

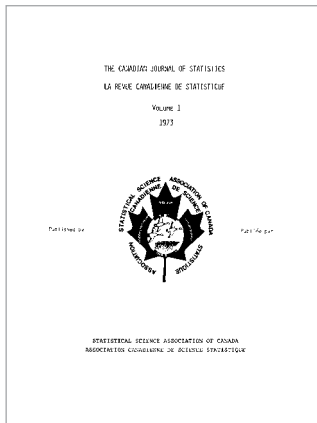
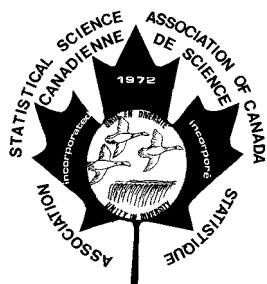
**THE GRAPHICAL CORPORATE IDENTITY
OF THE STATISTICAL SOCIETY OF CANADA**

A BRIEF HISTORY



Société Statistique
statistique Society
du Canada of Canada

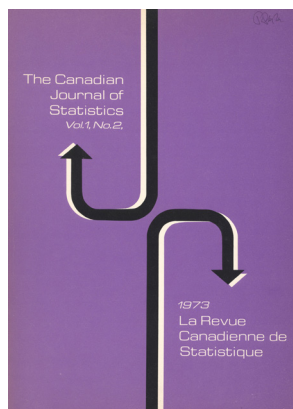
THE ORIGINS OF THE STATISTICAL SOCIETY OF CANADA go back to the founding of the Statistical Science Association of Canada (SSAC) in 1972. This was very much a personal initiative of Prof A. M. Mathai. He and his colleagues obtained Letters Patent. Mathai is said to have prepared the first issues of *The Canadian Journal of Statistics* on his own typewriter. The first logo appeared on the title page of Vol. 1 No. 2 and Mathai described it as follows:



It is a sample of migrating Canada geese. These beautiful feathered friends fly across continents from the artic [sic] to the tropic with a message from the north and bringing happiness to every one. These are Canada's own birds and when they return home to Canada they bring with them the beautiful blooming Spring time. Their migration is still a mystery. Biologists, Naturalists, Meteorologists, Statisticians, Ecologists, Sociologists and people at large are interested in these birds and their migration. So also the Statistical Science Association of Canada and the Canadian Journal of Statistics shall spread a message across continents and shall bring home happiness. It is the hope that Statisticians, Biologists, Ecologists, Social Scientists and people at large will be interested in them.

The inscription is "unity in diversity." Canadian society is a mosaic of different cultures and languages but with unity we progress as a great nation. The background is a beautiful maple leaf which is our national emblem. The scenery is the beautiful Horseshoe Fall on the Canadian side of Niagara Falls. As the gushing water at the Horseshoe Fall, Statistical Science Association, through its journal, shall gush out the vast reservoir of knowledge, radiating a beautiful rainbow across the horizon of scientific activities.

The emblem was designed by Prof. A. M. Mathai and it was drawn by Richard Santo of the Department of Architecture at McGill University.



The cover of the Journal incorporated design elements that were not particularly statistical in nature.

A rival organization, the Canadian Statistical Society (CSS), was also formed but did not adopt a logo beyond a simple monogram.

After several years of acrimony and disputed elections, the SSAC and CSS in their Annual General Meetings of 1977 voted to form one organization, the Statistical Society of Canada (SSC) and the Letters Patent of the SSAC were amended to change the name. That meant the end of the SSAC logo.



By 1979 there was some pressure to have a logo to use on letterhead. To save time, the SSC avoided all discussion of birds, animals or other iconic figures and adopted a text-only logo. The main idea was to promote the new acronym and the new name, equally in both languages.

When Geoff Hole became President in 1989 he formed a committee consisting of himself, George Styann and Peter Macdonald to design a Coat of Arms for the SSC. To be fair, George and I thought we were designing a logo and did not realize until Geoff got the Canadian Heraldic Authority from Rideau Hall involved, that we were working on something much grander. The Coat of Arms was presented by the Athabaska Herald at the 1990 Annual Meeting in St John's, Newfoundland. The Letters Patent conferring the Arms and speeches made at that occasion can be found in *SSC Liaison*, Vol. 4 No 3, June 1990. The following informal description is adapted from Geoff Hole's speech.

"Some of the symbolism in our coat of arms deserves to be explained. But we should also take note of the comments by Charles Maier, the Athabaska Herald, that symbolism is always open to new and fresh interpretation.

The dominant colours are red and white which make for a bold and striking design. Red is appropriate for the colour of the three maple leaves that recall the Canadian flag.

The Latin square speaks for itself and brings to mind statistical ideas of randomization and orthogonality, fundamental in designing

statistical experiments. The shield seems to be divided into two parts (top left and bottom right) by a line recalling regression.

The Coat of Arms includes a Snowy Owl representing wisdom. It is the provincial bird of Quebec and thus also symbolizes in part the birthplace of the SSC. Evidently it is a bird with exceptional vision and acute hearing and can detect prey at several miles distant. This great white owl is a beautiful sight, a bird of open country and unlike many owls is active during the daylight hours. In the Far North, where it breeds, it depends largely on the lemming supply for food. Lemmings undergo periodic population changes (here we have stochastic processes!) due to population explosion and subsequent epidemics, and when their numbers decrease the owls must migrate southward to avoid starvation (statisticians will go anywhere for work!). The interpretation of the owl with dark markings is seen more often on female and young birds. The female interpretation would nicely balance the masculine shield and remind us of the increasing number of statisticians who are women.

The bolt of lightning in the owl's claw perhaps symbolizes modern statistical computing and the flashes of insight that the study of statistics can generate. It can also be viewed as a times series.

Many asked why the owl is sitting on a helmet. Perhaps we can observe based on Canon George Earle's talk, The "Feel and Flavour" of Newfoundland, at the Newfoundland Soiree, that "The owl zats on ze elmit zo it won't zhat on ze zhald". Incidentally, the mantle over the helmet follows the normal distribution.

Finally we have the motto. Freely translated, it says science, wisdom and counsel. Science reflects and emphasizes the Latin square, wisdom similarly the owl, while counsel picks out the searching yellow eyes, the vision our Society needs and the role it must play to maintain the common and statistical (à la Marcus Aurelius).

Geoff might also have mentioned that counsel represents statisticians' willingness to give advice to others, as statistical consultants and indeed in any area of life where randomness is perceived and rational analysis is required.



The Coat of Arms quickly became identified with the SSC and has been used as a logo to this day, usually accompanied by some form of the 1979 text-only logo to provide the name. In 1999 *The Canadian Journal of Statistics* adopted a new cover design with new maple leaf images on the front cover and the old logo and Coat of Arms on the back cover.



As a logo the Coat of Arms is deficient in several ways. It was never intended to serve as a logo. It is too complex to be rendered as a small image. A Coat of Arms is supposed to identify the bearer by symbols alone, hence it lacks the name of the SSC. In a non-random survey of SSC members in 2015, most expressed affection for the Arms but felt we should have something more simple, striking and modern.



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The new logo by Paul DuVernet shows the owl taking flight. It represents where we have come from and shows that we are headed into the future with vigour and with passion for our craft. The intense colours merge to form Canadian flag red in the body of the owl, a graphic interpretation of the "unity in diversity" motto of the SSAC. They make an equally striking design on white letterhead or the black background of our new web site.

In the discussions with Paul as to what elements should be brought forward from the Coat of Arms to the new logo, it became clear that no one tool such as a normal density curve or a Latin square design adequately represents what we as statisticians do. The owl was chosen as the best element to represent analytical wisdom in the broadest sense and imply Canada at the same time. The bird in flight harks back to the flying geese in the original SSAC logo.

Mireille Schnitzer found more on the significance of the owl:

The owl represents wisdom, keen eyesight, foresight. It's Athena's sacred companion who whispered hidden truths into her ear. Canadian First Nations seem to give the owl similar symbolism but also see it as a harbinger of death. "First Nations people perceived the owl to be linked with wisdom, foresight and the keeper of sacred knowledge. The Owl is a great foreteller of weather conditions and can be observed to identify changes in environment." Hidden truths, prophesy, death predictions, weather forecasting... this all screams statistics to me!

Paul has rendered the owl abstractly, with gentle curves that are very satisfying to the mathematically inclined. The Athabaska Herald reminded us in 1990 that we should always look for new meaning in symbolism and it was exciting that Georges Monette immediately saw an even deeper interpretation of the image.

It's not a bird. It's not a plane. It's a response surface in three dimensions — and a very interesting one!

Serendipitously, the logo symbolizes the importance of insight and understanding when applying statistical methods and the dangers in the mechanical application of popular methods like forward stepwise fitting or dropping non-significant terms without understanding their role in a model.

It is our hope that the new logo, the vivid flying owl, will grow in meaning for Canadian statisticians as it represents the SSC in the years ahead.

Peter Macdonald

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- Maier, C. (1990) Presentation of the Coat of Arms. *SSC Liaison* V4N3 4-7.
- Monette, G. (2015) Personal communication.

Photo credit:

Peter Macdonald, https://www.flickr.com/photos/ssc_liaison/albums