

Our Names in the Computing Age

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1 Introduction

Modern governments wield considerable power over the private affairs of citizens, including their names. This paper explore restrictions persons face when naming children or adopting new names for themselves. The naming process is cross-culturally regarded as the prerogative of the child’s parents or close relatives [alfordo2]. Yet the right is not absolute; many state laws circumscribe naming possibilities to some extent. The issue to determine Scott, Tehranian, and Mathias [10] notes that the administrative desire for “synoptic legibility” is a driving force changing the form of personal names in industrialised societies, eg. through the standardisation of surnames, approved names lists, or official language laws. On the other hand, human rights specialists increasingly recog-

nise the importance of names as a cultural vector, calling for reform to allow linguistic expression of names in an official context [11].

We will make a distinction between policies that are founded primarily in administrative convenience and those that are part of a more comprehensive state language policy. In many cases, the restrictions are issued to promote administrative convenience or compatibility with digital systems, which require that names adhere to a particular form. In other cases, however, the government takes a more active role in name administration, such as by promulgating an approved names list (Iceland) or by subjecting them to a process of administrative overrule (Québec), thereby promoting a social (or ethnocentric) policy agenda.

On a personal level, how are people affected when their name doesn't "play nice" with the system? We will look at several cases of people whose names either could not be properly represented in a digital format or did not accord with the government's naming policies. How do the persons feel about changing their names for the convenience of administration? How flexible or willing are governments or companies to rectify the situation? These are issues at the crux of the modern discourse on how to balance administrative efficiency with respect for human dignity; in short, how to stave off alienation in a modern world.

First, we will review the worldwide diversity of naming customs and consider what social functions are played by a name's contents. Then we will examine the restrictions on personal naming. Then we will examine cases in which people's names do not "play nice" with a computer system, or are rejected by an administrator. These stories typically come from the "bizarre news" section of a newspaper, but they prompt more serious questions, such as how concentrated power is reshaping personal and cultural identities. These cases typify either a need for administrative convenience, or an social naming policy. In some cases we find a combination of the two rationales. We will consider each of the following research questions:

- How does institutional power limit the choice of personal names?
- How can computers impact personal and cultural identities?
- How can we protect the social content of names in developing countries and/or among minority-language speakers?

2 Names

You see, to some people in the world, your name is everything. If I say my name to an elder Hawaiian (kupuna), they know everything about my husband's family going back many generations...just from the name. [13]

(Janice "Lokelani" Keihanaikukauakahihuliheekahaunaele)

Names convey religious, cultural, linguistic, and national data about their name-sake. My own name, Gaberiel, is a misspelled Biblical name with some Romantic flair. Never mind that I am neither religious nor particularly Romantic. The semantic relation between a name and the bearer is hardly one-to-one.

Nearly all human beings have at least one name. Naming is considered a cultural universal by ethnographers; no society has been found which does not assign names for reference to specific individuals [alford88]. Several human rights treaties make reference to a person's right to a name. Article Seven of the Convention on the Rights of the Child even codifies a person's fundamental right to a name: "The child shall be registered immediately after birth and shall have the right from birth to a name." [5] The Convention does not comment, however, on the right of parents to a name *of their choice*. This is because of lagging recognition of the value of a name for conveying cultural value.

2.1 Functions of a Name

Why do we give people names? Let's divide naming functions into *reference* and *symbolic* functions, categories which we will subdivide further below.

2.1.1 Reference Functions

Consider a table containing one row for every person with whom you are acquainted. You store everything you know about the person in their database row: nationality, appearance, favorite foods, pet peeves, etc. But faced with this vast set of data, each row (person) needs to have one relatively unique identifier (key in database terminology) by which we can access their entry and retrieve the other fields. (Using hair color, for example, would be a poor choice. "Brown hair" does not narrow our search to a single individual.) A personal name is such a token by which we single out a specific individual, a making reference to the larger concept of a given human being.

The reference function of a name does not depend on the name's content; any unique or nearly unique token allows us to navigate the database. It is not clear that "John" is a more effective identifier than "12345678"; indeed the latter seems more likely to be unambiguous. As Scott, Tehranian, and Mathias [10] notes, "serial numbers" are an administrator's dream. Of course, they are too obscure for daily use, but institutions have worked nonetheless to make personal names more legible. Scott, Tehranian, and Mathias [10] argue that this need for "legibility" a primary explanation for the standardized use of patrilineal family surnames by modern states. For example, modern surnames were adopted by Norman élites following the conquest in order to emphasize their property holdings. Elsewhere, in Turkey, modern surnames were only adopted in 1934 under the modernising régime of Atatürk [10].

The rise of the permanent patronym is inextricably associated with those aspects of state-making in which it was desirable to distinguish individual (male) subjects: tax collection (including tithes), conscription, land revenue, court judgements, witness records, and police work. ([10])

Thus we can see digital recordkeeping of persons and places as the next step in the streamlining of “social information”. Institutions are able to organise and manipulate data about people with unprecedented efficiency, but this requires standardisation of the data to make it consistent. But the more people’s names are shoehorned into a database-friendly format, there is vast social information and expressive content being lost, especially if someone’s name must be altered simply to be stored in the digital format.

2.1.2 Symbolic Functions

The symbolic function of a name is that in which the name’s content itself conveys a complex of information, be it genealogical, cultural, linguistic, religious, etc. This is the function that digital records threaten to eliminate, as it is fluid and ephemeral, whereas computers require complete unambiguity.

We can subdivide a name’s symbolic functions into two aspects that must be balanced; they sit on a spectrum between what Finch [7] calls individualizing functions and connecting functions.

Individualizing functions are those aspects of a name which make a statement on the individual themselves. The clearest manifestation of this is the choice of a child’s forename; indeed this makes more of a statement on the parent than the child itself. “In selecting a name (especially for a first-born child) parents are not only determining the personhood of their child but are also taking a key step in defining their own new identity as parents.” [7, p. 718] Hence a parent can name their child something “beautiful” like “Isabella” or something “strong” like “Samson”.

“Call him Voldemort, Harry. Always use the proper name for things.
Fear of a name increases fear of the thing itself.” [rowling97]
(Albus Dumbledore)

Connecting functions are facets that locate the individual within a larger milieu. Most basically this takes the form of surnames, which in Anglophone societies identify the paternal family unit to which the individual belongs. “The construction of a name, and its uses through a lifetime, also can embody a sense of connectedness with family - with the parents who gave the name, and with others in a domestic arrangement or a kin network with whom all or part of the name is shared.” [7, p. 711] We can find more subtle connecting functions, however. Choosing a first name after an older ancestor connects you to a more specific family relationship. And even the linguistic or religious connotations carried

within the first or last name can connect a person to or set them apart from the dominant society in which they live.

2.2 A Survey of the World's Names

The form and contents of people's names vary immensely around the world. Anglo-American practice entails two given names, the "first" and "middle" names, being appended to a patrilineal surname. In many Hispanophone cultures, a child receives both a patrilineal and a matrilineal surname, and the father's surname taking precedence in terms of identification. An Icelandic surname consists of the father's given name with the attached suffix -son or -dottir, depending on gender. A similar practice occurs in Pakistan, but without any suffixation on the father's given name. In South India many people have three names, a personal name, a family name, and a village name.

The ordering of a name's elements also varies. East Asian and Hungarian names reverse the Western order, putting the given name after the family name. Standard Chinese given names consist of two characters, whose meanings may or may not be interconnected (Emma Woo). Wardhaugh [12] cites data from **evans-pritchard**48 regarding Sudan's Nuer people: Nuers receive both a paternal and maternal given name, a ceremonial clan name, and take for themselves an "ox name" from a favorite domestic animal.

Even from a brief overview, it is clear that great diversity exists in names worldwide; but we should not view each one as a static system. Instead, a naming culture constitutes a space of social rules and expectations which allow for cultural expression thru individual acts. On one end, a name can be used to locate the individual within a subgroup of the society, due to the name's linguistic, cultural, or religious connotations. For example, religion has been an important influence on naming; bearing a Christian or Islamic name marks someone as a likely member of that religious group. The linguistic origin of a name may also convey information. People often ask the origin of my last name, DeFreitas, which comes from Portuguese, a language I do not speak or have any ancestral connection to. In other cases, a name's origin may alert you successfully to the bearer's ancestry. In Kenya, we find the Giriama group, whose clan name system identifies not only the bearer's clan, but also provides information about the bearer's generation and birth order within the clan **parkin**89.

Asking the *cómo-se-llama* in Western context presupposes a fixed answer. Imagine the IRS' dismay if Walter demanded that he should be addressed as Jean-Pierre for the entirety of 2020. (It is, after all, a leap year.) The IRS would cease to function if it had to honor such naming practices for 320 million citizens. Administrative convenience, as Scott, Tehranian, and Mathias [10] finds, has been the primary factor promoting the spread of fixed legal names and hereditary surnames. For example, in England, surnames were first adopted by the landed Norman elite. As the bureaucracy strengthened and middling types aspired to

emulate their status. The practice spread down the social ladder and by the end of the 18th century had reached all parts of Great Britain. An accelerated programme as such occurred in Turkey starting in 1934 under the Westernising régime of Atatürk.

2.3 Digital Names

This paper explores a modern tension between the name's reference and symbolic function: computers. As the world has become computerized and the world's information stored in databases, a name cannot remain the sole property of its owner; it must facilitate interaction with the wider world as a means of address. If a name affirms your status as an individual, it no less affirms your status as a citizen of your country, resident of your city, customer of your electric service provider, holder of your credit card, employee of your company, and recipient of your parking ticket. A name is worth nothing if others people in the environs cannot pronounce it, write it, or remember it.

2.4 Computers

As we can see, fixed legal names are not a fact of life; they are a construction. In many non-industrialised societies, we find that naming is fluid and context-dependent. For example, the Giriama...

Fluid naming practices presuppose relative familiarity and the sharing of social context. Such practices cannot withstand a growing bureaucratic presence; governments need a “synoptic” view of their populations [10].

Today, computers are making the synoptic view ever more crystal clear for decision makers, providing precise and updated information from all parts of the Empire. On top of the requirement of a fixed legal name, it is now expected (if not mandated) that the name be compatible with institutional systems of digital record-keeping. This is the name that will go on your birth certificate, your passport, your driver's licence, your social security card; it is the name that makes you You.

The “digital age” (to be fair, we should include the impact of typewriters as well) has changed writing from an analogue and freeform practice to one based on combinations of discrete and fixed glyphs. Since most early development of computers took place in the United States, English gained a natural ascendancy over other languages in the field of digital communication. English, perhaps as a coincidence, is also one of the easiest languages to represent in code, requiring at the bare minimum just the 26 non-accented characters of the English alphabet, perhaps with some punctuation and numbers. The ASCII standard encoding, with 127 available code points, is more than enough to represent the English language in digital form. Thus, organizations which deal only infrequently

with non-English text have been slow to update their databases to Unicode standards.

3 California

California occupies a crossroads between American bilingualism and American nativism. As of 2010, roughly 29% of California’s population spoke Spanish [6], and the Hispanic legacy is inscribed in Spanish placenames across the state. Yet Spanish has no official recognition in state law, while English is enshrined as official language in California’s constitution [3]. Since no diacritics are accepted on California birth certificates, any names of Californian citizens containing characters like “á”, “é”, and “ñ” are misspelled by force of law. The ban on diacritics in names makes California the site of the United States’ most extensive regulation regarding names today.

Due to the proximity to México and historical origin as Mexican territory, the state has long housed many Hispanophones. At California’s 1848 annexation to the United States, one issue was guaranteeing the fair treatment of the (how many) “Californios”, Mexican residents of the territory. The Treaty of Guadalupe Hidalgo promised equal rights for Hispanophones:

Mexicans who, in the territories aforesaid, shall not preserve the character of citizens of the Mexican republic, conformably with what is stipulated in the preceding article, shall be incorporated into the Union of the United States, and be admitted at the proper time (to be judged of by the Congress of the United States) to the enjoyment of all the rights of citizens of the United States, according to the principles of the constitution; and in the mean time shall be maintained and protected in the free enjoyment of their liberty and property, and secured in the free exercise of their religion without restriction.
(Treaty, IX)

However “enjoyment of all the rights of citizens of the United States” did not mean protection of Spanish; **lamar-prieto14** notes that the early state had no Spanish courts, despite the large number of Spanish speakers. Baron [2] however notes that the early legislature published many proceedings in both English and Spanish. Legislative bilingualism continued until (date), a turning point in California linguistic history, when Spanish lost any claim to official status in the territory [**baron02**].

Despite the Hispanic legacy, Californian voters approved several “official English” referendums in the twentieth century. A 1986 ballot referendum, Proposition 63, declared English as California’s official language, creating Article III, Section 6 of the California Constitution and cementing the legal status of English and granting enforcement powers to the state government:

The Legislature shall enforce this section by appropriate legislation. The Legislature and officials of the State of California shall take all steps necessary to insure that the role of English as the common language of the State of California is preserved and enhanced. The Legislature shall make no law which diminishes or ignores the role of English as the common language of the State of California.

(California Constitution, Article III, Sec. 6(c))

Then in 1998 California voters approved Proposition 227, a measure curtailing most bilingual classes in the state. Classes teaching subjects in a bilingual setting would be replaced with nearly monolingual English classes designed for English learners. The motive is to encourage the rapid assimilation of English-language learners and potentially

3.1 The Case of Spanish

One modern battlefield for official Spanish recognition in California is on the birth certificate. Californian birth certificates allow only the 26 characters of English. While American law (and common law tradition generally) holds the naming of children to be the right and responsibility of parents, disregarding edge cases, like “Ghoul Nipple”, “Legend Belch”, “Brfxxcxmxnnpccclllmmnprxvclmncckssqlbb11116”, and “” [8]. However, diacritical marks for Spanish names like José are hardly an edge case. Larson [8, p. 5] investigates this in his study of American naming law, finding California, Massachusetts, New Hampshire, and Kansas to be among the states with such rules. We will focus here on California, because of the sparsity of documentation in the other states and because California’s large Hispanophone population makes the situation there particularly glaring.

Guidelines from the California Office of Vital Records (OVR) instruct county agents that names may contain only “the 26 alphabetical characters of the English language with appropriate punctuation if necessary” and that “no pictographs, ideograms, diacritical marks (including ‘é,’ ‘ñ,’ and ‘ç’) are allowed” [8].

The OVR’s handbook cites Proposition 63, California’s Department of Public Health interprets this language as mandating the prohibition of “non-English” characters in Californian names; other government agencies interpret the law differently. Two California state parks, Año Nuevo State Park and Montaña de Oro State Park, manage to contain the Spanish ñ in their official names, which is reflected on the parks’ official webpages. [1] [9] Likewise, the City of San José, California includes the accented é in its official name, and its Style Guide includes instructions on how to produce it digitally: “To create an accented é, hold down the alt key and type ‘o233’, on the numeric key pad.” *City of San José style guide* [4] California’s Department of Public Health likely disobeys the city’s guidelines in birth certificates, though this needs to be verified.

A 2014 bill in the California State Assembly sponsored by AM Nancy Skinner (AB-2528) sought to rectify the state's processing of birth certificates and driver's licenses by allowing diacritical marks in names. The bill "required the State Registrar to ensure that diacritical marks on English letters are properly recorded on birth certificates, death certificates, certificates of fetal death, and marriage licenses, including, but not limited to, accents, tildes, graves, umlauts, and cedillas". [ab-2528]

AB-2528 stalled in the Appropriations Committee once state agencies assigned multi-million dollar price tags relating to IT upgrades, noting that the DMV's software could not "even accept lower-case letters". For this same reason the bill was opposed by the County Recorder's Association of California.

In 2017, California AM Jose Medina revived the issue with AB-82, which ultimately passed both houses of the legislature before being vetoed by Governor Jerry Brown. Unlike the 2014 bill, this edition did not affect the issuance of driver's licenses, only birth certificates. Passing through many more stages of the legislative process, the committee hearings gathered more detailed estimates for the cost of IT upgrades than they had in 2014:

- \$230,000 for IT upgrades at Department of Public Health
- \$2 million per year for Department of Public Health to correct existing records
- Loss of revenue of \$450,000 per year to Department of Public Health since they would not be able to electronically transmit names to SSA (at \$3 per name) containing diacritics
- Up to \$12 million for local governments to upgrade their systems
- \$1–3 million in upgrades to Department of Health Care Services
- Unknown administrative costs to Department of Social Services

The sticking point for Governor Brown was compatibility with federal databases, which do not accept diacritics. In his veto message, he argued that the risks to vital records outweighed the benefits of cultural openness:

"Mandating the use of diacritical marks on certain state and local vital records without a corresponding requirement for all state and federal government records is a difficult and expensive proposition. This bill would create inconsistencies in vital records and require significant state funds to replace or modify existing registration systems."

The committee findings make clear that the state would incur nontrivial costs to update the name registration systems. Little discussion is included of the possible creative solutions to the problem. Even assuming that government systems cannot be made to support the full UTF-8 standard, there are ways of representing information using ASCII. For example, the international specification for machine-readable passports has a variety of control sequences for representing

subtle distinctions in the Latin, Cyrillic, and Arabic alphabets using only the 26 plain characters of the English alphabet. The original form can be recovered nearly losslessly using the transliteration table.

4 Hawaii

Hawaii is the only state in the United States having two official languages, English and Hawaiian.

4.1 The Case of Janice “Lokelani” Keihanaikukauakahihuliheekahaunaele

A Hawaiian woman named Janice Keihanaikukauakahihuliheekahaunaele has faced some administrative hassle due to her lengthy surname. She made the international press in 2013 for her crusade against Hawaii’s Bureau of Motor Vehicles, demanding an ID card which would include her full name. The recent renewal card she had received omitted her first name entirely, including her surname, but with the final ‘e’ chopped off. This caused for her an awkward situation at a traffic stop, where the policeman questioned her lack of a given name. After some complaining to the authorities, the state was able to extend the character limit from 35 to 40 characters and issue Ms. Keihanaikukauakahihuliheekahaunaele a revised driver’s licence.

To the bureaucrats handling her case, she was presumably an annoyance to whom their first suggestion would be to change the name, perhaps back to her maiden surname. Unfortunately Ms. Keihanaikukauakahihuliheekahaunaele did not appreciate this suggestion, whose surname serves as a link to her late husband, whose full name was Keihanaikukauakahihuliheekahaunaele, a traditional Hawaiian name carrying genealogical information to those few who still understand traditional Hawaiian language (supposedly cherished by the state). As she wrote in an email to a tool company:

A majority of people we attempt to do business with do not take the time to spell out the whole name and we do not do business with them again. We appreciate the respect you have shown us and will do business with you again.

You see, to some people in the world, your name is everything. If I say my name to an elder Hawaiian (kupuna), they know everything about my husband’s family going back many generations... just from the name. When the name is sliced up, changed or altered it distorts the intention and meaning that the name represents. Unfortunately, many people have been shamed into hiding their real names because

they don't fit in with the dominant culture's lack of respect for the name.

P.S. If bills or traffic citations are not correctly addressed, my husband refuses to pay and is under no obligation legally to pay.

([13])

An arbitrary character limit, such as 35, is result of the importance of databases in managing government and corporate information; in many database systems, the number of characters allotted for a text field must be specified beforehand in the database schema. A strict character limit for names is almost nonsensical in the absence of a rigid data-storage format. Presumably, the state's official recognition of Hawaiian was partly responsible for ensuring a favorable response to her request; we can imagine the issue quickly escalating from a media curiosity into a genuine debate about Hawaii's commitment to language and racial justice. We should contrast the successful outcome of Ms. Keihanaikukauakahihuliheekahaunale's case with the uncoöperative bureaucracy in China regarding the names of Ma Cheng and Zhao C.

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