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## **Suicide by Greenlandic youth, in historical and circumpolar perspective**

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## Suicide by Greenlandic youth, in historical and circumpolar perspective

*ABSTRACT: Death by suicide appears to have occurred relatively infrequently in Greenland until the 1970s, when suicide rates began to increase dramatically among men born after 1950. The overall suicide rate for Greenlanders peaked at a rate of 125 per annum per 100,000 in 1986, then fell off to roughly 100 per annum per 100,000 population around 1990 - and has remained at or near that level ever since. The rate is much higher among younger men than it is among middle-aged or older men, or among women. Suicide rates among young men in Nuuk have declined significantly over the past 25 years, while they have risen considerably in East Greenland and remained stable on the rest of the west coast. This article presents a short summary of what is known (and not known, in a scientific way) about suicide by Greenlandic youth, and situates the present youth suicide situation in Greenland in historical and circumpolar perspective.*

### Introductory notes

The category 'persons born in Greenland' is employed in this article as a proxy for 'Greenlanders'. Most of the statistical data on rates of death by suicide by Greenlanders used in this article were developed by Dr. Peter Bjerregaard of Denmark's National Institute of Public Health, from raw data obtained from Greenland's Embedslægeinstitutionen (Chief Medical Officer) and Statistics Greenland.

The statistical data on rates of death by suicide by 'Alaska Natives' were obtained from the Alaska state government's Division of Vital Statistics. It is unfortunately not possible to 'unpack' statistics aggregated for 'Alaska Natives' to obtain data specific to the state's Inupiat and Yu'pik populations. The statistical data on rates of death by suicide by Inuit in the different regions of Arctic Canada were developed by the author, from raw data obtained from a variety of official sources.

### Suicide by Greenlandic youth, in historical perspective

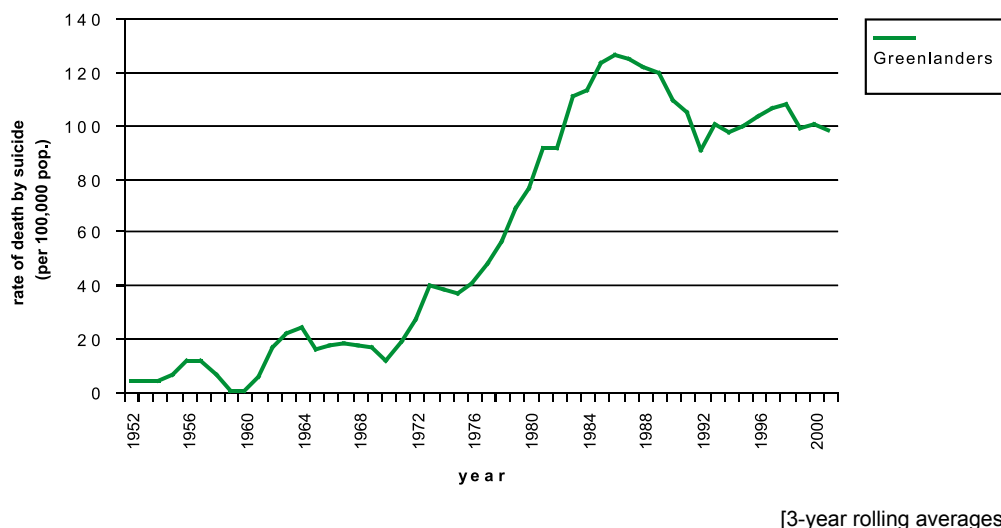
Many modern-day references to suicide by Greenlanders (and other Inuit) in olden days focus on older persons who decided to end their lives when they felt they simply couldn't carry on living, and/or had become a burden to their family. Often overlook-

ed are the stories of suicides by younger people, which sometimes occurred for very different reasons. For example, one early record of a suicide by a Greenlander is the narrative ‘The cute Savannguaq who was exposed to a pressure that led to her suicide, and when Habakuk met an umiaq with starving people from the south’,<sup>11</sup> which can be dated to between 1787 and 1789. It tells the story of Savannguaq, a young wife and mother who drowned herself after enduring psychological abuse from an old woman who lived in the same house as her and her husband, who was away hunting.<sup>2</sup>

<sup>2</sup>It would appear that for most of the 20<sup>th</sup> century Greenlanders had a very low suicide rate, perhaps because of the widespread adherence to Christian beliefs. Writing in 1935, Dr. Alfred Berthelsen calculated an annual suicide rate of just 0.3 per annum per 100,000 population for the period 1900 to 1930.<sup>33</sup> He concluded that the few suicides occurring in Greenland at that time were all the result of serious mental illness. As late as 1960 there was still the occasional year when there were no recorded suicides by Greenlanders.

The overall suicide rate of Greenlanders began to increase dramatically around 1970, and peaked at a rate of 125 per annum per 100,000 in 1986. It then fell off to roughly 100 per annum per 100,000 population around 1990, and has remained at or near that level ever since. This is an extremely high suicide rate, roughly seven times that of the suicide rate in mainland Denmark at the end of the 1990s. In fact the suicide rate among Greenlanders is one of the highest known suicide rates in the world, although the suicide rates among Inuit in three of the four Inuit regions in Arctic Canada are even higher.

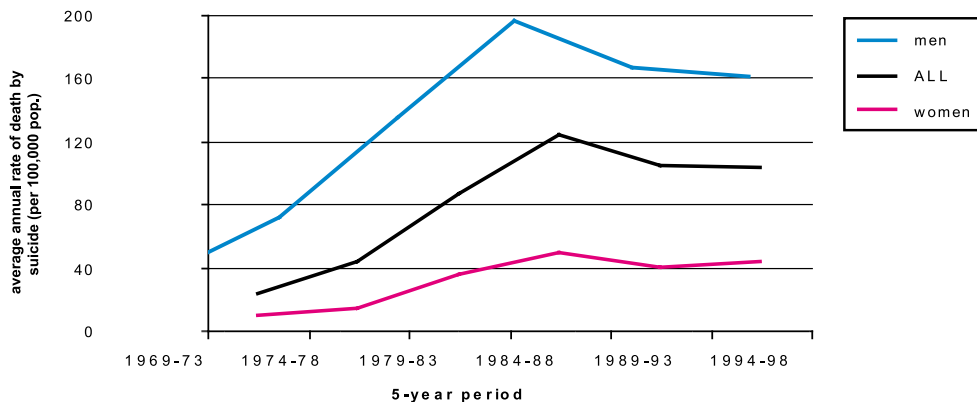
**Rates of death by suicides by Greenlanders, 1951-2002**



- 1 This is the title of a detailed version of the narrative, as recorded by the merchant Jens Kreutzmann (1828-99) and published in Kirsten Thisted’s 1997 anthology *Fortællinger & akvareller* (‘Narratives and watercolours’).
- 2 Savannguaq’s husband Taterak and his father Niumak later learned the circumstances which had led to her suicide, and took revenge on the “vile old crone”.

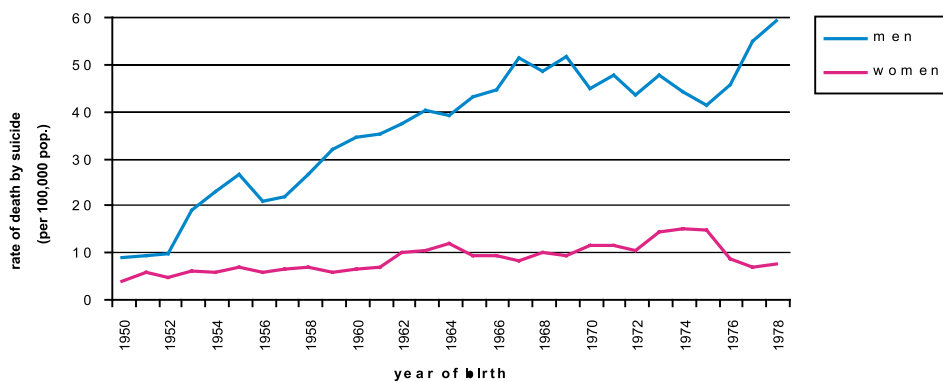
The increase in the suicide rate was primarily the result of a rising number of suicides by Greenlandic men during the 1970s and early 1980s...

**Rates of death by suicide by Greenlanders, by sex, 1969-73 to 1994-98**



... specifically by men born after the intensive modernization of Greenland began in 1950.

**Rates of death by suicide by Greenlanders, by sex and year of birth, 1950-78**

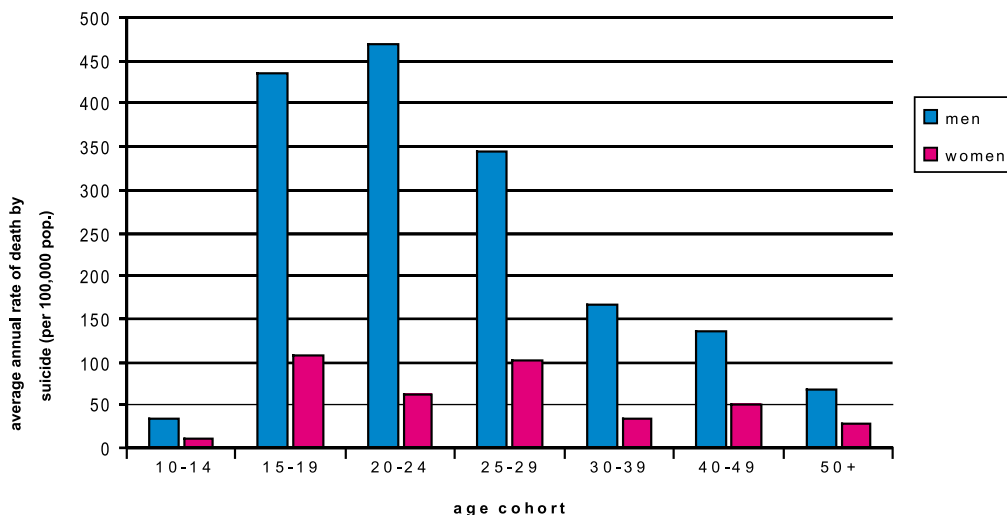


[3-year rolling averages]

The age/sex distribution of suicides by Greenlanders is similar to those prevailing in other Inuit societies across the Arctic – very high rates among young men, lower rates among middle-aged and older men, and far lower rates among women. And as is the case in the other Inuit regions, the age/sex distribution of suicides by Greenlanders is changing over time. Suicides by Greenlandic men less than 25 years of age composed a quarter of all suicides by Greenlanders in the early 1970s, reached 50% at the start of the 1980s, and had fallen to 30% by the end of the 1990s. The percentage

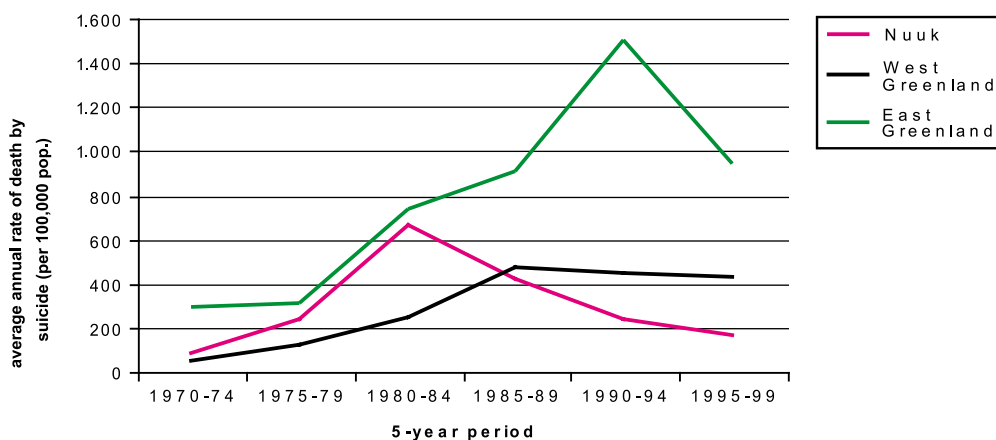
of all suicides by Greenlanders that are by men 25 years of age or older has risen to half the total, while the percentage that are by women has stayed at or near 20%.

**Rates of death by suicide by Greenlanders, by sex and age cohort, 1990-99**



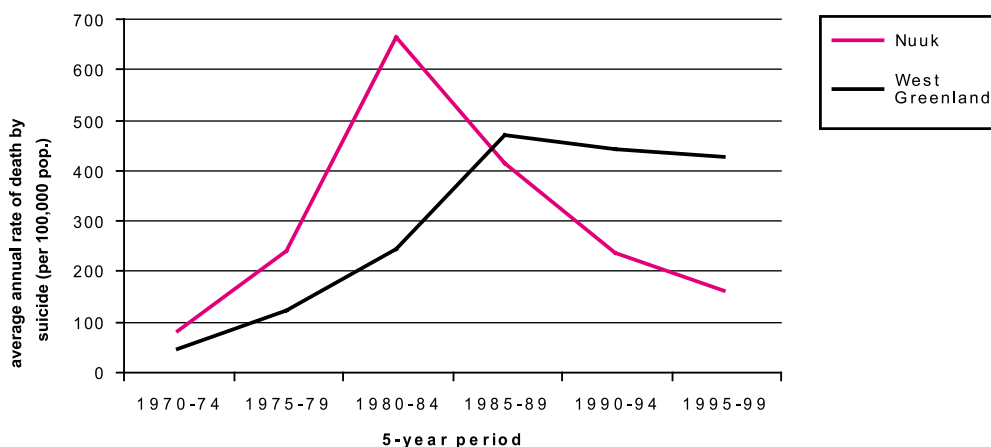
The following graph shows the overall picture of suicide by young male Greenlanders. The suicide rate among young Greenlandic men peaked first in Nuuk in the early 1980s, then along the rest of the west coast in the late 1980s, and finally on the east coast in the early 1990s. Suicide by young men in East Greenland reached a rate of 1,500 per annum per 100,000 population, surely one of the highest suicide rates every recorded anywhere on earth, before finally beginning to decline.

**Rates of death by suicide by Greenlandic men 15 to 24, by Nuuk and the west and east coasts, 1970-74 to 1995-99**



Removing East Greenland from the above graph allows us to better see the other significant trend: a steady decline in the suicide rate of young Greenlandic men in Nuuk beginning in the early 1980s. By the end of the 1990s the rate was one quarter of what it had been at its peak. Meanwhile, along the rest of the west coast the rate of suicide by young male Greenlanders has remained above 400 per annum per 100,000 population since the mid-1980s.

**Rates of death by suicide by Greenlandic men 15 to 24,  
by Nuuk and the west coast, 1970-74 to 1995-99**



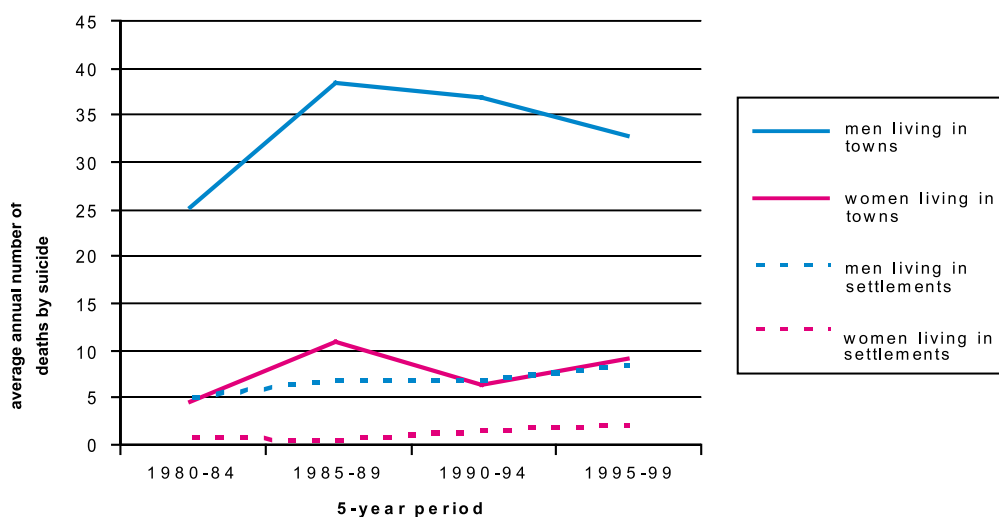
The decline in the suicide rate of young Greenlandic men in Nuuk over a 20-year period is one of the most interesting – and hopeful – trends in the otherwise grim recent pattern of death by suicide in Inuit regions.

The number of suicides by women in Greenland is much lower than the number of suicides by men, and the smaller total number makes it problematic to try and disaggregate the data by region and time period. However, the same basic patterns can be seen – the rates increased first in Nuuk, then along the rest of the west coast; and, the suicide rate among Greenlandic women in Nuuk has declined to a rate below that of the rest of the west coast, while the rate remains significantly higher among women in East Greenland.

Shooting and hanging account for 91% of suicides by male Greenlanders, and 70% of suicides by female Greenlanders.

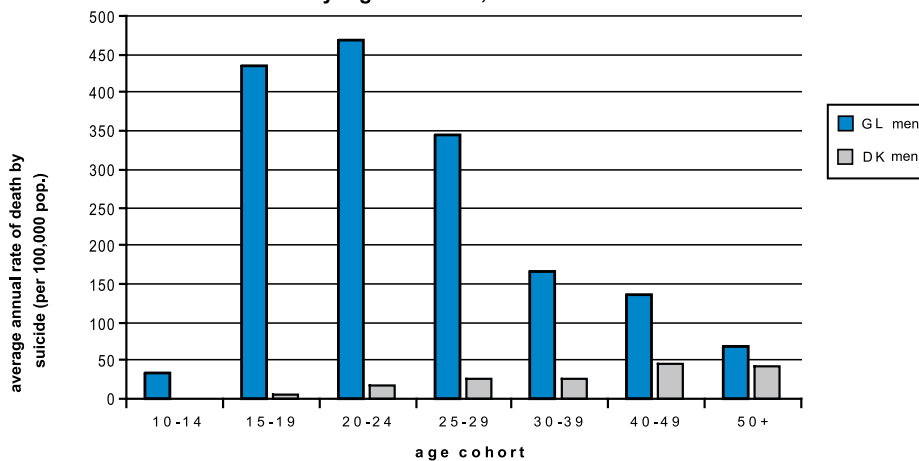
We can also look at the data in terms of whether the deceased was registered as living in a town or a settlement on January 1st of the year in which s/he died. These data show a gradual decrease in the number of suicides by men registered as living in towns, and a slight increase in the number of suicides by both men and women registered as living in settlements. The number of suicides by women registered as living in towns has fluctuated somewhat.

### Deaths by suicide by Greenlanders, by sex and place of residence, 1980-84 to 1995-99



The pattern of the suicide rates suffered by Greenlanders in recent decades is in radical contrast to the pattern prevailing in mainland Denmark, where suicides rates increase with age:

### Rates of death by suicide by Greenlandic and Danish men, by age cohort, 1990-99



During the 1990s Greenlandic men between the ages of 15 and 24 had a suicide rate 40 times that of their peers in mainland Denmark. This stark statistic brings to mind a point made by Upaluk Poppel, a representative of the Inuit Circumpolar Youth Council, in her presentation to the United Nations' Permanent Forum on Indigenous Issues on May 18, 2005: "If the populations of 'mainland' Canada, Denmark and the United States had suicide rates comparable to those of their Inuit populations, national emergencies would be declared."

## A note on what we know, and what we don't know – at least not in a scientific way

These above slides present most of the very limited data available on Greenlanders who have died by suicide in recent decades. They are really nothing more than 'body counts.' Ideally we would like to know the rates and patterns of family history and early childhood experiences; mental disorders; medical history; education history; work history; relationship history; substance use/abuse; engagement with the justice system; availability of, access to and use of health care services; and, other factors that may have played a role in the suicidal behaviour of these persons. We would also like to know about the presence or absence of a number of *protective* factors.

There is an accepted methodology for obtaining these much richer data – the 'suicide follow-back study' (or 'psychological autopsy')<sup>4</sup>, where researchers collect the detailed information needed to reconstruct the social, psychological and psychiatric history of persons who have died by suicide. This is accomplished primarily through detailed semi-structured interviews with family members and others who knew the deceased well, plus review of administrative data (e.g. medical charts).

While no full-blown follow-back study has been undertaken in Greenland, an important body of research exists on mental health in Greenland. Dr. Inge Lynge, the first psychiatrist on the island, made an unparalleled contribution to our understanding of the mental health of Greenlanders during the second half of the twentieth century.<sup>5</sup>

The Ph.D. project of the Dutch researcher Markus Leineweber has also made an important contribution to our understanding of suicide in Greenland.<sup>6</sup> Leineweber worked with death certificates and police reports for deaths occurring between 1993 and 1995 that were deemed by the authorities to have been suicides, and where possible he obtained limited amounts of additional data on the deceased. His conclusion was that frequent conflict within the family and with friends, a recent life-threatening experience, expressing suicidal intentions and the acute abuse of alcohol can be identified as the most common characteristics among Greenlanders who end their lives by suicide.

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4 For meta-analyses of results from follow-back studies, see: Cavanagh, J.T.O., et al. (2003) "Psychological autopsy studies of suicide: A systematic review," *Psychological Medicine* 33, pp. 395-405; and, Arseneault-Lapierre, G., et al. (2004) 'Psychiatric diagnoses in 3,275 suicides: A meta-analysis,' *BMC Psychiatry* 4.

Such a study is currently underway in Nunavut under the auspices of the McGill Group for Suicide Studies ([www.douglasrecherche.qc.ca/suicide](http://www.douglasrecherche.qc.ca/suicide)) – the Qaujivallianiq Inuusirijauvalauqtunik ('Learning from lives that have been lived') suicide follow-back study. This study will develop detailed life histories and psychological profiles of 100 suicides that have occurred since January 1, 2003. For each suicide completer, similar data are collected for a suicide attempter and a randomly selected control, matched to the suicide completer by community, ethnicity, sex and age cohort. The results of this study, when completed in 2008, should greatly increase our understanding of suicide by Inuit in Nunavut.

5 Dr. Lynge's many articles in leading academic journals were summarized in her 2000 publication *Psykiske lidelser i det grønlandske samfund* ('Psychological suffering in Greenlandic society'), Århus: Psykiatrisk Hospital i Århus, Institut for Psykiatrisk Grundforskning.

6 Leineweber, Markus. (2000) "Modernization and mental health: Suicide among the Inuit in Greenland." Ph.D. Dissertation, University of Nijmegen. 48 pp.



In a recent article<sup>7</sup>, the two leading figures in health research in Greenland in recent decades – Drs. Peter Bjerregaard and Inge Lynge – added the observation that “Suicidal thoughts occur more often in young people who grew up in homes with a poor emotional environment, alcohol problems and violence. ... the socioeconomic and structural features of the home were less important than the emotional environment for the development of personality disorders. A logical sequence of transgenerational events would be that modernization leads to dysfunctional homes due to poor parental behaviour (alcohol and violence). This in turn results in suicidal thoughts, suicides and also substance abuse among the children of those parents.” These conclusions are entirely consistent with the results of research on suicidal behaviour elsewhere in the world.

That being said, it should be noted that different people take their lives for different reasons. Just as some children who grow up in deeply dysfunctional homes survive and thrive later in life, some children who grow up in stable and happy homes and who experience few adverse childhood experiences die by suicide later in life. This is important to keep in mind when discussing suicide in a society like Greenland, which has been deeply traumatized by decades of high suicide rates.

### Suicide by Greenlandic youth, in circumpolar perspective

The transition from the ‘historical pattern of suicide by Inuit’ to the ‘present-day pattern of suicide by Inuit’ was first documented in North Alaska by psychiatrist Robert Krauss.

In a paper presented at a conference in 1971, he noted:

In the traditional pattern, middle-aged or older men were involved; motivation for suicide involved sickness, old age, or bereavement; the suicide was undertaken after sober reflection and, at times, consultation with family members who might condone or participate in the act; and suicide was positively sanctioned in the culture.

In the emergent pattern, the individuals involved are young; the motivation is obscure and often related to intense and unbearable affective states; the behaviour appears in an abrupt, fit-like, unexpected manner without much warning, often in association with alcohol intoxication; and unlike the traditional pattern, the emergent pattern is negatively sanctioned in the culture.<sup>8</sup>

This suicide transition was experienced first in North Alaska in the late 1960s, then in Greenland in the 1970s and early 1980s, and then again in Canada’s Eastern Arctic<sup>9</sup> in

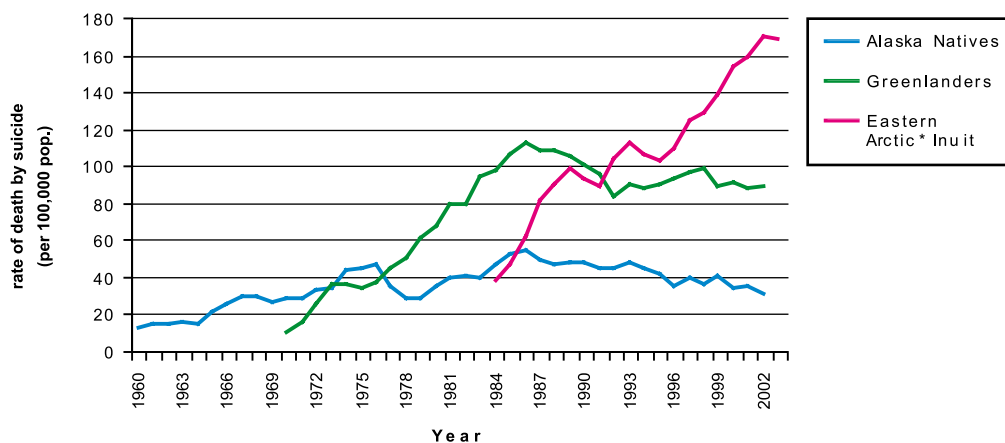
7 Bjerregaard, Peter, and Inge Lynge. (2006) “Suicide -- a challenge in modern Greenland,” *Archives of Suicide Research* 10:2, pp. 209-20.

8 Kraus, Robert F. (1971) “Changing patterns of suicidal behaviour in North Alaska Eskimo,” *Transcultural Psychiatric Research Review* 9, pp. 69-71.

9 Which I am defining here as the Qikiqtani (formerly Baffin) region of Nunavut, plus both the Ungava and Hudson coasts of Nunavik (Arctic Québec). Other Canadian Inuit regional groups include the Inuvialuit of the Western Arctic (in the Mackenzie Delta region of the Northwest Territories), the Inuit of the Kivalliq and Kitikmeot regions of Nunavut, and the Inuit of Nunatsiaviut (Northern Labrador)

the late 1980s and through the 1990s. Each time the transition occurred, it resulted in a higher overall rate of death by suicide.

### Rates of death by suicide by Alaska Natives, Greenlanders, and Eastern Arctic\* Inuit, 1960-2003



[3-year rolling averages]

In each case the primary factor underlying the increase in the overall suicide rate was a dramatic increase in the suicide rate among young (15 to 24 years of age) men, and in each case both the suicide rate among men aged 25 and above and the suicide rate among women increased to a much less significant degree.

Another common characteristic of these suicide transitions in Inuit regions was that there were sub-regions which developed persistently higher suicide rates than the rest of the jurisdictions they are a part of. East Greenland developed a much higher suicide rate than the rest of Greenland, Northwest Alaska did the same within Alaska, the Qikiqtani (formerly Baffin) region did the same within Nunavut, and the Hudson coast did the same within Nunavik (Arctic Québec).

Earlier in this article I noted the *decline* in the suicide rate of young Greenlandic men in Nuuk during the 1980s and 1990s. A similar shift appears to be underway in Alaska, where the suicide rate of Alaska Natives residing in 'urban Alaska'<sup>1010</sup> is now less than a third of that of Alaska Natives residing in 'bush Alaska'. No similar shift has been seen in Iqaluit, the capital of Nunavut – yet.

It should also be noted that it is those sub-regions of the Inuit world which have experienced the most 'development' in recent decades that have experienced declines in their suicide rates. It may be that young men who have grown up in these new

10 Defined as Anchorage, Kenai Peninsula Borough, Mat-Su Borough, Fairbanks Borough and Juneau.

conditions both get a better start in life and have a greater chance of becoming happy, successful adults. In effect, a new 'life script' has come into existence in urban areas across the Inuit world. In the 'olden days' boys grew up seeing the adult men around them being busy and productive, being good husbands and parents, and taking pride in their various accomplishments. The opportunity to grow up seeing – and to be parented by – adult men who are happy and successful is not uncommon in the Arctic, but socioeconomic circumstances result in the opportunity being greater in some places than in others. The young Inuit men at greatest risk appear to be those who are situated somewhere between the historical Inuit 'life script' and the emerging urban Inuit 'life script', in communities and families where unemployment and social dysfunction are more common.

## Conclusion

The Australian psychiatrist Robert Goldney has suggested that all human societies are likely to suffer a 'base rate' of suicide in the range of 5 to 10 per annum 100,000 population as a result of biological and other factors which are simply a part of the human condition.<sup>11</sup> The difference between the 'base rate' and rates that are significantly higher than the 'base rate' are, he believes, primarily the result of social determinants.<sup>12</sup>

The only logical explanation for the dramatic increase in suicide rates among Inuit living in different regions of the Arctic, with similar outcomes among the sexes and age groups, at different and distinct time periods, is that a similar 'basket' of social determinants has impacted heavily on Inuit societies at different times across the different regions and sub-regions.

The fact that suicide rates among young Inuit men residing in urban areas of Greenland and Alaska have *fallen* in recent decades suggests that this 'basket' of social determinants is still at work, and that it continues to change over time.

It is my hope that by better understanding the complex interplay of factors that result in elevated rates of suicide in Greenland and across the Inuit world, we can influence the social determinants of mental health in such a way as to lower suicide rates among both sexes and all age groups.

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11 Goldney, Robert W. (2003) "A novel integrated knowledge explanation of factors leading to suicide," *New Ideas in Psychology* 21, pp. 141-6.

12 We should however keep in mind that *all* suicides occur within *both* (A) a medical context (i.e. the complex biological interactions taking place within the brain of the victim); and, (B) the social context within which the victim developed, and then lived his/her life.

## *Litteratur*

- Arsenault-Lapierre, G. et al. (2004):* Psychiatric diagnoses in 3,275 suicides: A meta-analysis.
- BMC Psychiatry Bertelsen, Alfred (1935):* Grønlandsk medicinsk statistik og nosografi I: Grønlands befolknings-statistik 1901-30. Meddelelser om Grønland 117, nr. 1: s. 1-83.
- Bjerregaard, Peter og Inge Lynge (2006):* Suicide - a challenge in modern Greenland. Archives of Suicide Research 10:2, s. 209-20.
- Cavanagh, J.T.O. et al. (2003):* Psychological autopsy studies of suicide: A systematic review. Psychological Medicine 33
- Goldney, Robert W. (2003):* A novel integrated knowledge explanation of factors leading to suicide. New Ideas in Psychology 21
- Kraus, Robert F. (1971):* Changing patterns of suicidal behaviour in North Alaska Eskimo. Transcultural Psychiatric Research Review 9
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