These data were prepared by Eric Guntermann (UC Berkeley, Political Science) and Benjamin Forest (McGill, Geography). Both are members of the Centre for the Study of Democratic Citizenship. If you have questions, please contact Dr. Guntermann (English or French) or Prof. Forest (English).

You are welcome to use these data but must acknowledge us properly. Please contact us if you would like to do so.

THE 2014 ELECTION DATA

Quebec adopted new election districts (riding) boundaries in 2017, so we transpose the 2014 results into the constituencies to be used for the 2018 election. This means that we began with geographically detailed election results.

Élections Québec provides the results of the 2014 election by *section de vote* or SDV. SDV are very small geographic units that correspond to polling stations. (In a few cases, there are two or more polling stations in one SDV. In these cases, results from the multiple stations are added together to obtain the vote totals for the SDV.) The SDV results reflect votes cast in-person on election day, and thus provide detailed information on the spatial pattern of the vote.

A substantial number of ballots were not cast at polling stations, however. These include advanced ballots cast before election day, mail-in ballots, ballots cast at mobile polling stations, ballots cast by prisoners, and other situations. Such votes cannot be definitively tied to a specific location within districts but are not necessarily similar to votes cast at SDVs. For example, in Abitibi-Ouest the Liberal candidate received 33% support from SDV votes, but nearly 40% support from non-SDV votes.

This means that the non-SDV votes must be allocated to specific locations. While it is impossible to know precisely where such votes were cast, we assume that the geographic pattern of these votes is similar to the geographic pattern of SDV ones. Thus, we allocate the non-SDV votes according to the spatial pattern of SDV votes. For example, if an SDV accounts for 12% of all Liberal SDV votes in a district, we allocate 12% of the non-SDV Liberal votes to that same SDV. See Table 1.
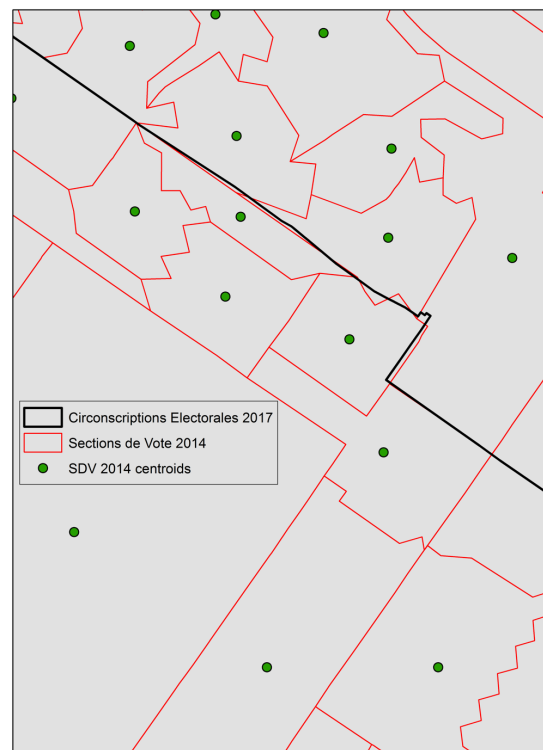
TRANSPOSING THE 2014 VOTE

By transposing the 2014 votes (both SDV and non-SDV), we can find what the election results would have been using the 2017 boundaries.

To do so, we allocated each 2014 SDV to the 2017 districts by overlaying their boundaries with each other using a Geographic Information System (GIS). Where a 2014 SDV falls entirely within a 2017 district, the allocation is easy. There are cases, however, where a 2014 SDV is split between two 2017 districts, and we must assign the SDV votes to one constituency or the other. We adopted a simple method known as centroid allocation.

Table 1: Allocation of non-SDV votes to SDVs (Example)

SDV	Total SDV Liberal votes	Proportion of total SDV Liberal votes	Total non-SDV Liberal votes in district	SDV proportion x total Liberal non-SDV votes	Aggregate Total Liberal votes (SDV + non-SDV)
1	20	0.12	60	7.06	27.06
2	50	0.29	60	17.65	67.65
3	70	0.41	60	24.71	94.71
4	30	0.18	60	10.59	40.59
Totals	**170**	**1.00**	**--**	**60**	**230.00**

First, we use the GIS to calculate the centroid of each SDV. (A centroid is the equivalent of the centre of a geometric shape like a circle or square but can be determined for irregular shapes. For practical purposes, it can be considered the centre point of an SDV.) We then allocate each SDV to a district by the location of its centroid. This approximates the partisan composition of the new 2017 districts. See Map 1.

On Map 1, the thick black line is the boundary of two 2017 districts; the red lines are the 2014 SDV boundaries; and the green dots are the centroids of the 2014 SDVs. In the middle of the map, several SDVs overlap with the two districts, but their centroids lie clearly within one or the other constituency.

Data Description

```
obs:            125
-------------------------------------------------------------------------
                storage    display
variable name   type       format    variable label
-------------------------------------------------------------------------
circonscription_nom str25   %25s      Nom de la circonscription
codegeographique    int     %10.0g    Code géographique
plq                 double  %10.0g    Proportion pour le Parti Libéral
pq                  double  %10.0g    Proportion pour le Parti Québécois
caq                 double  %10.0g    Proportion pour CAQ
qs                  double  %10.0g    Proportion pour Québec solidaire
on                  double  %10.0g    Proportion pour Option nationale
pvq                 double  %10.0g    Proportion pour le Parti Vert
autre               double  %10.0g    Proportion pour les autres parties
total               double  %10.0g    Total des votes
-------------------------------------------------------------------------
```