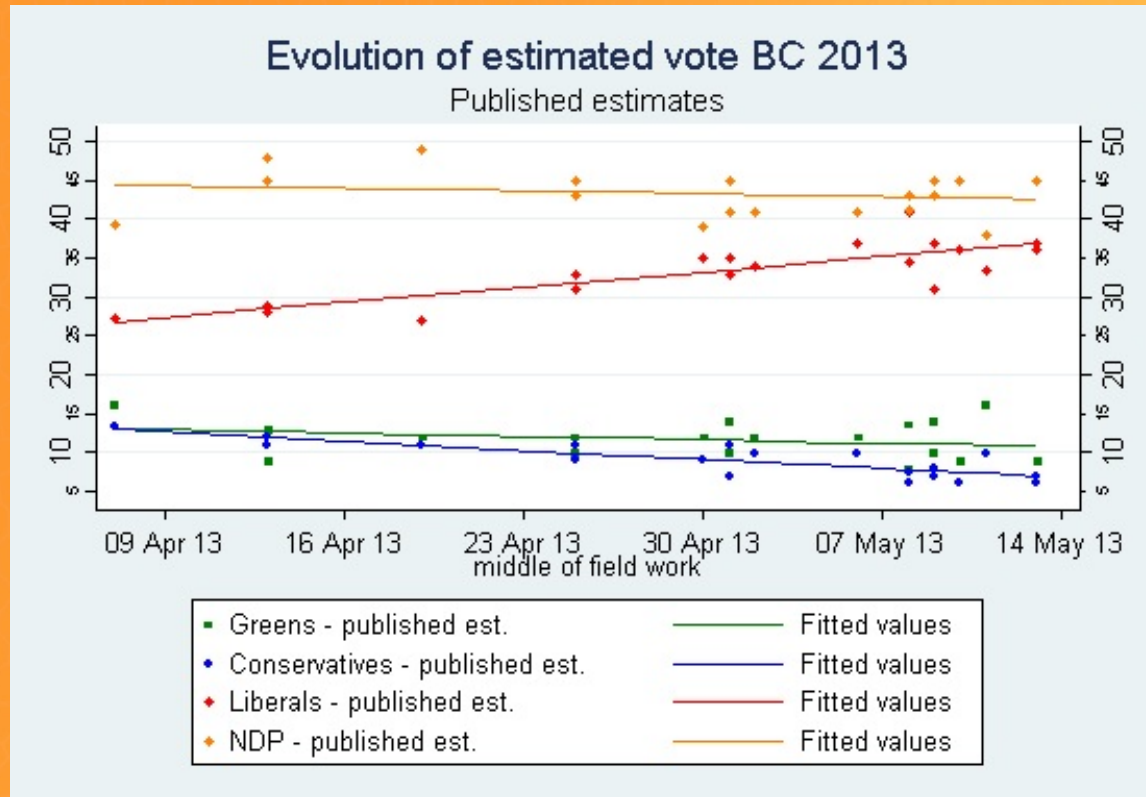 - On people's confidence in polls?

Alberta 2012

Evolution of estimated vote 2012
Published estimates

44.0
34.3
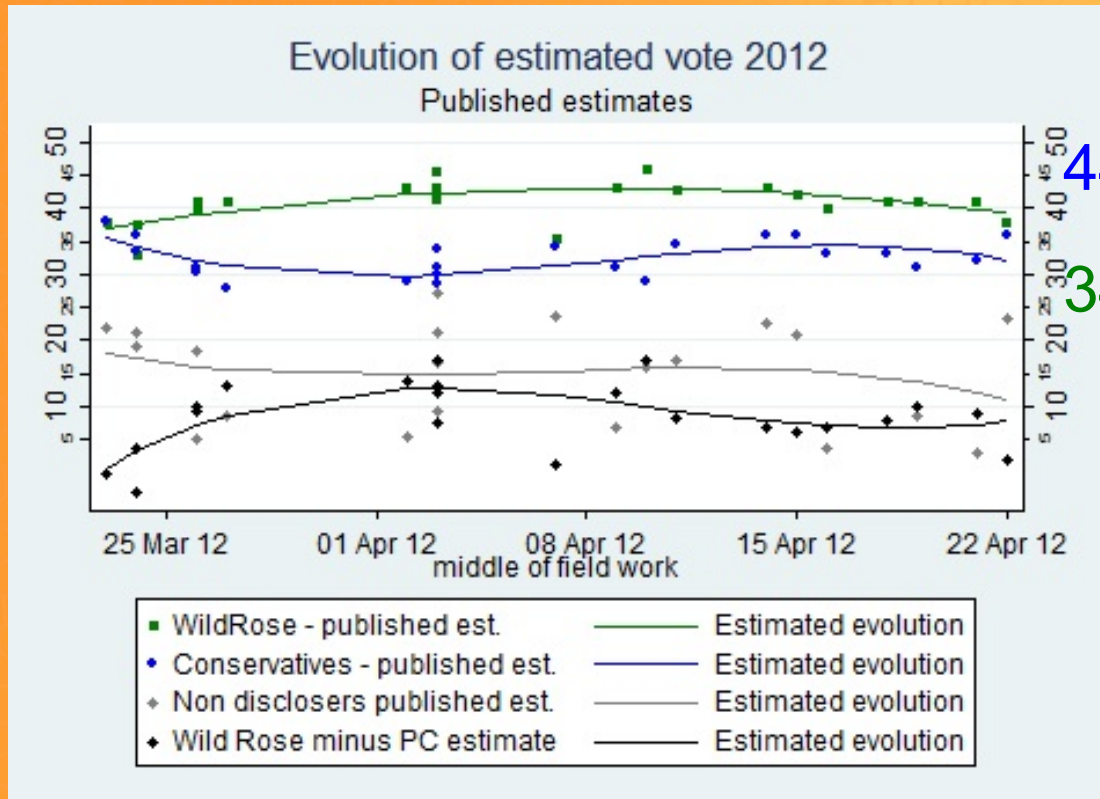
✛Wild Rose: +4.9; Cons: -11.8 = **16.7**
  ✛ Web: WR:-2.6; PC: +2.1: reduces bias
  ✛ IVR: WR: +2.1; PC: -2.9 : contributes to bias

British Columbia 2013

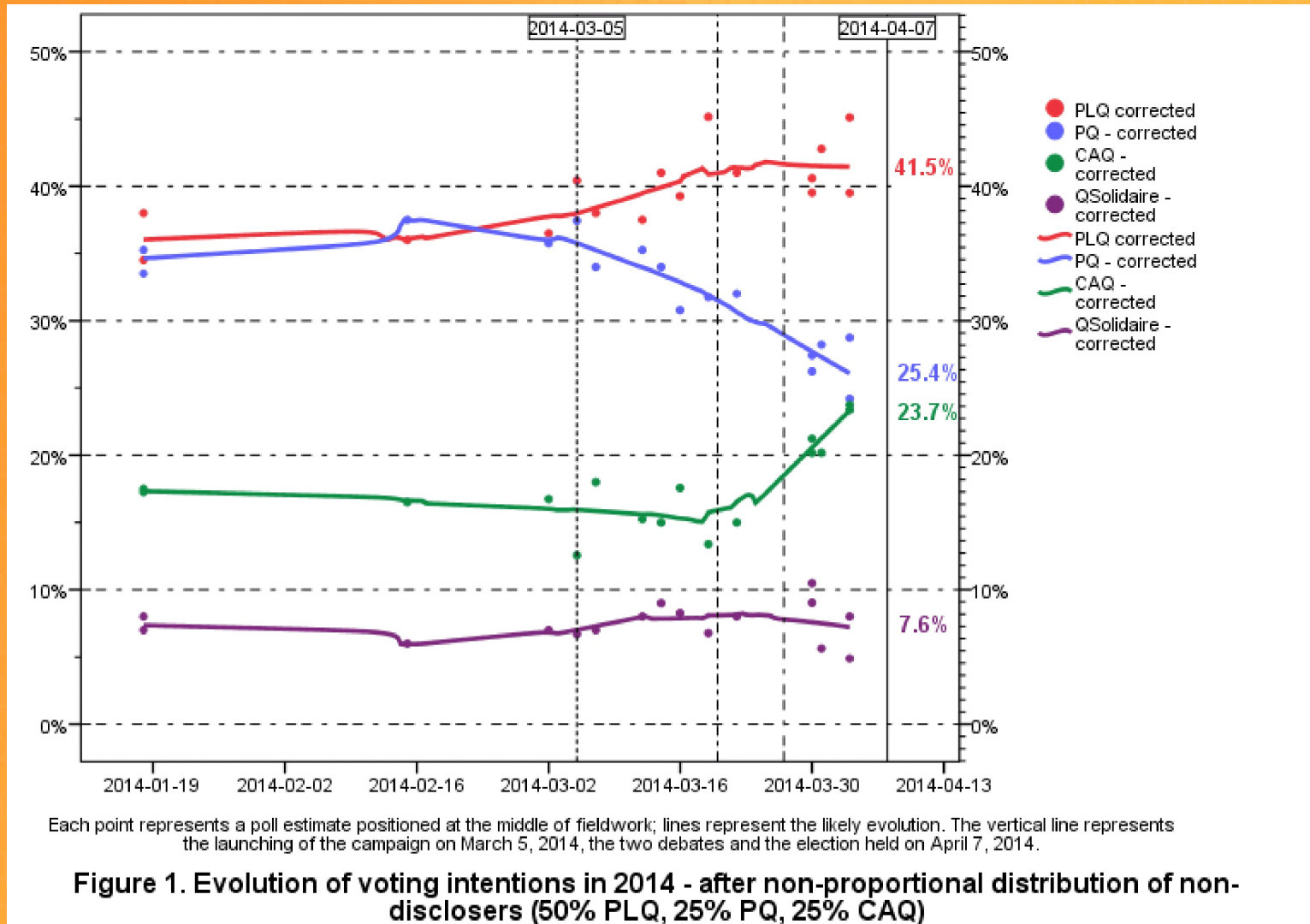Evolution of estimated vote BC 2013 — Published estimates

44.4
39.7

✢ There is movement towards the Liberal party.

✢ Liberals: -7.5; NDP:+2.9, Total: **10.4** pts

✢ WEB (68% of polls): NPD: +4.3

Quebec 2014
With non proportional attribution of the non-disclosers vote, an almost perfect prediction.

Each point represents a poll estimate positioned at the middle of fieldwork; lines represent the likely evolution. The vertical line represents the launching of the campaign on March 5, 2014, the two debates and the election held on April 7, 2014.

Figure 1. Evolution of voting intentions in 2014 - after non-proportional distribution of non-disclosers (50% PLQ, 25% PQ, 25% CAQ)

How do electoral polls fare? What is their influence?

- Electoral polls sometimes go wrong, seriously wrong.

- They have known biases: according to methods, against the right-wing parties in general. However, the media do not generally inform the population about these biases.

- Bad polls may have an influence
  - On some voters, the most sophisticated who are in a position to cast a strategic vote
  - Sometimes, on participation (Minaret in Switzerland) & on the results (2002 French presidential election)
  - On the militants: they can encourage or discourage them
  - Eventually, on our capacity to conduct polls because they may harm people's confidence in polls.

Polls or rights? "People agree" as the heart of public policy

The case of the Quebec Charter of values

- You can first decide that a problem exists.
  - First survey in 2007, on reasonable accomodations presented on main media during 5 days in a row. Media owner: Pierre-Karl Peladeau, pollster: Jean-Marc Léger, both very close to Parti Québécois.

- You may think that such a divisive topic might help you win an election.
  - Survey in March 2013 by the Marois Government regarding reasonable accomodations and more precisely, the right to wear religious gharb.
  - Note that people are asked whether there should be a law that would go against the Charter of rights (but they are not told this).

Polls and power?

The case of the Quebec Charter of values

- Poll results are then used as an argument, i.e., **people agree with us**, they want it.
  - 51% becomes a majority and then all "Quebeckers".

- Then, you look at voting intentions and say: it helps.

- Then your supporters start to think that it might help you win the next election.

- Political actors frame "the problem" and we look at poll results as if they originate from a sound opinion that people have considered and debated, and know the arguments on both sides.

What are the consequences?

- We end up again with homogenous categories:
  - Muslims are fundamentalist.
  - All people who wear religious gharb are fundamentalist AND against equality between men and women. (Same argument was used for minarets in Switzerland).
  - French Quebeckers are "bigots" who live in an homogenous environment.
    - Then how do you explain that French Quebeckers who live in the Montreal area were more likely to favor the Quebec Charter of values than those who live outside the Montreal region?
  - Non Francophone Quebeckers are open-minded.

In conclusion

- Society influences polls:
  - It defines and modifies the categories we can use
  - It defines the mode of communication we can use to carry out our research
  - It defines the topics on which polls are conducted.

- Polls influence society:
  - Their results tend to solidify categories and give a homogenous image of each category: there are the "plusses" and the "minuses".
  - Without sound analysis, they may reinforce inequalities without helping to solve them.
  - Their results are used by political actors as an argument for their policies.