# Establishing a First Demography (Implementation, Fate) of 183 Public Innovations and Comparison of Policy and Administrative Innovation Demography to Normal Policy and Organization Demography

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**ABSTRACT**

Study of public innovation has focused on its implementation. While implementation of public innovations has therefore been tracked somewhat, a limited amount is known about their fate. In this essay, for the first time, a demography of a public innovation population, implemented 1971-82 and tracked to 2021, is developed. The demography tracks all 183 Government of Saskatchewan (GoS), Canada innovations, a large population for a rare event. A baseline public innovation demography is thereby established. After 50 years, 32.2 percent of the innovations survived, 67.8 percent had been terminated. Policy and administrative innovations had different termination rates after both 30 and 50 years but they were both lower.

Innovation demography results are compared to normal policy and organizational population demography. After 30 years, policy innovation and normal (all USA, one population) program termination rates were still different (innovation rates higher). After 50 years, administrative (management) innovations and normal organizations (ten organizational populations) had the same demographics. After 50 years, the policy innovation termination rate was 69.2%, 1.38%/year, while the administrative innovation termination rate was 50%, 1%/year. After 50 years, the innovations' termination rates may have become normal.

***Key words:*** Public innovation demography; public innovation implementation; public innovation fate; consequences of innovation; comparison of public policy innovations and normal public policies; public policy innovations; government innovation.

## Introduction

***Innovation population.*** For the first time, a full public trailblazing innovation population demography (183 innovations) is identified. The innovations were implemented 1971-1982 by the GoS. For most (141) of the 183 innovations (Glor, 2023, article 4, column 7), the GoS was first to adopt the innovation in its population (see also Glor, 1997, 2002). A few examples of first innovations include implementing a comprehensive one-province library system in which books could be borrowed and returned at any library in the province; implementing an environment department; requiring workplace joint employer-employee safety committees in workplaces with more than 10 employees; soliciting public opinion and recommendations for major economic projects and subjects and policies of major importance to the province; and establishing head office activity in its own jurisdiction for all major mineral industries.

Demography is the statistics of a population (Vogt and Johnson, 2011); it identifies trends and historical changes in a population over time (Connelly, 2013: 269). Trailblazing innovation is the first three times a policy (including program) or administrative process is implemented in the GoS and in the GoS' population. The GoS' population is Canadian provinces, territories and federal government and USA states and federal government. These are the governments to which the GoS compared itself.[1]

***Saskatchewan*** is a Canadian province of one million people. Historically, its governments have alternated between social democratic and liberal/conservative. In 1971, half of the economy was agricultural. With active government involvement, its natural resource industries expanded considerably under the social democratic Blakeney NDP government, 1971-82. Among Canadian provinces, Saskatchewan tied for second highest compound annual growth rate, 1950-2016. During those 66 years, it had social democratic governments for 41 years and right-wing governments for 24 years. During those 66 years, social democrats were in power for 41 years, liberals for 7 years and neoliberals for 18 years. Gross domestic product per capita grew in the Canadian oil-producing provinces (Alberta, Saskatchewan, Newfoundland) due to increased oil prices, producing windfall profits; it fell in real terms in the other provinces. Real Saskatchewan incomes fell slightly 1970-1975 and increased 1975-1980.[2]

***The Literature.*** Researchers have studied implementation of public innovations considerably, including policy innovations (e.g. Mohr, 1969; JL Walker, 1969; Poel, 1976; Glor, 1997, 2015; Bloch, 2011; Colvin, 2006) and administrative innovations (e.g. Glor, 2002; RM Walker, 2006). They have studied termination little but some (e.g. Borins, 2014 [a study of innovation awards, i.e. successful innovations, and some terminations]); Glor, 2015; Glor and Ewart, 2016). These studies did not consider individual populations, however, but rather innovations across populations. We nonetheless learned something about implementation but less about what happens to public innovations, their fate (survival/termination). The Bloch (2022) study is a survey.

Some authors have said they knew the failure rate of private sector innovations was very high but they provided little if any substantiation (e.g. Drucker, 1980). Other authors claimed more public organizations and policies should be terminated but again offered little or no evidence there were too many (e.g. Bardach, 1976; Daniels, 1997, 2001; Geva-May, 2004: 309). Some of these scholars worked for USA Republican governments (see below) that supported termination of public programs and organizations on principle (ideologically). Others offered faulty evidence (e.g. Kaufman, 1976), as found by Lewis (2002); Carpenter and Lewis (2004); Berry, Burden and Howell (2010); and Glor (2015).

***GoS Innovations***. The Blakeney GoS, 1971-82, whose innovations are studied here, implemented 182 innovations first/second/third and one fourth among the population of USA

[1] Limiting the GoS' population to Canada and the USA presents GoS as a trailblazer. Had the population included, e.g. social democratic governments in Europe and elsewhere, GoS may not have appeared as such a trailblazer. However, the GoS and Saskatchewan social democrats had limited information on what other social democratic governments were doing and often invented solutions to Saskatchewan's problems. The population to which it related was indeed Canadian and American governments.

[2] https://www150.statcan.gc.ca/n1/pub/11-626-x/11-626-x2019009-eng.htm.

and Canadian governments. Despite being outside the trailblazing definition, the innovation that was fourth is included here because the first through fourth rankings formed a group. Demographic data are developed and used here to study the innovation population and its subsets (the data is available in Glor, 2023, article 4), to track their fate for 50 years and to compare the results to those of normal policy and organizational populations.

The innovations are divided into two types: policy (including program) and administrative (management/process/organizational) innovations. Bloch (2011), who was tasked by the OECD to develop a classification system for public innovations, identified four types of innovations: product, process, organizational and communication innovations. In this study, the term policy rather than product (typically a private sector term) is used. As in much of the policy literature, the term policy includes programs (e.g. Howlett and Cashore, 2020). Process and organizational innovations are combined. Communication innovations are not considered as a separate category, as communication was not considered to be as important at the time as it is now. The GoS did, however, emphasize consultation. The GoS' unique consultation mechanisms are considered as a sub-category called "participation" and can be distinguished in the database.

***The GoS Study***. Implemented 1971-82, 183 GoS' innovations were identified (Glor, 2023, article 4).[3] A database of the public innovations was developed, then their terminations and their patterns of termination and survival are identified. *Termination* includes innovation transfer to another department (ministry), name change, major funding cut, abolition (mortality) (disappearing from the record) and privatization (sold/transferred to the private or the non-profit sector). This definition is chosen because it is a definition used in the program, organizational and innovation termination literature; for example [e.g.] Glor (2013) and is the definition used in the United States Government Manual (USGM) (e.g. 2008-2009, 2020). The USGM is the main source of demographic information on the USA federal government's programs and organizations.

The USGM was the source of information for the policy comparison population used (Berry, Burden and Howell, 2010) (see below). Using the same definition of termination makes the policy study database and the policy comparison database more comparable to other studies. The USGM does not, however, mention privatization, while it is included in termination in this study.

The 183 GoS innovations are studied. Most (169) of the GoS innovations were policy innovations; the remainder (14) were administrative innovations.

***Comparisons.*** The GoS policy and administrative innovations are compared to normal policies and organizations.

According to Bauer and Knill (2014), three issues should be studied in comparative policy change, that is not the same as innovation, but related: (1) risk of selection bias in favor of individual instances of change (issue-centred perspective); (2) measurement of change; and (3) factors potentially causing policy change. Bauer and Knill prefer taking stock of developments in whole policy fields. The first two issues are studied in this paper, the third one, factors, in Glor

[3] The author has published about these innovations since 1985 (https://www.innovation.cc/editorial-board/glor.htm).

(2023a). This study avoids selection bias by considering all the innovations of a whole government. It measures change by calculating the periods of time that innovations survived. The third issue, factors influencing implementation and fate of innovation, are studied for GoS innovations in Glor (2023a).

The Berry, Burden and Howell (2010) study of USA normal programs are compared to the GoS' policy (program) innovations. Organizational populations are compared to administrative innovations as no demographic data was found on a normal administrative population.

*Normal Policies/Organizations*. Normal refers to full or almost full populations. Besides referring to full populations, normal also refers to normal ranges of the phenomena being studied: **"**Normal means [they] were not outlier populations, studies that were not representative of their entire population … that could be expected to have higher or lower than normal mortality rates because of the characteristics of the populations studied (e.g. a study limited to successful organizations … [is] expected to have a lower-than-normal mortality rate)" (Glor, 2013: 6). Partial population studies have been published that are not of normal populations; e.g. Corder (2004) studied USA federal government credit programs at a time when several (e.g. Fannie Mae, Freddie Mac) were experiencing difficulties and just before some were privatized. Berry, Burden and Howell (2010: 10, Table 1) studied the demographics of all 2130 USA federal domestic programs implemented over 12 years, 1971-83, and is therefore a normal population. Fortuitously, they are almost the years studied here (1971-82).

The Berry, Burden and Howell study is therefore an appropriate comparison group. They studied the demographics of all 2130 USA federal domestic ***programs*** implemented 1971-83. The programs were tracked through the USGM, the official handbook of the US federal government, published since 1933. It summarizes policies of legislative, judicial, and executive branches and agencies (USGM 2008-09). It includes a history of each program and a section entitled Agency Organizational Changes Federal Agencies Terminated, Transferred, or Changed in Name Subsequent to March 4, 1933 (USGM, 2020). No other full policy/program population studies were found. Engeli, Allison and Montpetit (2018) did not find any others either.

Glor (2013) and Lim (2021) reviewed the ***organizational termination*** literature, eight years apart. Glor (2013) studied the demographics of private, non-profit and public organizations, including ten full *public organizational populations* in the USA, Canada, Ireland, United Kingdom, Germany and Norway. These ten normal public organizational populations included 3674 organizations. Glor's study found that the public sector had the highest organizational termination rate among the sectors.

Like Glor, Jae Young Lim (2021) analyzed the organizational termination literature, eight years later. Lim recommended additional research on individual countries, cross-country comparisons, connections between termination and performance, termination and political outcomes. The current paper researches a Canadian province, compares USA and GoS policies (programs) and explores the link between termination and periods. Glor (2023a) researches eleven antecedents of their implementation/fate, and Glor (2023b) the main antecedents

identified in a systematic literature review of the policy implementation literature, to see if they are relevant to the GoS innovations.

Lim noted that reorganizations rarely improve performance and that policymakers rarely consider evaluations when deciding to terminate an organization. Unlike Adam, Bauer, Knill and Studinger (2007), Lim therefore saw terminations as largely irrational. A major source of irrationality is ideology. Lim recommended identifying the link between termination and political outcomes (whether terminations help officials to get elected), which may be complex. Lim did not suggest studying, however, the possible link in the opposite direction, between political outcomes and terminations, that are found in Glor (2023a, b) to be even more likely to affect terminations. Lim also recommended expanding termination research from looking only at top-down processes of termination, that deemphasize the role of agencies and individuals and ignore political and strategic dynamics, to additionally look at bottom-up processes that acknowledge multiple actors, are both case- and empirically-oriented, study interactive processes such as coproduction and agency and individual reactions. The Blakeney government's innovation areas appeared in the government's election platforms. They were developed bottom-up through public and political party consultations. Although some of the ideas for innovations were developed by public servants, this study does not find that most were developed by public servants. Glor (2023a) conducts a multiple streams analysis in order to better understand the interactions among factors.

In his analysis of the organizational termination literature, Lim missed some relevant works, including Glor's (2013) study of the termination of thousands of private, non-profit and public organizations and that calculated normal termination rates (Glor, 2013). He also missed some original studies of the creation and fate of five GoS income security innovations and their organizations (Glor and Ewart, 2016) and of nine Canadian public innovations/organizations (Glor, 2015).

Professor Lim did not define organizational termination, but in the literature he reviewed, the term organizational is sometimes used to refer to policy, program and organizational termination, all three. Policies and organizations are distinguished in the present study. So far, organization populations have been studied more than policies; likely because organizations are easier to study—e.g. in the GoS, organizations consistently appeared in government documents but policies did not.

In addition to fate of USA federal government organizations outlined in the USA *Federal Register,* sources of organization data were the Canadian Parliamentary Library database tracking the fate of all Canadian federal government departments (ministries) from when Canada was formed in 1867 to 2010 (Glor, 2011; database no longer available); Irish ministries, 1959-2008 (Hardiman and MacCarthaigh 2010, Hardiman and Scott 2010); Irish agencies, 1922-2009 (MacCarthaigh 2014); German agencies, 1949-2006 (Adam, Bauer and Knill, 2008); and Norwegian ministries and, outside ministries, state-owned companies and governmental foundations (database no longer available). Despite these additional studies, the easiest government to trace remained the USA federal government because the USGM consistently identifies implementation and fate of its policies and organizations. Databases have not remained consistently available, however. Consequently, much of the quantitative research on public

policy and organization terminations has been done on the USA federal government (e.g. Lewis, 2002; Carpenter and Lewis, 2004; Berry, Burden and Howell, 2010). That means that the Berry, Burden and Howell study chosen for comparison is an even better study for comparison of policies.

Fate of normal policies has received some population attention, normal organizations more, processes less. The author found one population study of normal policies, including fate of USA all-domestic-policies (2130) and ten public organizational population studies (10, 3674 organizations) (Glor, 2013). Glor and Ewart (2016) found that five GoS organizations reflected the fate of their five income security policies, but with a time lag.

In this article, public policy and administrative innovations are compared to one normal public policy and ten public organization populations. To identify how the fate of the GoS policy innovation population compares to the fate of a normal policy population, the GoS policy innovation population data (that includes programs) is compared to the Berry, Burden and Howell (2010) USA federal all domestic program population data. To identify how the demographics of the GoS administrative innovation population compare to normal, the GoS administrative population innovation data is compared to that for ten international public organization populations (Glor, 2013).[4]

To study public policy and administration innovation demography is more difficult than to study normal policy and process/organization populations. One reason is that the definition of innovation usually used is a subjective one—innovation as perceived by persons involved in the innovation. This study also accepted perceptions of those involved, who are the best informed, but attempted to confirm these results in numerous ways and by only accepting the first, second and third adoptions (*trailblazing*) (and one 4th adoption) in USA and Canadian governments.

USA and Canadian innovations were identified in the public administration literature and by asking informants on the GoS innovations whether they knew of any other similar innovations to the ones they implemented.

To put innovation fate in context requires answers to some questions: (1) Which innovations were implemented in the Saskatchewan public innovation population and when? (2) What was the fate of the implemented innovations? (3) How did the GoS policy and administrative innovations compare to those of normal policies and organizations?

This study establishes a baseline demography for public innovation by preparing analyzing a new data base (Glor, 2023c) of implementation and fate of a full population of innovations (183) of an entire government. It provides empirical evidence for implementation of GoS innovations 1971-82 and traces their fate for 50 years, 1971-2021. This has not been done before. The study also explores whether innovations survive fewer or more years than normal policies and organizations. This has also not been explored before.

The demographics of normal policies and organizations have been studied but the demographics of a population of public innovations has not been studied previously. The rest of

[4] Glor studied normal organizations in order to compare them to innovations.

this article describes the methodology used, findings, discusses the findings and draws conclusions about the demographics of the GoS innovation population within a USA and Canadian population. It also considers the importance of time (decades) to innovation fate. It likewise compares innovation demography to the demography of normal policies and organizational populations. It is thus able to identify whether and when the innovation population(s) achieved normal termination rates.

## Methodology

Implementation of some GoS innovations were considered in the literature previously, including policy (Glor, 1997), process (Glor, 2002) (160 innovations), social/justice (Harding, 1995), and income security (Glor and Ewart, 2016; Glor, 2017) innovations. Fate of a few innovations has also been considered in the literature: nine for Canada (Glor, 2015), including some GoS innovations; some USA innovation award nominees (Borins, 2014); and GoS income security programs (Glor and Ewart, 2016). Here, the demography—implementation and fate (survival/termination)—of the full population of 183 Blakeney GoS innovations is studied. This article considers implementation and fate empirically by identifying how long each innovation survived, establishing demographic rates and a baseline demography for public innovations.

This study identifies more innovations than previous studies of GoS innovations and creates a new database of implementation and fate as of 2021 that provides data on each of the 183 trailblazing innovations of the Blakeney government, implemented 1971-1982. The fates of innovations were traced through publications on the innovations, GoS budget *Estimates*, *Public Accounts*, the author's previous publications on antecedents (2019, 2021a, 2021b, 2021c), the author's original research[5] and numerous interviews. The completed database was reviewed by four well-informed people: changes were made when appropriate, based on their knowledge.

Termination rates are calculated for the innovations as a whole, policy and administrative innovations separately, and by decade since individual innovations were implemented. Their similarities and differences are calculated. Eleven factors thought to have influenced them are assessed for each innovation, influenced by personal knowledge, literature on GoS innovations and a systematic literature review of factors influencing policy innovation (Glor 2021 a-c).

Termination rates are then compared for policy innovations to normal policies (all USA federal domestic policies). The GoS 169-policy population of innovations is compared to the 2130-policy normal USA population. The administrative 14-innovation (including 1 organization) population is also compared to ten normal international organizational populations (3674 organizations).

Innovations and normal policies and organizations are compared at the level of mean termination rates for all time periods and for certain time periods. Policy innovations are

[5] This includes personal knowledge. The author worked for the GoS 1976-84 and occupied positions where she developed knowledge of many of these innovations and became acquainted with many people responsible for them.

compared to normal policies over 30 years. Administrative innovations are compared to organizations over 30 years and 50 years, to 2021. Termination rates are also calculated for each decade after implementation.

Often, sources of information on policy and administrative innovations have been surveys and government reports. Policies and processes appear, survive and disappear from publications in keeping with governments' priorities. In GoS, name changes were mostly tracked in budget *Estimates* but policy terminations often had to be inferred by their disappearance from them. While programs tended to appear in *Estimates*, policies and processes did not tend to be there and so had to be tracked other ways. The most consistent and available publications were *Estimates* (GoS's annual expenditure plan) and *Public Accounts* (GoS's actual expenditures). While departmental annual reports were good sources of information on new policies during the Blakeney government, during the 1980s their presentation changed for the GoS, Government of Canada and elsewhere, when they became *program plans*. Policy and organizational implementation, fate and finances became harder to track as a result. Administrative innovations have rarely appeared in government documents so other publications (e.g. Glor, 2002) and people who worked in the governments were better sources of information for them.

This article explores the following research questions: (1) What is the demography (implementation and fate) of a full population of innovations of an entire government, created 1971-1982? (2) What are the demographics of policy and administrative innovations? (3) How do the termination rates of innovative and normal policy populations (includes programs, as in the policy literature [Howlett and Cashore, 2020]) and administrative innovation and normal organization populations compare? Do innovations survive fewer or more years than normal policies and organizations? (4) Is there a point where the termination rates of innovations and normal policies and administration become similar?

Normal is examined for the termination rates of all policy (Berry, Burden and Howell, 2010) and all organizational populations (Glor, 2013) studied. Population studies not representative of their populations are excluded (e.g. Corder, 2004 on USA credit programs). Fate of innovations is traced and termination rates calculated and analyzed. The demography of innovations is compared to the findings for 2130 normal policies and 3674 normal organizations (10 populations).

## Results

The demography of the GoS innovation population and of the policy and administrative innovation populations are established here, then the results are compared to each other and to normal policies and organizations.

(1) ***Demographics***. Of 183 innovations, one-third (60, 32.8%) survived (are censored, still existed in 2021). Two-thirds (123, 67.2%) of the innovations were terminated over 50 years, 1971 to 2021. The mean termination rate was 1.344% per year over 50 years.

The numbers of innovations terminated varied considerably from year-to year (Appendix I). Most of the terminations (97, 78.9%) occurred during the first two decades after each innovation was implemented. The numbers of terminations went up in the fourth and fifth decades.

(2) ***Demographics of policy and administrative innovations.*** Among the innovations, 169 were policy and 14 were administrative innovations. Over 50 years, policy innovations had a higher termination rate (68.6%) than administrative innovations (50%) (Appendix I).

**Table 1: GoS Innovations Created 1971-1982, Decades to Termination/Survival and Ladder of Survival/Termination**

| **Decades from Creation Date** | **<10 years** | **10-<20 years** | **20-<30 years** | **30-<40 years** | **40-50 years** | **50 years 1971-2021** |
|---|---|---|---|---|---|---|
| **N of Innovations Terminated during Each Decade after Each Was Impld** | 45 | 52 | 5 | 10 | 11 | **123** |
| **% of Innovations Terminated during Decade N= 183** | 24.6 | 28.4 | 2.7 | 5.46 | 6.0 | **67.2** |
| **Cumulative Termination of Innovations (N)** | 45 | 97 | 102 | 112 | 123 | **123** |
| **Cumulative Termination Rate N= 123** | 36.6 | 78.9 | 82.9 | 91.1 | 100.0 | **100.0** |
| **N of Innovations Surviving at Beginning of Decade** | 183 | 138 | 86 | 81 | 71 | **60** |
| **% Terminations during Decade to Innovns Surviving, Beginning of Decade** | 24.6 | 37.7 | 5.8 | 12.3 | 15.49 | **-** |

***Abbreviations***: Impld=implemented; Innovns=innovations, N=number, surviving=censored. 30-<40 includes one surviving innovation, 40+.

Policy and administrative innovations varied as well in how their terminations were spread over time (Appendix I). While most of the policy terminations occurred during the first two decades after their creation, some were terminated throughout the 50 years Their mean survival rate was 31.4%. Terminations of administrative innovations, on the other hand, only occurred in the first decade after their implementation. Their survival rate was 50%.

The termination rate for the policy innovation population was 1.87%/year after 30 years and 1.37%/year after 50 years. The termination rate for the administrative innovation population was 1.67%/year after 30 years and 1.0%/year after 50 years (Table 2).

(3) ***Comparisons.*** GoS innovation demography was standardized and put in perspective two ways, by comparing: (1) innovations remaining at the beginning of each decade of existence of each innovation (Table 1), and (2) GoS innovations to normal policies and organizations (Table 2).

Trailblazing innovation terminations were studied over 40 to 50 years: there is a range because the innovations were implemented over 11 years, from 1971 to 1982. The level of innovation termination to be expected over 30 and 50 years was previously unknown but this first public innovation demography establishes a baseline for comparison purposes. While one demography is not definitive, it is a good start. GoS policy and administrative termination rates

were then compared to those of normal policies and organizations in other locations. USA and GoS policies were compared during the same period and over the same length of time.

GoS policy innovations were compared to normal policies over 30 years; GoS innovation administrative processes were compared to normal organizations over 50 years. This difference in duration of the studies was due to the years for which normal data was available in the literature. The periods of time studied influenced the rates of termination: Termination rates for both both trailblazing and normal populations were higher in the short than in the long term.

**Table 2: Public Policy and Process Innovation and Normal Program and Organization Population Demography Compared**

| | **Normal Populations** | | **GoS Populations** | | | | |
|---|---|---|---|---|---|---|---|
| | **All USA Federal Govt Domestic Programs** Berry, Burden & Howell 2010 | **Public Orgns** Glor 2013 | **GoS Policy & Admin Innovns** This Study | **GoS Admin Innovns** This Study | **GoS Admin Innovns** This Study | **GoS Policy Innovns** This Study | **GoS Policy Innovns** This Study |
| **Time Period** | 1971-2003 32 yrs | 1867-2010 49-58 yrs | 1971-2021 43 – **50** yrs | 1973-03 30 yrs | 1971-2021 50 yrs | 1971-01 30 yrs | 1971-2021 50 yrs |
| **Total Survivals** | 1075 | 1607 | 60 | 7 | 7 | 74 | 53 |
| **Total Termd** | 1055 | 2067 | 123 | 7 | 7 | 95 | 116 |
| **Total No.*** | 2130 | 10 public org. popns 3674 orgns | 183 | 14 | 14 | 169 | 169 |
| **Term rate (%)** | 49.53 | 56.26 | 67.2 | 50.0 | 50.0 | 56.2 | 68.6 |
| **Term Mean %/Yr** | 1.548 | 1.051 | 1.344 | 1.667 | 1.0 | 1.87 *** | 1.37 |

***Sources*:** Corder, 2004;[6] Berry, Burden & Howell, 2010; Glor, 2013, Appendix 4. ***Abbreviations:*** Govt=government; Innovns=innovations; No.=number; Orgns=organizations; popns=populations; Progs=programs; survd=survived; Term=termination; Termd=terminated; T=total; yrs=years; %=percent.

* Corder included programs added throughout the study period; Author only policies and processes added 1971-82.

** Corder's Table 1 says surviving programs existed 33 years, the title of the table says the period studied was 1974-2001, the text says "after 1974", i.e. 1975-2001. The latter is used.

[6] USA Federal Executive Department and Agency credit programs had a high termination rate per year, probably because the study included all programs added throughout the study period (more recently implemented programs have higher termination rates). Caution should be exercised in drawing any conclusions about programs based on the Corder (2004: 16, Table 1) study. The federal government was subsidizing loans through these programs, in particular to students, farmers and homeowners. Of these programs, several were privatized after this study. Fannie Mae, Freddie Mac (which bought mortgages from other institutions) and the Farm Credit System are now Government Sponsored Enterprises, private corporations chartered by Congress. Sallie Mae was privatized in 2004-2008, and began issuing private loans while still offering FFEL loans. It stopped offering federal loans when The Federal Family Education Loan (FFEL) Program ended in 2010. All loans are now made through the William D. Ford Federal Direct Loan Program. Sallie Mae still offers private loans to students and their parents. Fannie Mae and Freddie Mac are in federal conservatorship. Credit programs in such shape were not normal.

*** Similar to normal. Difference from Corder: 0.21 percentage point per year: confirms Corder not normal: Corder reported a higher termination rate at 32 years than for innovations. Difference from normal (Berry et al, 2010) of 0.32 percentage point per year—a substantially larger difference than for a fully normal policy population at 30/26 years of 1.548%/year.
[iv] Not normal

*Policy Innovation Compared to Normal Policy Termination Rates*. Of all 169 GoS trailblazing policy innovations, 95 were terminated during the first 30 years (56.2% termination, 1.87%/year) after their implementation. Of the 2130[7] USA normal domestic policies, 1055 (858 mutations, 197 deaths) were terminated over 32 years, 1971-2003, a mean annual termination rate of 1.548%/year (Berry, Burden and Howell, 2010).

This answers the question: Do public innovations have higher or lower termination rates than normal policies? Policy innovations had a higher annual termination rate (1.87%/year) than normal policies (1.548%/year) during the same time period. The difference in the termination rates of GoS policy innovations and USA normal domestic policies was 0.322%/year. The public innovation mean was 20.8% higher than the normal rate/year.

*Normal Organizations.* Glor (2013) calculated the normal public organizational population mean termination rate (1.051%/year) and also termination rates for private and non-profit sector organizations). The most comparable of the 33 studies reviewed were the 21 right-censored full populations that met the criteria for inclusion. The criteria were (1) unbiased study, covering a full population, and (2) not an outlier population. Twenty-eight studies met the standards set for the first screening and of these 21 survived the second screening.

These 21 population studies included ten public full-population studies: they all had termination rates under 1.3%/year. Among the ten normal international organization populations, 3674 organizations were studied and 2067 terminated. The termination rate was therefore 56.26%, 1.051%/year.

*Administrative Innovations Compared to Normal Organizations.* Of 14 Saskatchewan administrative innovations, 7 were terminated within 30 years, a 50% termination rate (1.67%/year). After 50 years, their termination rate was still 50%, 1.0%/year. The comparison normal international organizational termination rate was the same as the administrative innovation termination rate after 49-58 years: 1.0%/year for the innovation population, 1.051%/year for the normal organizations (Table 2).

(4) ***Do the termination rates of innovations and normal policies and administration become similar?*** Termination rates of all innovations combined declined after two decades, but not consistently (Table 1). Termination rates of policy innovations also after two decades but not consistently (Appendix I). These calculations were done based both on the original number of innovations (183) and on the numbers of innovations remaining a the end of each decade (Table 1). Termination rates of administrative innovations declined steadily over time. No more administrative innovations were terminated after <10 years. The termination rates of both innovative and normal policy and administrative populations grew more similar over time but in

[7] In their introduction, Berry, Burden and Howell (2010: 1) report a total of 2059 programs but in their Table 1 they report 2130 programs. 2130 is used here.

some decades there were increases. Increases after several decades have been observed in other studies as well—e.g. in organizational mortality (e.g. Glor, 2015: 56; Singh, House and Tucker, 1986; Singh, Tucker and House, 1986). The numbers of terminations go up and down during the 50 years. Because of this, other factors than time potentially influencing the implementation and fate of GoS innovations are examined in Glor (2023a).

## Discussion

Regarding policies, Berry, Burden and Howell (2010), Lewis (2002), Carpenter and Lewis (2004); Glor (2015) and the current innovation study dispelled the myth that policies are indissoluble (Kaufman, 1976): both normal policy and policy innovation terminations were commonplace. Although both normal and innovative policies were terminated, the current study demonstrated that policy and administrative innovations had higher termination rates than both normal policies and normal organizations until 50 years had elapsed. Even after 50 years, only administrative innovations had the same termination rate as normal organizations. Policy innovations had higher termination rates than administrative innovations after 50 years.

Comparisons done in this paper concerned public innovation populations. Glor (2013) compared normal organization population termination rates among three sectors. She found that non-profit and private sector organizational population mortality rates were lower than normal public organization population rates. That the public sector had the highest organizational termination rates was a surprising finding, as numerous authors had claimed the opposite, and on that basis concluded that more public organizations should be terminated (Kaufman, 1976; Daniels, 1997, 2001; Geva-May, 2004). In fact, fifty percent of private sector and sixty percent of non-profit organization population studies had termination rates per year that were lower than the very lowest public sector population termination rate. The private sector tended to have higher termination rates than the non-profit sector, the public sector to have termination rates higher than both of the other sectors. The myth that public sector organizations have low termination rates was debunked, again, as it has been by Lewis, 2002; Berry, Burden and Howell, 2010; Glor, 2015; Lim, 2021).

Innovations, normal policies and normal organizations did not merge to the same termination rate until 50 years had elapsed, however. That the GoS innovations did not have close to normal termination rates until they reached age 50 was surprising. That is a long time for innovations to be accepted as legitimate.

Innovation has been promoted heavily in the literature and to governments by the Organization for Economic Cooperation and Development (OECD) and the World Bank, main sources of policy and funding for developing countries. While the term used is innovation, its meaning is not trailblazing but rather the adoption of innovations of other countries. Rather, the effect has been to encourage countries to adopt the approaches and structures of western economies, to disseminate the innovations. It is imitation rather than trailblazing or experimentation.

## Conclusion

This study tracked the demographic implementation, 1971-82 and fate, 1971-2001 of a 183-innovation GoS population of public innovations.

*Demographic results.* After 50 years, 123 GoS innovations had been terminated and 60 survived, a 67.2% termination rate and a 32.8% survival rate. The study included 169 policy innovations and 14 administrative (process) innovations. Among policy innovations, after 30 years, 95 innovations had been terminated, a 56.2% termination rate, 1.87%/year termination rate; after 50 years, 116 GoS policy innovations had been terminated, a 1.37%/year termination rate, the same as the merged policy and process innovations (1.34%/year).

The policy innovation demography was compared to a full, normal population of USA federal domestic policies over 30 years. Their termination rates were different after 30 years. The population of 14 administrative innovations was compared to ten international organizational populations over 50 years. After 50 years, administrative innovation and organizational population termination means were the same (1.0, 1.051%/year) but the termination rate for policy innovations was still somewhat different (1.37%/year) from them.

Policy innovations had a higher termination rate after 30 years than the USA normal all-domestic-policies population (1.87%/year versus 1.548%/year) after 32 years, almost exactly the same period. A high GoS 20-year termination rate per year (97, 53.0% total, 2.65%/year) dropped after 30 years (102, 55.7% total, 1.858%/year). The 56% innovation termination rate may be normal for innovations after 30 years. The merged policy and administrative innovation termination rate was 1.344%/year after 50 years.

The 50-year termination rate for the Saskatchewan administrative innovation population (1.0%/year) was the same as the normal organizational termination rate (1.05%/year) over 49-58 years. While public administration and organizations are not identical phenomena, they both exist in the administrative domain.

*Study Weaknesses.* This study has some weaknesses, as a result of the limited literature available on demography of public innovations and normal policy populations. Only one truly normal policy demographic study was found but it was a good one—all 2130 USA federal domestic policies over the same 32 years (Berry, Burden and Howell, 2010). They were compared to GoS provincial policy innovations, also domestic. Previously, some studies of normal policies and normal organizations had been conducted but this is the largest population of innovative policies studied so far. During their first 30 years, GoS policy innovations had a 1.87%/year termination rate; the administrative innovations 1.67%/year. After 50 years, GoS policy innovations had a 1.37%/year termination rate, administrative innovations 1.0%/year (none were terminated after they had existed for 10 years). While this study fills a gap by studying populations of all innovations, innovation policies and administrative innovations, the number of administrative innovations (14) is too small to draw conclusions about administrative innovations beyond the GoS. Moreover, while administration and organizations are related, they are not identical topics.

Policy comparisons also had some weaknesses, however Only two policy populations were compared and they were not identical. They did not cover exactly the same policy areas—federal USA domestic policies were compared to a Canadian province's sub-national policy innovations. The USA and Canada are different countries; federal and state government responsibilities are divided somewhat differently—nonetheless, some USA federal responsibilities are provincial in Canada (e.g. education, environment) but in both, responsibilities are often shared, with provinces/states having constitutional responsibility, and federal governments making financial and policy contributions. While innovations were considered as a whole, policies and administrative processes are not identical subjects.

For administrative innovations, numbers of innovations are small. They need to be enhanced by more studies before conclusions can be drawn beyond the individual administrative innovation population studied. Policy population results are stronger because of larger numbers, as is the overall innovation population—They can be used in comparisons.

Despite some weaknesses, this study nonetheless contributes: (1) By identifying the demography of implementation and fate of 183 public innovations, including 169 public policy innovations; both are full populations. This information is available for comparison with other populations of innovations and normal policies and processes. The study also provides some data on administrative (14) innovations and tracks their survival/termination over half a century. (2) The paper compares its results to those of a normal policy population (2130 USA policies). USA governments are part of the GoS's population, so this is a particularly useful comparison. The paper also compares international public organizations (3674) and populations (10) to GoS administrative innovations (14). More research is needed on implementation and fate of policy/administrative innovations and normal populations in additional governments and more comparisons are needed. Glor (2023a) identifies and distinguishes the importance of the impacts of eleven factors on the demography of GoS innovations.

Conclusions can be drawn: (1) A first baseline innovation and policy innovation demography was established. The overall innovation results and policy innovation results can be used in comparisons with other innovation populations and in comparisons with normal processes and normal policies. (2) Mean termination rates of USA federal normal policies and GoS provincial policy innovations were different after 30 years. A normal USA policy population had a lower termination rate (1.548%/year) than GoS policy innovations (1.87%/year) after 32 and 30 years, respectively (a difference of 0.322%/year). (3) International normal public organization populations had the same termination rate (1.051%/year) as Saskatchewan administrative innovations (1.0%/year) after each had existed 50 years (difference 0.051%/year). (4) Time (decades) was important: most Saskatchewan innovations were terminated during their first 20 years after implementation (newness was found to be important in other studies too, e.g. Singh, Tucker and House, 1986) and the largest number was terminated during the 1980s, during the decade following the implementing government. (5) The innovation population and policy results can be used in comparisons.

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College, York University, Toronto, Canada. As a practitioner, she worked for the Government of Canada, two Canadian provincial governments, a regional municipality and a city. Eleanor has published about innovation in the areas of aging, rehabilitation, public health, aboriginal health, Saskatchewan and other Canadian innovations. She has published seven books, five chapters and 45 peer-reviewed articles on public sector innovation from an organizational, especially a public service perspective. Eleanor published a Defining, Distinguishing and Studying Public Sector Innovation and Change, in TIJ in 2021. Email address: glor@magma.ca

# Appendix I: Decades of Fate: Termination and Survival (Right Censored) of Innovation Population

| | **Policies** | | | | | | | | **Admin** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year Impld** | **Terminated** | | | | | **On-going** | **T Policy Impld** | **Suv Rate** | **Termd** | **Ongoing** | **T Admin Impld** | **Gr. Total Impld** |
| | ***0 <10 yrs*** | ***1 10-<20 yrs*** | ***2 20-<30 yrs*** | ***3 30-<40 yrs*** | ***4 40-<50 yrs*** | ***5 50+ yrs*** | | ***50 yrs*** | ***0 <10 yrs*** | ***5 50+ yrs*** | | ***50 yrs*** |
| ***1971*** | 0 | 4 | 0 | 0 | 1 | 1 | 6 | 16.7 | - | - | - | 6 |
| ***1972*** | 2 | 12 | 1 | 0 | 2 | 5 | 22 | 22.7 | - | - | - | 22 |
| ***1973*** | 2 | 14 | 0 | 0 | 1 | 3 | 20 | 25.0 | 1 | 1 | 2 | 22 |
| ***1974*** | 11 | 12 | 2 | 1 | 1 | 8 | 35 | 22.9 | 2 | 1 | 3 | 38 |
| ***1975*** | 2 | 5 | 1 | 0 | 2 | 5 | 15 | 33.3 | 1 | - | 1 | 16 |
| ***1976*** | 1 | 1 | 0 | 2 | 3 | 3 | 10 | 30.0 | - | - | - | 10 |
| ***1977*** | 6 | 1 | 0 | 0 | 1 | 7 | 15 | 46.7 | - | 2 | 2 | 17 |
| ***1978*** | 10 | 1 | 0 | 0 | 0 | 11 | 22 | 50.0 | - | 2 | 2 | 24 |
| ***1979*** | 1 | 0 | 1 | 1 | 0 | 7 | 10 | 60.0 | 2 | 1 | 3 | 13 |
| ***1980*** | 1 | 1 | 0 | 6 | 0 | 3 | 11 | 27.3 | 1 | - | 1 | 12 |
| ***1981*** | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | - | - | - | 2 |
| ***1982*** | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 100 | - | - | | 1 |
| ***Total*** | 38 | x52 | x5 | x10 | x11 | x53 | x169 | 31.4 | 7 | 7 | 14 | 183 |
| ***Totals grpd*** | Terminated 90 | | Terminated 26 T=116 | | | 53 | 169 | | 7 | 7 | | 183 |
| ***Total Policy*** | 38 | 52 | 5 | 10 | 11 T=116 | 53 | 169 | | | | | 169 |
| ***Total Policy*** | 95 | | | 21 T=116/169= 68.6% | | 53 | 169 | | | | | |
| ***Total Admin*** | 7 | 0 | 0 | 0 | 0 T=7 50% | 7 | 14 | | 7 | 7 | 14 | 14 |
| ***Grand Total*** | 45 | 52 | 5 | 10 | 11 T=123 | 60 | 183 | | 7 | 7 | 14 | 183 |
| ***Grand Total %*** | 24.6% | 28.4% | 2.7% | 5.46% | 6.0% T=67.2% | 32.8% of 183 | 100.0 | | 50% | 50% | 100% | 100% |

***Abbreviations:*** Admin=administrative; Gr=Grand; Grpd=grouped; Impld=implemented; Surv=survival; T=Total. 9/2/23

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