## CORRESPONDENCE

The Editor.

Journal of Glaciology

SIR.

About the use of the expression "Indlandsis": comments on Dr. Weidick's letter

"But now, Socrates, what do you think all this amounts to? It is mere scrapings and shavings of discourse as I said a while ago, divided into bits"

Plato, Hippias major, 304A, quoted in Kierkegaard (1846), back of title-page

In his letter, Weidick (1967) gives a good account of the origin of the term *Indlandsisen* as applied to the ice which covers the whole of Greenland. He demands that this term, and also its translations (Inland Ice, Inlandeis, Indlandsis) should be exclusively applied in the future to the ice cover of Greenland. I think that this demand is somewhat exaggerated.

First let us note that the Danish term *Indlandsisen* is applied to the ice of Greenland thanks to Dr. Rink, who first had the general idea of the origin and development of this immense glacier which covers Greenland. But *Indlandsisen* means ice of the interior, ice in the middle of the land, *continental ice* (glace

continentale) according to the usage employed by F. Johnstrup (1890).

This phenomenon exists not only in Greenland but also in the Antarctic. It also existed during past geological eras in Fenno-Scandia, North America, the Sahara, South Africa, etc. during the ice ages. It is thus legitimate to use this term for the same phenomenon in other parts of the world than Greenland, and I consider that we are honouring the Danish geographer Rink in using his term *Indlandsisen*.

Further this term can easily be translated into English (Inland Ice) and German (Inlandeis). We may note that Ice Sheet has a more general meaning than Inland Ice, and is not a synonym. If the Danish term and its translations can only be used for the ice cover of Greenland, what are we to call the other continental ice covers? Furthermore, Weidick should give a translation, exclusively for Greenland, of Indlandsisen in all other languages such as Russian, Chinese, etc.

In French there is no literal translation and as the term glace continentale is not very happy, for more

than half a century Inlandsis has been used. Petit Larousse gives the following definition:

Inlandsis n.m. (mot norvég., de in, dans, land, pays, et is, glace). Glacier continental des régions polaires recouvrant le relief et se terminant à sa périphérie par des glaciers de vallée qui atteignent

la mer, ou par une barrière de glace. Syn.: calotte glaciaire.

We may criticize barrière and calotte, but we must reject the nom masculin, norvégien which comes we know not whence, despite its consecration by usage. This is why for some years, at the request of our Danish colleagues, and to honour Rink, we have been using the term Indlandsis for an ice cover existing or having existed in polar regions. But we do not favour limiting its use to Greenland. Otherwise where do we go? It would be better to impose on international usage the Eskimo term Sermerssua which was given to the Indlandsis well before the Danes came to Greenland (sermerssua = "large glacier").

And what about smørrebrød, køkkenmødding, kayak, anorak, etc. . . . exclusively Danish?

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Face au 22, Quai Carnot, 92 Saint-Cloud, France 11 February 1967

## REFERENCES

Johnstrup, F. 1890. Résumé des communications sur le Grønland. Meddelelser om Grønland, Bd. 1, Nr. 7, p. 187–211.
 Kierkegaard, S. A. 1846. Afsluttende uvidenskabelig efterskrift til de philosophiske smuler. Mimisk-pathetisk-dialektisk sammenskrift; existentielt indlæg af Johannes Climacus. København, Reitzel.
 Weidick, A. 1967. About the use of the expression "inland ice". Journal of Glaciology, Vol. 6, No. 47, p. 763.

SIR, About the use of the expression "Indlandsis": comments on Dr. Weidick's letter

No one is unaware that the term *Indlandsis* (with a capital I) was originally the name given to the ice sheet in the interior of Greenland. But the proper name has been used in France by geographers as a

common noun (with a small i) to signify any ice sheet having the principal characteristics of the Greenland ice sheet, that is to say covering a large part or the whole of a continent, and as a result modifying the general atmospheric circulation. There are in geography many other well-known examples of this linguistic phenomenon; before becoming common nouns, karst originally signified a limestone region of Croatia, somma a crest of volcanic origin surrounding Vesuvius, erg two regions of dunes in the Sahara, bray a region of the Paris basin where there was a large anticline.

The terms nappe de glace (ice sheet), champ de glace (ice field) and calotte glaciaire (ice cap) are not satisfactory, since they can be applied to an ice mass of any size. However, the transition from glaciers and local ice fields to an indlandsis or vice versa as the climate changes, occurs in an irreversible fashion, as Brooks and Tronov have shown, and as I have described in my book (Lliboutry, 1964–65, Tom. 2, p. 798–805). It is this discontinuity which allows us to classify glaciers and ice caps on the one hand and

the indlandsis and their distributary glaciers on the other.

I hope Danish glaciologists will be so good as to lend us the word, and not to write ®Indlandsisen.

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enoble, Isere, France 17 February 1967

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Lliboutry, L. 1964-65. Traité de glaciologie. Paris, Masson et Cie. 2 vols.

SIR, About the use of the expression "Indlandsis": comments on Dr. Weidick's letter

As a Dane I can only welcome Anker Weidick's initiative to elucidate the use of the term "inland

ice", indlandsis, and cognate terms, as these are often used at random.

Based on knowledge of Rink's works published in Danish it is beyond doubt that Rink meant his term *Indlandsisen* as a geographical place name to distinguish the huge part of Greenland from the different, remaining part of the country. The term *Indlandsisen* is therefore used on Danish topographical maps as an ordinary place name, and according to general rules for geographical place names it should not be transcribed to "inland ice" or other anglicized terms, and further it should be spelled with

capital I.

Besides as a geographical place name *Indlandsisen* has been used by numerous authors to indicate a glacier, an ice sheet of huge dimensions. It deserves notice, however, that Rink's original definition—as also stressed by Weidick—does not only emphasize that the ice is of immense extent, but also that it should be barred from the sea by a generally wide, coastal land strip. The latter is not even 100 per cent the case with the Greenland ice sheet though nearly. If it is maintained that the ice should be barred from the sea by coastal land, it is obvious that the term "the Antarctic Inland Ice" is incorrect and presumably also "a Pleistocene Inland Ice". The terms "ice sheet" or "ice cover" are more correct to indicate these phenomena. The word *Indlandsis* should therefore only refer to the Greenland ice sheet Of general use in Danish is the word *Iskappe*, normally indicating a glacier type of smaller dimensions than Indlandsisen. The older literature in particular uses it to describe Indlandsisen, but here it does not signify a particular place name, and the corresponding English word "ice cap" may therefore also be used of the Greenland ice sheet.

Københavns Universitets Geografiske Institut, Haraldsgade 68–70, København Ø, Denmark 14 February 1967 BØRGE FRISTRUP

L. LLIBOUTRY

SIR, About the use of the expression "Indlandsis": comments on Dr. Weidick's letter

Very large masses of glacier ice, covering hundreds of thousands of square kilometres, are at present to be found only in Greenland and Antarctica. They lie mainly on a rock bed, but in Antarctica extensive