

The Nordic ID tradition

Five countries, five systems with similarities and differences

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Presentation at the Bhalisa Network symposium
at the University of Bergen, Norway
27 June 2022

Key features of the Nordic ID tradition

A central national register lists birthdate, address, and ID number (which includes the birthdate).

Public institutions use the number as an identifier to varying degrees (health care, libraries).

Companies can get access to national register data (sometimes for a fee).

The number is more important than cards or any physical tokens of identity.

People give out their ID number *relatively* freely (more freely in Iceland and Sweden).

A satellite-style map of Europe and the surrounding regions, including Iceland, the British Isles, and parts of Africa and Asia. The map is overlaid with several semi-transparent yellow and orange boxes containing text labels for national identification numbers. The labels are: 'kennitala' (Iceland), 'fødselsnummer' (Denmark), 'personnummer' (Sweden), 'CPR-nummer' (Denmark), and 'henkilötunnus' (Finland). A large orange box at the top right contains the text 'Names for the #s'.

Names for the #s

kennitala

**fødsels-
nummer**

**henkilö-
tunnus**

**person-
nummer**

**CPR-
nummer**

**Dates established
(fuzzy concept)**

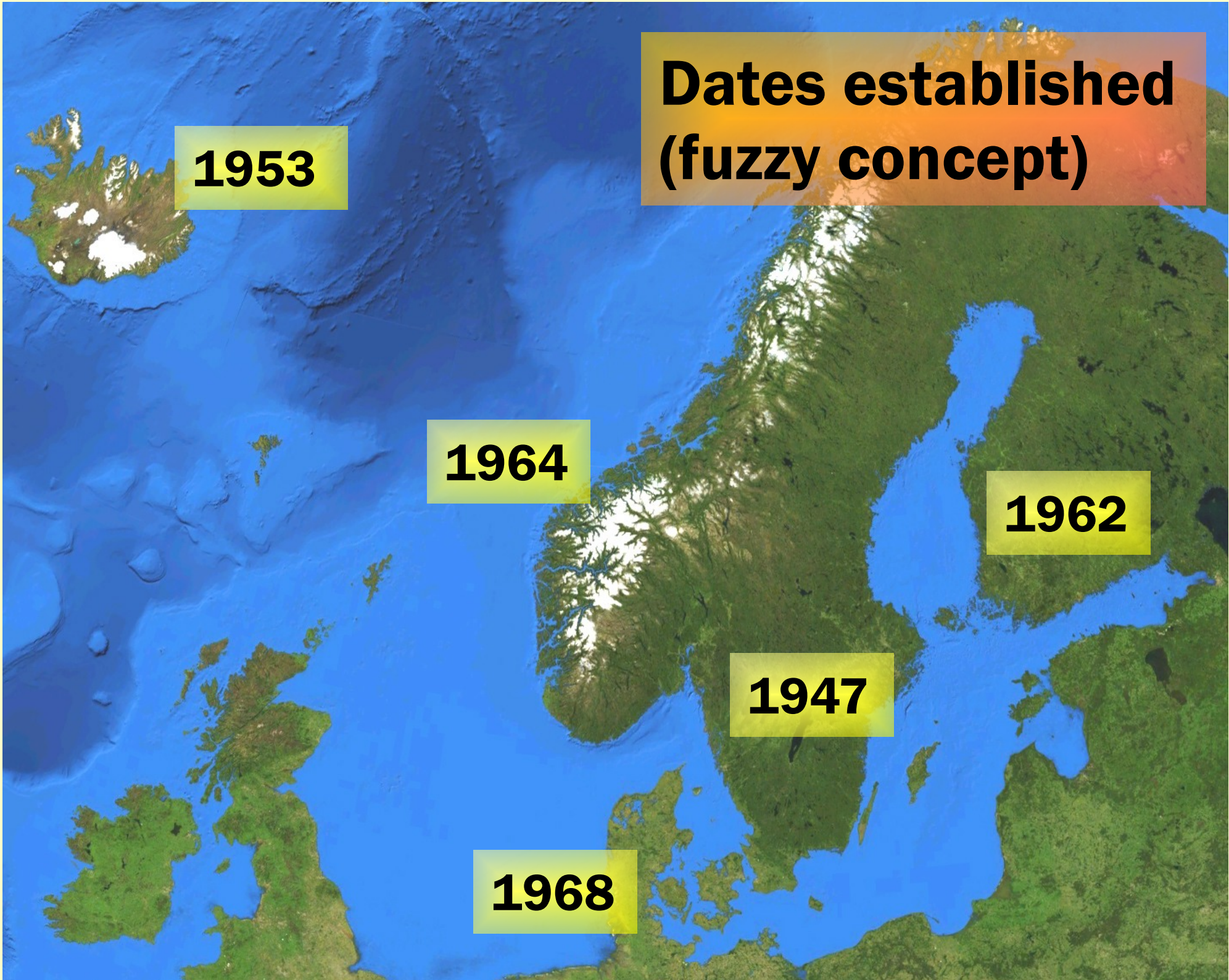
1953

1964

1962

1947

1968



Similarities across all five countries

A unified number, used by all public sector authorities and also available for use by the private sector (\neq DE, UK; = US)

The number includes the birthdate (\neq DE, UK, US)

It's used in residence registration (\neq DE, UK, US)

It's not (now) used as an authenticator or PIN (\neq US)

Companies can purchase access to the address database and use it to keep customer addresses up to date (\neq DE, UK, US)

Differences	IS	NO	DK	SE	FI
Mandatory official non-photo identity card with the full ID number			✓		
Optional official photo identity card with full ID number, issued on request	Yes, but ...	No ID # on card	Yes, but ...	✓	✓
Easy to learn someone's number	✓			✓	
Recipient's number required for bank transfers	✓				
Number commonly used by private companies as principal customer ID	✓			✓	
“Slide towards authentication” was a serious problem		✓	✓		✓
Number encodes gender		Until 2032	✓	✓	✓
Corporate numbers share same number space (<i>I'd like to know more about this issue</i>)	✓	?	?	Sort of?	?

The Nordic ID systems save time and money

Simplify reporting of income and tax-relevant events on your tax return

Manage corporate and public-sector client address databases (no change-of-address forms needed)

Collect statistics on society without a census

Provide a ready-made system of defined identities, with no duplicates, for health, payroll, property, etc.

Take advantage of trust in administration to create efficiencies and save large sums (CPR's estimate: "at least several hundred million DKK annually").

Taxation and ID

ID #s and taxation are closely integrated

Payers of income (employers, pension funds, bank interest) use your ID number to report your income.

Each year, when I got my Icelandic and Norwegian tax returns, they were mostly filled out already. (In contrast, my German return takes *days* of work.) It's a huge savings for the public.

Pre-filled data extends to assets and debts (housing, cars, loans), and children's ages, showing integration with the land, motor vehicle, and person registries.

In two countries (Sweden and Norway) the tax authorities actually manage the number system.

Individuals' income is publicly visible

In Iceland, Norway, Sweden and Finland, the tax authorities make some data from your individual tax return public. (I'm not sure about Denmark.)

Let's take an example: Iceland. The amount of tax assessed on each individual is publicly posted for a few days. This is not a direct index of actual income, but it's a decent proxy. Icelandic newspapers and magazines scour the assessment data every year for prominent or interesting people. They publish the results in an annual "tekjublað," making them available long beyond the brief period when the tax office lets you see the binders.

To work, you need an ID number

To get paid for your work in the Nordic countries, you need a bank account. To get a bank account, you need an ID number.

Although Nordic residents do sometimes pay for services off the books, nobody gets paid for regular wage labor in cash. (Cash is on the way out here.)

The “tax card” system: Classically, you got a paper certificate from the tax office, and gave it to your employer. Your employer could then pay more of your salary to you, and could withhold a smaller percentage of it for taxes. Employers wanted to see your tax card before hiring you.

Openness

Some Nordic ID systems are very “open”

In Iceland people use their ID number as freely as their name. The ID numbers are listed in a public database. Swedes give out their numbers almost as freely and casually.

Norwegians, Danes, and Finns treat their numbers more guardedly. They avoid disclosing them except when needed.

The question of how freely ID numbers are disclosed is a *very* important design issue. Creating a successful ID system requires careful consideration of the incentives around secrecy and disclosure.



**Degrees of
openness**

**IS: very
open**

**NO: less
open**

**FI: less
open**

**SE: quite
open**

**DK: less
open**

The “slide towards authentication”

It’s just so tempting for service designers to use an interaction partner’s knowledge of person X’s ID number as evidence that that the partner is in fact person X.

An identifier, by nature, must frequently be shared. But using a national ID number like a PIN turns this shared thing into a very unsuitable secret code. The number’s usage slips from identification towards authentication.

In Denmark, Norway, and Finland, this slippage got quite advanced before it was arrested (ultimately by the advent of two-factor authentication). The “slide” disrupted the behavioral incentives which made national ID numbers valuable.

Do people know whether the ID is secret or not?

In Iceland and Sweden, there is (I think) more clarity about the ID system's purpose. The numbers are open to all. So it's obvious that your ID number can never be any more secret than your name and address.

In the other Nordic countries, there's much more confusion about whether the numbers are secret or not. Håkon Olderbakk's 2007 report tried to push Norwegian practice towards the Swedish-Icelandic model, but that has not come to pass. Margrethe Vestager told Danes that the CPR number is „fortrolig“ (confidential), yet may not be used as a PIN. But the “confidential” CPR number is printed on cards that Danes must regularly show. Contradictions persist.

So perhaps there are two Nordic models?

The difference between the “**more open ID**” countries (Iceland and Sweden) and the “**less open ID**” countries (Norway, Denmark, and Finland) is big enough that the concept of a “Nordic ID model” is problematic. We might speak of a distinct “Icelandic-Swedish model.”

As for the Norwegian, Danish, and Finnish systems, I wonder how distinct they really are from some other European identity systems. I am not enough of an expert on other European systems to say for sure.

Can others outline the similarities and differences between N/D/F and countries such as France, the Netherlands, Poland, Italy, or the Baltic states?

About my own interest in the topic

Almost fifteen years ago I started to write about the Icelandic ID number. Iceland definitely has the most extreme of the Nordic national ID systems. Later, at NTNU in Gjøvik, Norway, I supervised two master's theses on Norwegian and Finnish ID practice.

A short history of national identification numbering in Iceland

Ian Watson

Abstract: Iceland created national identification numbers in the early 1950s as part of

Thanks for your attention

There is much more depth to these issues, and I am looking forward to discussions with anyone who shares an interest in them.