nameauth — Name authority mechanism
for consistency in text and index*

Charles P. Schaum†

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Abstract

The nameauth package automates the correct formatting and indexing of names for professional writing. This aids the use of a name authority and the editing process without needing to retype name references.

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1 Quick Start

1.1 How to Use the Manual

A name authority is a canonical, scholarly list of names to which all variants must refer. The task dashboard (Section 1.2) guides one to various areas of interest. Start with the basics and add features as needed. To load the defaults, simply type:

```latex
\usepackage{nameauth}
```

Package Design and Features

With nameauth names become abstractions: verbs that alter state and nouns that have state. That improves accuracy and consistency:

- **Automate** name forms used in professional writing. First uses of names will have full forms. Later uses have shorter forms. Names vary in the text, but stay constant in the index.
- **Permit** complex name formatting.
- Many cross-cultural, multilingual naming conventions are possible. More details appear in Sections 1.6, 2.5, 2.6.3, and 2.10.3.
- **Automatic sort keys and tags** aid indexing.
- One can **associate information with names**.
- In Section 1.6 we see how to avoid common errors.
- Section 2.11 contains **thanks** and various technical notes.

Special Signs

As teaching aids, this manual uses markings that are not part of nameauth, but in some cases are implemented using it:

- We show *first uses* and *subsequent uses* of names (Sections 2.4, 2.8.1).
- † A dagger indicates “non-native” Eastern forms (Section 2.3.3).
- ‡ A double dagger shows usage of the obsolete syntax (Section 1.4).
- § A section mark denotes index entries of fictional names.

3.0 ← Major changes have package version numbers in the margin.

 Disclaimer

Names are about real people. This manual mentions notable figures both living and deceased. All names herein are meant to be used respectfully, for teaching purposes only. At no time is any disrespect or bias intended.
1.2 Task Dashboard

Here we link to sections by task in order to get things done quickly. Many sections have return links at their end that bring the reader back to this page.

Where do you want to go today?

<table>
<thead>
<tr>
<th>Quick Start</th>
<th>Basics</th>
<th>Basics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sections 1.3, 1.3.1,</td>
<td>Package options:</td>
<td>Name macros:</td>
</tr>
<tr>
<td>1.3.2, 1.3.3, 1.4,</td>
<td>Section 2.1</td>
<td>Sections 2.2.1,</td>
</tr>
<tr>
<td>1.5, 1.6</td>
<td></td>
<td>2.2.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intermediate</th>
<th>Intermediate</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant forms:</td>
<td>Avoid errors:</td>
<td>Western names:</td>
</tr>
<tr>
<td>Sections 2.2.3,</td>
<td>Sections 1.4, 1.5,</td>
<td>Sections 2.3.1,</td>
</tr>
<tr>
<td>2.3.4, 2.6.2</td>
<td>1.6, 2.3.4, 2.11.2</td>
<td>2.3.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language</th>
<th>Language</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern names:</td>
<td>Particles, medieval,</td>
<td>Index entries</td>
</tr>
<tr>
<td>Sections 2.3.1,</td>
<td>ancient names:</td>
<td>and control:</td>
</tr>
<tr>
<td>2.3.3</td>
<td>Sections 2.3.4, 2.5,</td>
<td>Section 2.6.1</td>
</tr>
<tr>
<td></td>
<td>2.10.3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Index</th>
<th>Advanced</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index cross-refs, automatic sorting, and auto-info: Sections 2.6.2, 2.6.3, 2.6.4, 2.9</td>
<td>Generally manage how names are typeset: Sections 2.4, 2.5, 2.8.1, 2.8.2, 2.10.1–2.10.4</td>
<td>Make complex elements determined automatically by names: Sections 2.7, 2.8.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advanced</th>
<th>Application</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally manage names by using a name authority: Sections 2.2.3, 2.4, 2.6.1, 2.8.1</td>
<td>Use nameauth with beamer overlays to get correct name forms: Sections 2.4, 2.8, 2.8.1, 2.8.2</td>
<td>History / game books, other complex layouts: Sections 2.4, 2.6.4, 2.7, 2.8.1, 2.8.2, 2.10.1–2.10.3</td>
</tr>
</tbody>
</table>
1.3 Basic Concepts

We encode names in macro arguments to address multiple naming systems. Required name elements are shown in black; optional parts are in red.\(^1\) The arguments appear in the order \(\langle FNN \rangle \langle SNN \rangle \langle Affix \rangle \langle Alternate \rangle\):

**Western Name**

- **Forename(s):** \(\langle FNN \rangle\)
  - Personal name(s): baptismal name
    - Christian name
    - multiple names
    - praenomen\(^2\)
- **Surname(s):** \(\langle SNN \rangle\)
  - Family name: of father, mother
    - ancestor, vocation
    - origin, region
    - nomen, cognomen
    - patronym
- **Descriptor:** \(\langle Affix \rangle\)
  - Sobriquet / title: Sr., Jr., III...
    - notable attribute
    - origin, region
- **Alternate Name(s):** \(\langle Alternate \rangle\)

In the body text, not the index, \(\langle Alternate \rangle\) swaps with \(\langle FNN \rangle\) for Western names and \(\langle Affix \rangle\) for all other name categories.

**Eastern Name**

- **Family name:** \(\langle SNN \rangle\)
  - Family / clan name
- **Personal name:** \(\langle Affix \rangle\)
  - Seldom multiple names; multi-character okay.
- **Descriptor:** \(\langle Alternate \rangle\)
  - Title, etc.
    - (old syntax for personal names)

**Ancient name**

- **Personal name:** \(\langle SNN \rangle\)
  - Given name(s)
- **Descriptor:** \(\langle Affix \rangle\)
  - Sobriquet / title: Sr., Jr., III...
    - notable attribute
    - origin, region
    - patronym
- **Descriptor:** \(\langle Alternate \rangle\)
  - Alternate name
    - (old syntax for titles, etc.)

---

\(^1\)Compare [Mulvany, 152–82] and the *Chicago Manual of Style.*

\(^2\)How one handles Roman names depends on index entry form; some possible suggestions are given above. Explained on page 29 and following, we have a name *Publius Cornelius Scipio* that can be Scipio Africanus or just Scipio, using macro expansion.
1.3.1 Traditional Interface

Mandatory arguments are shown in black, with optional elements in red. If the required argument $\langle SNN \rangle$ expands to the empty string, \texttt{nameauth} will generate a package error. Extra spaces around each argument are stripped (Section 1.6). The argument patterns shown here are used in many \texttt{nameauth} macros.

### Western Names

<table>
<thead>
<tr>
<th>Required</th>
<th>Required</th>
<th>Optional,</th>
</tr>
</thead>
<tbody>
<tr>
<td>\Name\</td>
<td>\Name*\</td>
<td>\FName\</td>
</tr>
<tr>
<td>$\langle FNN \rangle$</td>
<td>$\langle SNN, \textit{Affix} \rangle$</td>
<td>$\langle \textit{Alternate} \rangle$</td>
</tr>
</tbody>
</table>

Add braces {} after $\langle SNN, \textit{Affix} \rangle$ if other text in brackets [] follows.

### Examples

Western names require the $\langle FNN \rangle$ argument to be present. One always includes all arguments for consistent index entries. The simplified interface (Section 1.3.2) cuts down the amount of typing in many cases.

\Name [George]{Washington} \hspace{1cm} George Washington
\Name* [George]{Washington} \hspace{1cm} George Washington
\Name [George]{Washington} \hspace{1cm} George Washington
\FName [George]{Washington} \hspace{1cm} George

\Name [George S.]{Patton, Jr.} \hspace{1cm} George S. Patton Jr.
\Name* [George S.]{Patton, Jr.} \hspace{1cm} George S. Patton Jr.
\Name [George S.]{Patton, Jr.} \hspace{1cm} Patton
\FName [George S.]{Patton, Jr.} \hspace{1cm} George S.

The $\langle \textit{Alternate} \rangle$ argument will swap with $\langle FNN \rangle$ in the text, not in the index or the name pattern (Section 1.5). To see alternate names, one must use a macro that shows forenames (first use, \Name*, and \FName). Western names require a comma to delimit affixes (Section 2.3.1). Below we see alternate names:

\DropAffix\Name* [George S.]{Patton, Jr.}[George] \hspace{1cm} George Patton
\Name [John David]{Rockefeller, IV} \hspace{1cm} John David Rockefeller IV
\Name* [John David]{Rockefeller, IV}[Jay] \hspace{1cm} Jay Rockefeller IV
\DropAffix\Name* [John David]{Rockefeller, IV}[Jay] \hspace{1cm} Jay Rockefeller
\Name [John David]{Rockefeller, IV}[Jay] \hspace{1cm} Rockefeller
\Name [Clive Staples]{Lewis} \hspace{1cm} Clive Staples Lewis
\Name* [Clive Staples]{Lewis}[C.S.] \hspace{1cm} C.S. Lewis
\FName [Clive Staples]{Lewis}[Jack] \hspace{1cm} Jack

In addition to alternate forenames, one also can display alternate surnames, but that uses several different approaches (Sections 2.2.3, 2.3.4, 2.5.2, 2.10.3).
### “Non-native” Eastern Names, Western Index Entry

<table>
<thead>
<tr>
<th>Required</th>
<th>Required</th>
<th>Optional,</th>
</tr>
</thead>
<tbody>
<tr>
<td>forename(s)</td>
<td>surname(s), no (Affix)</td>
<td>in text only</td>
</tr>
</tbody>
</table>

\begin{align*}
\text{Name} & \quad \langle \text{FNN} \rangle \\
\text{Name*} & \quad \langle \text{SNN} \rangle \\
\text{FName} & \quad \langle \text{Alternate} \rangle
\end{align*}

Add braces { } after \{\langle SNN \rangle\} if other text in brackets [ ] follows.

### Examples

Below we start with “regular” Western name forms:

\text{Name}[\text{Hideyo}]{\text{Noguchi}} \ldots \ldots \ldots \text{Hideyo Noguchi}
\text{Name*}[\text{Hideyo}]{\text{Noguchi}}[\text{Doctor}] \ldots \ldots \ldots \text{Doctor Noguchi}
\text{Name}[\text{Frenec}]{\text{Molnár}} \ldots \ldots \ldots \ldots \ldots \ldots \text{Frenec Molnár}

To turn them into “non-native” Eastern names or proper Hungarian names [Mulvany, 166] we use the reversing macros and leave the \langle \text{Alternate} \rangle argument empty (Section 2.3.3). Index entries are in Western style: \langle SNN \rangle, \langle FNN \rangle:

\text{\text{CapName}\text{RevName}\text{Name*}[\text{Hideyo}]{\text{Noguchi}}} \ldots \ldots \ldots \text{NOGUCHI Hideyo}\dagger
\text{\text{CapName}\text{RevName}\text{Name*}[\text{Hideyo}]{\text{Noguchi}}[\text{Sensei}] \ldots \ldots \text{NOGUCHI Sensei}\dagger
\text{\text{RevName}\text{Name*}[\text{Frenec}]{\text{Molnár}}} \ldots \ldots \ldots \ldots \text{Molnár Frené}\dagger

Reversed Western forms do not work with the older syntax (Section 1.4) and they do not share name control sequences and index entries with “native” Eastern names and ancient name forms (Section 1.5).

### “Native” Eastern Names in the Text, Eastern Index Entry

<table>
<thead>
<tr>
<th>Required</th>
<th>Optional,</th>
</tr>
</thead>
<tbody>
<tr>
<td>surname and forename</td>
<td>in text only</td>
</tr>
</tbody>
</table>

\begin{align*}
\text{Name} & \quad \langle SNN, Affix \rangle \\
\text{Name*} & \quad \langle SNN, Affix \rangle \\
\text{FName} & \quad \langle \text{Alternate} \rangle
\end{align*}

Add braces { } after \{\langle SNN, Affix \rangle\} if other text in brackets [ ] follows.

### Examples

The comma-delimited required argument, \langle SNN, Affix \rangle, is the key to non-Western names, which always take the form \langle SNN Affix \rangle in the index. See Section 2.3.3. “Native” Eastern names have Eastern name order from the start and they do not share name control sequences and index entries with Western names (Section 1.5). They can be reversed to have Western name order in the body text.
Except for mononyms, non-Western forms also can have alternate names. This is incompatible with the older syntax (see Section 1.4). Unless the index must have Western-style entries, “native” forms are best for Eastern names:

\Name{Yamamoto, Isoroku}........................................ Yamamoto Isoroku
\Name{Yamamoto, Isoroku}........................................ Yamamoto
\RevName\Name*{Yamamoto, Isoroku}[Admiral]........... Admiral Yamamoto
\Name{Miyazaki, Hayao}............................................ Miyazaki Hayao
\Name*{Miyazaki, Hayao}[Sensei]......................... Miyazaki Sensei
\RevName\Name*{Miyazaki, Hayao}[Mr.]..................... Mr. Miyazaki

Ancient and Medieval Names

<table>
<thead>
<tr>
<th></th>
<th>Required name</th>
<th>Optional, in text only</th>
</tr>
</thead>
<tbody>
<tr>
<td>\Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>\Name*</td>
<td>{SNN, Affix}</td>
<td></td>
</tr>
<tr>
<td>FName</td>
<td></td>
<td>[Alternate]</td>
</tr>
</tbody>
</table>

Add braces {} after {\{SNN, Affix\}} if other text in brackets [] follows.

Examples

These forms are meant for royalty and ancient figures. They can be mononyms or have multiple names, and may have an affix. Note the teaser for Section 2.2.2:

\Name{Aristotle}................................................. Aristotle
\Name{Aristotle}................................................. Aristotle
\Name{Elizabeth, I}.............................................. Elizabeth I
\Name{Elizabeth, I}.............................................. Elizabeth
\ForceFN\FName{Elizabeth, I}[Good Queen Bess]....... Good Queen Bess

1.3.2 Simplified Interface

nameauth Although not required, using the nameauth environment in the preamble guards against undefined macros. This environment defines a tabular-like macro:

\begin{nameauth}
\langle arg1 \& arg2 \& arg3 \& arg4 \rangle
\end{nameauth}

It uses \langle arg1 \rangle as a basis to create three macros that are equivalent to:

\langle arg1 \rangle \rightarrow \Name{\langle arg2 \rangle}{\langle arg3 \rangle}{\langle arg4 \rangle}
\L{\langle arg1 \rangle} \rightarrow \Name*{\langle arg2 \rangle}{\langle arg3 \rangle}{\langle arg4 \rangle} % L for long
\S{\langle arg1 \rangle} \rightarrow \FName{\langle arg2 \rangle}{\langle arg3 \rangle}{\langle arg4 \rangle} % S for short

If either \langle arg1 \rangle or \langle arg3 \rangle are empty, or \langle SNN \rangle is empty, nameauth will generate a package error. Forgetting the backslash, ampersands, or angle brackets will cause errors. For more on \langle arg4 \rangle see page 9.
Comments below are not part of the environment. Extra spaces in each argument are stripped (Section 1.6). Put trailing braces {} or something else after the shorthand macros if text in brackets [] follows, so it does not become an optional argument. Below we introduce name forms with particles.

**Examples**

\begin{nameauth}
\%(arg1) (arg2) (arg3) (arg4) \\
\< Wash & George & Washington & k & >\% Western \\
\< Harnack & Adolf & Harnack & k & >\% Western \\
\< Lewis & Clive Staples & Lewis & k & >\% Western \\
\< Pat & George S. & Patton, Jr. & k & >\% W. affix \\
\< JRV & John David & Rockefeller, IV & k & >\% W. affix \\
\< Ches & Chesley B. & Sullenberger, III & k & >\% W. affix \\
\< Soto & Hernando & de Soto & k & >\% W. part. \\
\< JWG & J.W. von Goethe & Goethe & k & >\% W. part. \\
\< VBuren & Martin & Van Buren & k & >\% W. part. \\
\< Noguchi & Hideyo & Noguchi & k & >\% W. as E. \\
\< Miyaz & Miyazaki, Hayao & k & >\% Eastern \\
\< Yant & Yamamoto, Isoroku & k & >\% Eastern \\
\< Aeth & Æthelred, II & k & >\% Ancient \\
\< Attil & Attila, the Hun & k & >\% Ancient \\
\< Dem & Demetrius, I & k & >\% Ancient \\
\< Eliz & Elizabeth, I & k & >\% Ancient \\
\< Aris & Aristotle & k & >\% Mono \\
\< CSL & Clive Staples & Lewis & k & >\% C.S. \\
\< MSens & Miyazaki, Hayao & Sensei & k & >\% E. alt. \\
\end{nameauth}

<table>
<thead>
<tr>
<th>Output</th>
<th>Short Form</th>
<th>Long Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington</td>
<td>\Wash</td>
<td>\Name[George]{Washington}</td>
</tr>
<tr>
<td>George Washington</td>
<td>\LWash</td>
<td>\Name*[George]{Washington}</td>
</tr>
<tr>
<td>George</td>
<td>\SWash</td>
<td>\FName[George]{Washington}</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>\SubvertThis\Eliz</td>
<td>\SubvertThis\Name{Elizabeth,I}</td>
</tr>
<tr>
<td>Elizabeth I</td>
<td>\ForgetThis\Eliz</td>
<td>\ForgetThis\Name{Elizabeth,I}</td>
</tr>
</tbody>
</table>

English and modern Romance languages keep the particle with the surname. German and other languages do not (cf. Sections 2.3.4 and 2.5).³

³See also [Mulvany, 152–82], and the *Chicago Manual of Style.*
(Alternate) Tips

Above we listed two shorthands that had alternate names in \( \langle arg_4 \rangle \): \CSL and \MSens. They have related shorthands whose \( \langle arg_4 \rangle \) are empty: \Lewis and \Miyaz. Here are how they are related (cf. Section 2.2.2):

- They share the same name patterns (Section 1.5): `\ForgetThis\Lewis Clive Staples Lewis; \CSL Lewis. \ForgetThis\Miyaz Miyazaki Hayao; and \MSens Miyazaki.
- More commonly, one produces alternate names with `\Lewis[C.S.]` C.S. Lewis and `\Miyaz[Sensei]` Miyazaki Sensei.
- Both `\CSL` C.S. Lewis and `\MSens` Miyazaki Sensei already have (Alternate) built in. They cannot take another optional argument. One must remember which shorthands have used \( \langle arg_4 \rangle \).
- If one should forget that, one will get errors: `\CSL[C.S.]` C.S. Lewis and `\MSens[Sensei]` Miyazaki Sensei.

Variant Overview

<table>
<thead>
<tr>
<th>Western:</th>
<th>Ancient / Mononym</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>\Wash</code> ............ George Washington</td>
<td><code>\Aris</code> ..................... Aristotle</td>
</tr>
<tr>
<td><code>\LWash</code> ............ George Washington</td>
<td><code>\Aris</code> ..................... Aristotle</td>
</tr>
<tr>
<td><code>\Wash</code> ............ Washington</td>
<td></td>
</tr>
<tr>
<td><code>\SWash</code> ............ George Washington</td>
<td><code>\ANCIENT / ROYAL: (Sections 2.3.3, 2.3.4)</code></td>
</tr>
<tr>
<td><code>\RevComma\Wash</code> Washington, George</td>
<td><code>\Aeth</code> ..................... /ÆMerled II</td>
</tr>
<tr>
<td></td>
<td><code>\Aeth[Unradig]</code> /Æthelred Unæradig</td>
</tr>
<tr>
<td><strong>Particles:</strong></td>
<td></td>
</tr>
<tr>
<td><code>\Soto</code> ............ Hernando de Soto</td>
<td><code>\Attil</code> .................. Attila the Hun</td>
</tr>
<tr>
<td><code>\Soto</code> ............ de Soto</td>
<td><code>\Attil</code> .................. Attila</td>
</tr>
<tr>
<td><code>\CapThis\Soto</code> De Soto</td>
<td></td>
</tr>
<tr>
<td><strong>Affixes:</strong></td>
<td></td>
</tr>
<tr>
<td><code>\Pat</code> ............ George S. Patton Jr.</td>
<td><code>\Noguchi</code> ................ Hideyo Noguchi</td>
</tr>
<tr>
<td><code>\LPat</code> ............ George S. Patton Jr.</td>
<td><code>\LNoguchi</code> ................ Doctor Noguchi</td>
</tr>
<tr>
<td><code>\DropAffix\LPat</code> George S. Patton</td>
<td><code>\SNoguchi</code> ................ Hideyo</td>
</tr>
<tr>
<td><code>\Pat</code> ............ Patton</td>
<td><code>\RevName\LNoguchi</code> ....... Noguchi Hideyo†</td>
</tr>
<tr>
<td><code>\SPat</code> ............ George S.</td>
<td><code>\CapName\RevName\LNoguchi</code> NOGUCHI Hideyo†</td>
</tr>
<tr>
<td></td>
<td><code>\CapName\LNoguchi</code> ................ NOGUCHI†</td>
</tr>
<tr>
<td><strong>Nicknames:</strong></td>
<td></td>
</tr>
<tr>
<td><code>\JRIV</code> ............ John David Rockefeller IV</td>
<td><code>\NATIVE” EASTERN: (Section 2.3.3)</code></td>
</tr>
<tr>
<td><code>\DropAffix\JRIV</code>Jay</td>
<td><code>\CapName\Yamt</code> ............ YAMAMOTO Isoroku</td>
</tr>
<tr>
<td><code>\SJRIV</code>Jay</td>
<td><code>\CapName\Yamt</code> ............ YAMAMOTO Isoroku</td>
</tr>
<tr>
<td><code>\Lewis</code> ............ Clive Staples Lewis</td>
<td><code>\CapName\Yamt</code> ............ YAMAMOTO</td>
</tr>
<tr>
<td><code>\LLewis</code>Jack</td>
<td><code>\RevName\Yamt</code> ....... Isoroku Yamamoto</td>
</tr>
<tr>
<td><code>\SLewis</code>Jack</td>
<td><code>\RevName\Yamt[Admiral]</code> .... Admiral Yamamoto</td>
</tr>
<tr>
<td><code>\LCSL</code> ............ C.S. Lewis</td>
<td><code>\SYamt</code> .................... Yamamoto</td>
</tr>
<tr>
<td><code>\SCSL</code> ............ C.S.</td>
<td><code>\ForceFN\SYamt</code> ............ Isoroku</td>
</tr>
</tbody>
</table>

Above we used `\ForgetThis` (Section 2.8.1) to reset first uses of names. Now we set up examples on page 41 by invoking `\ExcludeName{Attila, the Hun}` and `\AKA[John David]{Rockefeller,IV}{Jay}{Rockefeller}` Jay Rockefeller. On why that form has a different index entry than `\DropAffix\JRIV[Jay]` Jay Rockefeller, see Sections 2.6.2 and 2.9.
1.3.3 Select Macro Overview

Below we have a partial selection of macros and their arguments in overview:

<table>
<thead>
<tr>
<th>(prefix macros)</th>
<th>\Name</th>
<th>(optional *)</th>
<th>(name args)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(prefix macros)</td>
<td>\FName</td>
<td>(optional *)</td>
<td>(name args)</td>
</tr>
<tr>
<td>(prefix macros)</td>
<td>\IndexName</td>
<td>(name args)</td>
<td></td>
</tr>
<tr>
<td>(prefix macros)</td>
<td>\IndexRef</td>
<td>(xref args)</td>
<td>(target)</td>
</tr>
<tr>
<td>(prefix macros)</td>
<td>\AKA</td>
<td>(optional *)</td>
<td>(target args)</td>
</tr>
<tr>
<td></td>
<td>\ExcludeName</td>
<td>(name args)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\IncludeName</td>
<td>(optional *)</td>
<td>(name args)</td>
</tr>
<tr>
<td></td>
<td>\PretagName</td>
<td>(name args)</td>
<td>(sort key)</td>
</tr>
<tr>
<td></td>
<td>\TagName</td>
<td>(name args)</td>
<td>(tag)</td>
</tr>
<tr>
<td></td>
<td>\UntagName</td>
<td>(name args)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\NameAddInfo</td>
<td>(name args)</td>
<td>(tag)</td>
</tr>
<tr>
<td></td>
<td>\NameQueryInfo</td>
<td>(name args)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\NameClearInfo</td>
<td>(name args)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\ForgetName</td>
<td>(name args)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\SubvertName</td>
<td>(name args)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\IfMainName</td>
<td>(name args)</td>
<td>{(y)}{(n)}</td>
</tr>
<tr>
<td></td>
<td>\IfFrontName</td>
<td>(name args)</td>
<td>{(y)}{(n)}</td>
</tr>
<tr>
<td></td>
<td>\IfAKA</td>
<td>(name args)</td>
<td>{(y)}{(n)}{{x}}</td>
</tr>
</tbody>
</table>

The (prefix macros) below have a one-time effect per name and they also stack.
For example: \CapThis\RevName\SkipIndex\Name[bar]{foo}: Foo Bar.

| \CapThis | Capitalize first letter of all name components in body text. |
| \AccentCapThis | Fallback when Unicode detection cannot be done. |
| \CapName | Cap entire ⟨SNN⟩ in body text. Overrides \CapThis. |

| \RevName | Reverse order of any name in body text. Overrides \RevComma |
| \RevComma | Reverse only Western names to ⟨SNN⟩, ⟨FNN⟩. |

| \ShowComma | Add comma between ⟨SNN⟩ and ⟨Affix⟩. |
| \NoComma | No comma between ⟨SNN⟩ and ⟨Affix⟩. Overrides \ShowComma. |

| \DropAffix | Drop affix only for a long Western name reference. |
| \KeepAffix | Insert non-breaking space (NBSP) between ⟨SNN⟩, ⟨FNN/Affix⟩. |
| \KeepName | Insert NBSP between all name elements. Overrides \KeepAffix. |

| \ForgetThis | Force a first-time name use. Negates \SubvertThis. |
| \SubvertThis | Force a subsequent use. |
| \ForceName | Force first-use formatting hooks. |
| \ForceFN | Force printing of ⟨Affix⟩ in non-Western short forms. |

| \SeeAlso | Make a see also reference instead of a page reference. Only for use with \IndexRef, \AKA, \PName and their starred variants. |
| \SkipIndex | Do not create index entries. |
| \JustIndex | Act like \IndexName; negated by \AKA, \PName. |

Back to Section 1.2
1.4 Obsolete Syntax

This “ghost” of nameauth past limits alternate names and cross-references (Section 2.9), excludes comma-delimited names, and complicates indexing and tagging (Sections 2.6.4 and 2.7). When the ⟨FNN⟩ and ⟨Affix⟩ arguments are empty, ⟨Alternate⟩ acts like ⟨Affix⟩ and affects both name and index patterns (Section 1.5). In this manual we designate these names with a double dagger (‡):

\Name{Henry}{VIII} % Ancient
\Name{Chiang}{Kai-shek} % Eastern
\begin{nameauth}\langle Dagb & & Dagobert & I \rangle > % Ancient
\langle Yosh & & Yoshida & Shigeru \rangle > % Eastern
\end{nameauth}

\Name{Henry}{VIII} Henry VIII
\Name{Henry}{VIII} Henry‡
\Name{Chiang}{Kai-shek} Chiang Kai-shek‡
\Name{Chiang}{Kai-shek} Chiang‡
\CapName{Yosh} YOSHIDA Shigeru‡
\CapName{RevName}{L}Yosh Shigeru YOSHIDA‡

2.6 \Name{Henry}{VIII} (older syntax) and \Name{Henry, VIII} (new syntax) share name patterns, tags, and index entries, as shown below. We recommend using the newer syntax unless otherwise needed.

\NameAddInfo{Henry}{VIII}\{	extit{Defensor Fidei}\} % old
...\Name{*}{Henry, VIII}\\NameQueryInfo{Henry, VIII} % new
Henry VIII (Defensor Fidei)

1.5 Name Pattern Overview

The table below shows how the macro arguments generate name patterns central to nameauth. The ⟨Alternate⟩ argument only affects patterns when using the obsolete syntax. The naming macro arguments create internal control sequences that affect names in both the text and the index:

<table>
<thead>
<tr>
<th>Macro Arguments</th>
<th>Patterns</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>⟨⟨FNN⟩⟩⟨⟨SNN⟩⟩</td>
<td>⟨FNN⟩!⟨SNN⟩</td>
<td>Western</td>
</tr>
<tr>
<td>⟨⟨FNN⟩⟩⟨⟨SNN, Affix⟩⟩</td>
<td>⟨FNN⟩!⟨SNN⟩,⟨Affix⟩</td>
<td>Western</td>
</tr>
<tr>
<td>⟨⟨SNN, Affix⟩⟩</td>
<td>⟨SNN⟩,⟨Affix⟩</td>
<td>non-Western</td>
</tr>
<tr>
<td>⟨⟨SNN⟩⟩⟨⟨Alt⟩⟩</td>
<td>⟨SNN⟩,⟨Alt⟩</td>
<td>(obsolete)</td>
</tr>
<tr>
<td>⟨⟨SNN⟩⟩</td>
<td>⟨SNN⟩</td>
<td>mononym</td>
</tr>
</tbody>
</table>
We “forget” several names below to create first-use cases:

<table>
<thead>
<tr>
<th>Macro</th>
<th>Body Text</th>
<th>\ShowPattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>\Harnack[Adolf von]</td>
<td>Adolf von Harnack</td>
<td>Adolf!Harnack</td>
</tr>
<tr>
<td>\Harnack</td>
<td>Harnack</td>
<td>Adolf!Harnack</td>
</tr>
<tr>
<td>\ForgetThis\Pat</td>
<td>George S. Patton Jr.</td>
<td>GeorgeS.!Patton,Jr.</td>
</tr>
<tr>
<td>\DropAffix\LPat</td>
<td>George S. Patton</td>
<td>GeorgeS.!Patton,Jr.</td>
</tr>
<tr>
<td>\ForgetThis\Noguchi</td>
<td>Hideyo Noguchi</td>
<td>Hideyo!Noguchi</td>
</tr>
<tr>
<td>\RevName\Noguchi</td>
<td>Noguchi Hideyo</td>
<td>Hideyo!Noguchi</td>
</tr>
<tr>
<td>\ForgetThis\Yamt</td>
<td>Yamamoto Isoroku</td>
<td>Yamamoto,Isoroku</td>
</tr>
<tr>
<td>\RevName\LYamt</td>
<td>Isoroku Yamamoto</td>
<td>Yamamoto,Isoroku</td>
</tr>
<tr>
<td>\ForgetThis\Name{Henry, VIII}</td>
<td>Henry VIII</td>
<td>Henry, VIII</td>
</tr>
<tr>
<td>\Name{Henry}[VIII]</td>
<td>Henry VIII</td>
<td>Henry, VIII</td>
</tr>
<tr>
<td>\Dem[I Soter]</td>
<td>Demetrius I Soter</td>
<td>Demetrius,I</td>
</tr>
<tr>
<td>\LDem</td>
<td>Demetrius I</td>
<td>Demetrius,I</td>
</tr>
<tr>
<td>\ForgetThis\Aris</td>
<td>Aristotle</td>
<td>Aristotle</td>
</tr>
<tr>
<td>\Aris</td>
<td>Aristotle</td>
<td>Aristotle</td>
</tr>
</tbody>
</table>

Six suffixes are appended to these patterns to create independent data sets:

<table>
<thead>
<tr>
<th>Description</th>
<th>Pattern</th>
<th>Mnemonic</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front-matter names</td>
<td>⟨pattern⟩</td>
<td>&quot;name front&quot;</td>
<td>Adolf!Harnack!NF</td>
</tr>
<tr>
<td>Main-matter names</td>
<td>⟨pattern⟩</td>
<td>&quot;main name&quot;</td>
<td>Hideyo!Noguchi!MN</td>
</tr>
<tr>
<td>Index cross-refts</td>
<td>⟨pattern⟩</td>
<td>&quot;pseudonym&quot;</td>
<td>Yamamoto,Isoroku!PN</td>
</tr>
<tr>
<td>Index sorting tags</td>
<td>⟨pattern⟩</td>
<td>&quot;pretag&quot;</td>
<td>Henry, VIII!PRE</td>
</tr>
<tr>
<td>Index info tags</td>
<td>⟨pattern⟩</td>
<td>&quot;tag&quot;</td>
<td>Demetrius, I!TAG</td>
</tr>
<tr>
<td>“Text tag” database</td>
<td>⟨pattern⟩</td>
<td>&quot;database&quot;</td>
<td>Aristotle!DB</td>
</tr>
</tbody>
</table>

The following macros write to these data sets; others also can read from them:

<table>
<thead>
<tr>
<th>Macros</th>
<th>!NF</th>
<th>!MN</th>
<th>!PN</th>
<th>!PRE</th>
<th>!TAG</th>
<th>!DB</th>
</tr>
</thead>
<tbody>
<tr>
<td>\Name \Name* \FName</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\ForgetName \SubvertName</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\PName\PName*</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\AKA \AKA* \IndexRef</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\ExcludeName</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\IncludeName \IncludeName*</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\PretagName</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\TagName \UntagName</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>\NameAddInfo \NameClearInfo</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td>■</td>
</tr>
</tbody>
</table>

Back to Section 1.2
1.6 Debugging and Avoiding Errors

Debugging Macros

ShowPattern displays how the name arguments create name patterns. One can debug pattern collisions and other issues with this macro:

\ShowPattern[⟨FNN⟩]{⟨SNN, Affix⟩}{⟨Alternate⟩}

We used ShowPattern in two of the tables on the previous page in order to illustrate name control patterns. We set the macro using a typewriter font, e.g.:
\texttt{ShowPattern[Hernando]{de Soto}:	exttt{ Hernando\textbackslash de Soto}}

ShowIdxPageref displays a full index entry in the text. Its analogue is ShowIdxPageref*, which shows a short index entry. Both only show names as page references, even if they are cross-references:

\ShowIdxPageref[⟨FNN⟩]{⟨SNN, Affix⟩}{⟨Alternate⟩}
\ShowIdxPageref*[⟨FNN⟩]{⟨SNN, Affix⟩}{⟨Alternate⟩}

The full entry produced by ShowIdxPageref can be affected by both index styles and tags produced by PretagName and TagName, e.g.:
\texttt{ShowIdxPageref[Hernando]{de Soto}:	exttt{ Desoto, Hernando=}de Soto, Hernando\textbackslash hyperpage}

ShowIdxPageref* appears throughout this manual to illustrate basic index entries, e.g.: \ShowIdxPageref*[Hernando]{de Soto}:	exttt{ de Soto, Hernando}

Avoiding Common Errors

- Keep it simple! Avoid unneeded macros and use the simplified interface.
- Compare index entries with names in the body text.
- Check package warnings. Set the verbose option if needed.
- Check arguments’ braces and brackets to avoid errors like “Paragraph ended” and “Missing grouping token inserted.”
- Do not format ⟨SNN⟩,⟨Affix⟩ together as a pair. Format ⟨SNN⟩ and ⟨Affix⟩ separately (Section 2.5).
- Sort names in the index with PretagName (Section 2.6.3).
- In package docs (dtex files) set up the nameauth environment and tags in the driver section to avoid errors.

Obsolete Syntax Caution

- The older syntax has restrictions (Section 1.4). Only the new syntax permits variant names, e.g.: \Name*[Henry, VIII]{Tudor} Henry Tudor. The new syntax is preferred.
- A proper form for the old syntax is \Name*[Henry]{VIII}:	exttt{ Henry VIII}.
- \Name{Henry}{VIII} is a malformed Western name: “Henry VIII” and “VIII.” Likewise \Name{Henry}{VIII}{Tudor}:	exttt{ Tudor VIII” and “VIII.”} Both have the incorrect index entry “VIII, Henry”.

13
Standard Warnings

- If one defines shorthand macros in the `nameauth` environment whose control sequence already exists, warnings always appear. For example:

  \begin{verbatim}
  \PretagName[E., B.]{White}{White, E.B.}
  \begin{nameauth}
  \< White & E.B. & White & > % v.1
  \< White & E., B. & White & > % v.2
  \end{nameauth}
  \end{verbatim}

- \White gives “E. B. White”. Its pattern is: E., B. !White. We lost the first version. We forget White for later. There should be two package warnings in this section for the redefinition of \White, because we defined it in the driver, then again here twice.

- This could be a problem if a name shorthand replaces an actual macro that is used for something else and breaks that macro.

- Then again, if one uses, e.g., a new `nameauth` environment per chapter, these warnings may be harmless. User discretion is advised.

Verbose Warnings

Package warnings result from the following only when the `verbose` option is used because we do not want the default to be “chatty”:

- Creating an index page reference after using a name as an xref or excluding it. Not allowed.
- Creating the same cross-reference multiple times. Not allowed.
- Using `\ExcludeName` on an xref. Not allowed.
- Using `\IncludeName` on an xref. Not allowed.
- Using `\ExcludeName` to exclude a name that exists is allowed, but a warning still results.
- `\PretagName` sorts xrefs, but also creates “informational warnings.”
- Using `\TagName` and `\UntagName` on xrefs. No tag allowed.

Error Protection Strategies

extra spaces The `nameauth` package trims extra spaces around name arguments to prevent errors like multiple index entries that appear due to extra spaces. \LaTeX{} usually compacts internal spaces. For example, instead of being two different names, below we have the same name in a first, then subsequent use:

\begin{verbatim}
\Name*[Martin Luther]{King, Jr.}
\Name*[\textit{Martin Luther}]{King, Jr., Jr.}
\end{verbatim}

This does not include explicit spaces from `\space`, etc. For example, the pattern `Martin Luther!King, Jr.` comes from `\Name[Martin Luther]{King, Jr.}` while `Martin-Luther!King, Jr.` comes from `\Name[Martin-Luther]{King, Jr.}`. The tilde appears as a non-breaking space in the text.
Full stops appear in one’s initials and in affixes like “Jr.” (junior), “Sr.” (senior), “d. J.” (der Jüngere), and “d. Ä.” (der Ältere). The naming macros and some of the alternate name macros (Section 2.9) check if the printed name ends with a full stop and is followed by one. They gobble the extra full stop:

This is Rev. Dr. \Name[Martin Luther]{King, Jr.}. Full stop is gobbled.
This is Rev. Dr. Martin Luther King Jr.

This is Rev. Dr. \Name[Martin Luther]{King, Jr.}. Full stop is not gobbled.
This is Rev. Dr. King.

Again we speak fully of \Name*[Martin Luther]{King, Jr.}. Full stop is gobbled.
Again we speak fully of Martin Luther King Jr.

We drop the affix: \DropAffix\Name*[Martin Luther]{King, Jr.}. Full stop is not gobbled.
We drop the affix: Martin Luther King Jr.

His initials are \FName[Martin Luther]{King, Jr.}{M.L.}. Full stop is gobbled.
His initials are M.L.

His name patterns, however, are different, creating different names:
MartinLuther!King,{Jr.}
MartinLuther!King,{Jr}.

Variations in the use of active characters and control sequences also change active chars name arguments and index sorting (Section 2.6.3; cf. 2.11.2 and 2.11.3):

\Name*{Æthelred, II} Äthelred II; Pattern: ÄÆthelred,II ¹
We have seen this name earlier.

\SkipIndex\Name\{Æ thelred, II\} Äthelred II; Pattern: \AEthelred,II
This is a new name that looks the same.

¹With pdflatex / latex, the glyphs ÄÆ correspond to \iEc{Æ}.

grouping issues

Take care when using braces and spaces with a name at the end of a sentence. Braces can change name arguments, even though they look the same. We disable indexing for the three points below:

- If one encapsulates a name in braces, the punctuation detection fails:
This is Rev. Dr. {\Name*[Martin Luther]{King, Jr.}}. Full stop is not gobbled.
This is Rev. Dr. Martin Luther King Jr.

A solution encapsulates both the name and the full stop:
This is Rev. Dr. {\Name*[Martin Luther]{King, Jr.}.} Full stop is gobbled.
This is Rev. Dr. Martin Luther King Jr.

- If one encapsulates ⟨Affix⟩ in braces, the punctuation detection fails:
This is Rev. Dr. \Name*[Martin Luther]{King, {Jr.}}. Full stop is not gobbled.
This is Rev. Dr. Martin Luther King Jr.

The solution leaves the full stop in ⟨Affix⟩ outside the braces:
This is Rev. Dr. \Name*[Martin Luther]{King, {Jr}.}. Full stop is gobbled.
This is Rev. Dr. Martin Luther King Jr.

The name patterns, however, are different, creating different names:
MartinLuther!King,{Jr.}
MartinLuther!King,{Jr}.

- If one leaves an extra space after a name, the punctuation detection fails:
This is Rev. Dr. \Name*[Martin Luther]{King, Jr.}. Full stop is not gobbled.
This is Rev. Dr. Martin Luther King Jr.

The solution removes the extra space:
This is Rev. Dr. \Name*[Martin Luther]{King, Jr.}. Full stop is gobbled.
This is Rev. Dr. Martin Luther King Jr.

active chars and macros

With pdflatex / latex, the glyphs ÄÆ correspond to \iEc{Æ}.
• \Name{Bo"ethius} Boëthius; Pattern: Bo"ethius
  We introduce this new name.

• \SkipIndex\Name{Boëthius} Boëthius
  This is a different name that looks the same.

• \SkipIndex\Name{Bo{"e}thius} Boëthius;
  Pattern: Bo{"e}thius
  This also is a different name that looks the same.

formatting initials

Omit spaces between initials; see Bringhurst, *Elements of Typographic Style*. If a style guide requires spaces, try thin spaces. Use \PretagName{} to sort those names (Section 2.6.3). Below we use no formatting:

<table>
<thead>
<tr>
<th>1</th>
<th>\PretagName[E.,B.]{White}</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>{White, E.B.}</td>
</tr>
<tr>
<td>3</td>
<td>\begin{nameauth}</td>
</tr>
<tr>
<td>4</td>
<td>\begin{family}{White} &amp; E. &amp; B. &amp; White &amp; &gt;</td>
</tr>
<tr>
<td>5</td>
<td>\end{nameauth}</td>
</tr>
<tr>
<td>6</td>
<td>\end{nameauth}</td>
</tr>
<tr>
<td>7</td>
<td>\PretagName[John]{\de{Strietelmeier}}{Strietelmeier, John}</td>
</tr>
</tbody>
</table>

Normal text: E. B. White

hyphenation

English contains names from many cultures. The rules for hyphenation go to the heart of how names with non-English origins should be pronounced. With \nameauth, one can use either optional hyphens or the babel / polyglossia packages to handle such names:

<table>
<thead>
<tr>
<th>1</th>
<th>\newcommand\de[1]{\foreignlanguage{ngerman}{#1}}</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>% or polyglossia: \newcommand\de[1]{\textgerman{#1}}</td>
</tr>
<tr>
<td>3</td>
<td>\NameAddInfo[John]{\de{Strietelmeier}}%</td>
</tr>
<tr>
<td>4</td>
<td>{late professor at Valparaiso University}</td>
</tr>
<tr>
<td>5</td>
<td>\begin{nameauth}</td>
</tr>
<tr>
<td>6</td>
<td>\begin{family}{Striet} &amp; John &amp; \de{Strietelmeier} &amp; &gt;</td>
</tr>
<tr>
<td>7</td>
<td>\end{nameauth}</td>
</tr>
<tr>
<td>8</td>
<td>\PretagName[John]{\de{Strietelmeier}}{Strietelmeier, John}</td>
</tr>
</tbody>
</table>

Not fixed:
In English, some names come from other cultures. These names, like John Strietelmeier \SkipIndex\Name[John]{Strietelmeier} can break badly.

Fixed with discretionary hyphens:
In English, some names come from other cultures. These names, like John Strietelmeier, \SkipIndex\Name[John]{Strie\-tel\-meier} could break badly.

Fixed with language packages:
In English, some names come from other cultures. These names, like John Strietelmeier, \Striet could break badly.

Strietelmeier (late professor at Valparaiso University) is neither pronounced nor hyphenated as “Stri-etel-meier”; rather, it is pronounced and hyphenated as “Strie-tel-meier”. See Sections 2.3.4 and 2.5 when using macros in name arguments. Using babel or polyglossia likely is best.
2 Detailed Usage

2.1 Package Options

One includes the nameauth package thus:

\usepackage[⟨option1⟩,⟨option2⟩,...,⟨option_n⟩]{nameauth}

The options have no required order. Still, we discuss them from the general to the specific, as the headings below indicate. In the listings below, implicit default options are boldface and need not be invoked by the user. Non-default options are in red and must be invoked explicitly.

Choosing Features

Enable Package Warnings

verbose Show warnings about index cross-references.

The default suppresses package warnings from the indexing macros. Warnings from the nameauth environment are not suppressed.

Choose Formatting

mainmatter Start with “main-matter names” and formatting hooks (see also page 19).

frontmatter Start with “front-matter names” and hooks.

alwaysformat Use only respective “first use” formatting hooks.

formatAKA Format the first use of a name with \AKA like the first use of a name with \Name.

oldAKA Force \AKA* to act like it did before version 3.0.

oldreset Reset per-use name flags locally within the naming macros, as before version 3.3.

oldpass When \Justindex is called, allow long/short flags to pass through, as before version 3.3.

The mainmatter option and the frontmatter option enable two different systems of name use and formatting. They are mutually exclusive. \NamesActive starts the main matter system when frontmatter is used. See Section 2.4.

The alwaysformat option forces “first use” hooks globally in both naming systems. Its use is limited in current versions of nameauth.

The formatAKA option permits \AKA to use the “first use” formatting hooks. This enables \ForceName to trigger those hooks at will (Section 2.9). Otherwise \AKA uses “subsequent use” hooks.

Using the oldAKA option forces \AKA* always to print a “forename” argument in the text, as in versions before 3.0. Otherwise the current behavior of \AKA* prints in the same fashion as \FName (see Sections 2.2.2 and 2.9).

Older reset and pass options restore pre-version 3.3 handling of flags that could lead to undocumented behavior. The oldreset option causes all Boolean flags related to the prefix macros and long/short name forms to be reset locally. The new default is to reset them globally (Section 2.10.4). Likewise, the oldpass option allows the long/short flags to pass through \JustIndex instead of being reset (Section 2.6.1).
Enable / Disable Indexing

\texttt{index} \hspace{1em} Create index entries in place with names.
\texttt{noindex} \hspace{1em} Suppress indexing of names.

These options and related macros do not affect the normal use of \texttt{\index}. They apply only to the \texttt{nameauth} package macros. The default \texttt{index} option enables name indexing right away. The \texttt{noindex} option disables the indexing of names until \texttt{\IndexActive} enables it. \textbf{Caution:} using \texttt{noindex} and \texttt{\IndexInactive} prevents index tags until you call \texttt{\IndexActive}, as explained also in Section 2.6.1.

Enable / Disable Index Sorting

\texttt{pretag} \hspace{1em} Create sort keys used with \texttt{makeindex}.
\texttt{nopretag} \hspace{1em} Do not create sort keys.

The default allows \texttt{\PretagName} to create sort keys used with \texttt{makeindex}. The \texttt{nopretag} option disables the sorting mechanism, e.g., if a different sorting method is used with \texttt{xindy}. See Section 2.6.3.

Affect the Syntax of Names

Show / Hide Affix Commas

\texttt{nocomma} \hspace{1em} Suppress commas between surnames and affixes, following the \textit{Chicago Manual of Style} and other conventions.
\texttt{comma} \hspace{1em} Retain commas between surnames and affixes.

If you use \texttt{modern standards}, choose the default \texttt{nocomma} option to get, e.g., \textit{James Earl Carter Jr}. If you need to adopt \texttt{older standards} that use commas between surnames and affixes, you have two choices:

1. The \texttt{comma} option globally produces, e.g., \textit{James Earl Carter, Jr}.
2. Section 2.3.1 shows how one can use \texttt{\ShowComma} with the \texttt{nocomma} option and \texttt{\NoComma} with the \texttt{comma} option to get per-name results.

In both cases, the display of commas (or the lack thereof) does not affect the appearance or the sorting of index entries.

Capitalize Entire Surnames

\texttt{normalcaps} \hspace{1em} Do not perform any special capitalization.
\texttt{allcaps} \hspace{1em} Capitalize entire surnames, e.g., romanized Eastern names.

This only capitalizes names printed in the body text. English standards usually do not propagate typographic changes into the index.

Still, you can use this package with non-English conventions (just not via these options). You can add, e.g., uppercase or small caps in surnames, formatting them also in the index. See also Sections 2.5 and 2.10.3. The simplified interface aids the embedding of control sequences in names. Section 2.3.3 deals with capitalization on a section-level and per-name basis.
Reverse Name Order

- **notreversed**: Print names in the order specified by \Name and the other macros.
- **allreversed**: Print all name forms in “smart” reverse order.
- **allrevcomma**: Print all names in “Surname, Forenames” order, meant for Western names.

These three options are mutually exclusive. Section 2.3.3 speaks more about reversing. The allreversed option, \ReverseActive, and \RevName work with all names and override allrevcomma and its macros.

So-called “last-comma-first” lists of names via allrevcomma and the reversing macros \ReverseCommaActive and \RevComma (Section 2.3.2) are not the same as the comma option. They only affect Western names.

Typographic Post-Processing

Formatting Attributes

- **noformat**: Do not define a default format.
- **smallcaps**: First use of a main-matter name in small caps.
- **italic**: First use of a main-matter name in italic.
- **boldface**: First use of a main-matter name in boldface.

2.5 Current versions assign no default formatting to names. Most users have preferred the noformat option as the default and then design their own hooks as needed. The options above are “quick” solutions based on English typography.

2.4 What was “typographic formatting” has become a generalized concept of “post-processing” via hook macros. Post-processing does not affect the index. Sections 2.4, 2.10.1, 2.10.2, and 2.10.3 explain these hooks in greater detail:

- **\NamesFormat** formats first uses of main-matter names.
- **\MainNameHook** formats subsequent uses of main-matter names.
- **\FrontNamesFormat** formats first uses of front-matter names.
- **\FrontNameHook** formats subsequent uses of front-matter names.

Changes to the formatting hooks apply within the scope where they are made. Use \global explicitly to alter that. \NamesFormat originally was the only hook, so any oddity in the naming of these hooks results from the need for backward compatibility with old versions.

Section 2.9 discusses how \AKA does not respect these formatting systems and uses the hooks differently. To avoid using the formatAKA option and \ForceName with \AKA, Section 2.6.2 shows how to use \IndexRef and \Name instead.

---

6For those that want the old default option from the early days of this package, one can recover that behavior with the smallcaps option.

Alternate or Continental Formatting

Alternate Formatting

\texttt{altformat} Make available the alternate formatting framework from the start of the document. Activate formatting by default.

3.1 A built-in framework provides an alternate formatting mechanism that can be used for “Continental” formatting that one sees in German, French, and so on. Continental standards often format surnames only, both in the text and in the index. Section 2.5 introduces the topic and should be sufficient for most users, while Section 2.10.3 goes into greater detail.

The previous methods that produced Continental formatting were rather complex compared to the current, simplified manner of doing so. Yet it is likely that these older solutions still ought to work. The error protection that prevents \texttt{\CapThis} from breaking alternately formatted names remains available to these older solutions by using \texttt{altformat} or the related macros (Section 2.5).

Feature Priority

The following table shows the relative priority of package options and macros related to indexing, capitalization, and reversing. The darker the row, the lower the priority. Those macros or options in a particular category (column) that have higher priority (row) tend to override similar macros that have lower priority in that same category.

Thus, \texttt{\IndexInactive} overrides \texttt{\JustIndex}, which overrides \texttt{\SkipIndex}; using \texttt{\SeeAlso} depends entirely on the interaction of the three others.

<table>
<thead>
<tr>
<th>Indexing</th>
<th>Capitalization</th>
<th>Reversing</th>
<th>Name Forms, commas, breaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>index</td>
<td>normalcaps</td>
<td>notreversed</td>
<td>\texttt{ForgetThis}</td>
</tr>
<tr>
<td>noindex</td>
<td>allcaps</td>
<td>allreversed</td>
<td>\texttt{DropAffix}</td>
</tr>
<tr>
<td>\IndexActive</td>
<td>\AllCapsInactive</td>
<td>\ReverseActive</td>
<td>\texttt{\SubvertThis}</td>
</tr>
<tr>
<td>\IndexInactive</td>
<td>\AllCapsActive</td>
<td>\ReverseInactive</td>
<td>\texttt{\KeepName}</td>
</tr>
<tr>
<td>\JustIndex</td>
<td>\CapName</td>
<td>\RevName</td>
<td>\texttt{\ForceName}</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>\texttt{\NoComma}</td>
</tr>
<tr>
<td>\SkipIndex</td>
<td>\AccentCapThis</td>
<td>allrevcomma</td>
<td>\texttt{\KeepName}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>\RevCommaActive</td>
<td>\texttt{\ForceFN}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>\RevCommaInactive</td>
<td>\texttt{\ShowComma}</td>
</tr>
<tr>
<td>\SeeAlso</td>
<td>\CapThis</td>
<td>\RevComma</td>
<td>\texttt{\KeepAffix}</td>
</tr>
</tbody>
</table>

Back to Section 1.2
2.2 Naming Macros

In this manual we modify the formatting hooks to show first and later name uses, forcing such uses as needed (Sections 2.4 and 2.8.1). All naming macros create index entries before and after a name for when a name straddles a page break.

2.2.1 \Name and \Name*

\Name displays and indexes names. It always prints the ⟨SNN⟩ argument. \Name prints the full name at the first occurrence, then usually just the ⟨SNN⟩ argument thereafter. \Name* always prints the full name:

\begin{quote}
\Name \[\langle FNN\rangle\]{\langle SNN, Affix\rangle}\[\langle Alternate\rangle]
\Name*\[\langle FNN\rangle\]{\langle SNN, Affix\rangle}\[\langle Alternate\rangle]
\end{quote}

3.0 In the body text, not the index, the ⟨Alternate⟩ argument replaces either ⟨FNN⟩ or, if ⟨FNN⟩ is absent, ⟨Affix⟩. If both ⟨FNN⟩ and ⟨Affix⟩ are absent, then the obsolete syntax is used (Section 1.4).

\begin{nameauth}
\begin{verbatim}
< Einstein & Albert & Einstein & >
< Cicero & M.T. & Cicero & >
< Confucius & & Confucius & >
< Miyaz & & Miyazaki, Hayao & >
< Eliz & & Elizabeth, I & >
\end{verbatim}
\end{nameauth}

When using the simplified interface, the preferred way to get alternate names is \LCicero[Marcus Tullius] and \LMiyaz[Sensei]: Marcus Tullius Cicero and Miyazaki Sensei. The alternate forename is not shown in subsequent short name references e.g., \LCicero[Marcus Tullius] Cicero.

\begin{quote}
\begin{verbatim}
\Name [Albert]{Einstein} or \Einstein Albert Einstein
\Name*[Albert]{Einstein} or \LEinstein Albert Einstein
\Name [M.T.]{Cicero} or \Cicero M.T. Cicero
\Name*[M.T.]{Cicero}[Marcus Tullius] Marcus Tullius Cicero
\Name [M.T.]{Cicero} or \Cicero Cicero
\Name {Confucius}, \Confucius Confucius
\Name {Miyazaki, Hayao} or \Miyaz Miyazaki Hayao
\Name*[Miyazaki, Hayao][Sensei] Miyazaki Sensei
\Name {Miyazaki, Hayao} or \Miyaz Miyazaki
\Name {Elizabeth, I} or \Eliz Elizabeth I
\Name*[Elizabeth, I] or \LEliz Elizabeth I
\Name {Elizabeth, I} or \Eliz Elizabeth
\end{verbatim}
\end{quote}

8If ⟨Alternate⟩ is \ignorespaces, the Western long form of \Name looks like the short form. “Native” Eastern and ancient forms would have an extra trailing space.
2.2.2 Forenames: \FName

\FName and its synonym \FName* print personal names only in subsequent name uses. They print full names for first uses. These synonyms let one add an F either to \Name or \Name* to get the same effect:

\FName [(FNN)]{(SNN, Affix)}[(Alternate)]
\FName*[(FNN)]{(SNN, Affix)}[(Alternate)]

\ForceFN These macros work with both Eastern and Western names, but to get an Eastern personal name, one must precede these macros with \ForceFN. See also Sections 2.3.4 and 2.8.1 on how to vary some of the forms below:

| \FName{Albert}{Einstein} or \SEinstein | Albert |
| \FName[M.T.]{Cicero}{Marcus Tullius} or \SCicero{Marcus Tullius} | Marcus Tullius |
| \FName{Confucius} or \SCconfucius | Confucius |
| \FName{Miyazaki, Hayao} or \SMiyaz | Miyazaki |
| \ForceFN\FName{Miyazaki, Hayao} or \ForceFN\SMiyaz | Hayao |
| \ForceFN\FName{Miyazaki, Hayao}[Sensei] or \ForceFN\SMiyaz[Sensei] | Sensei |
| \FName{Elizabeth, I} or \SEliz | Elizabeth |
| \ForceFN\SEliz[Good Queen Bess] | Good Queen Bess |

The (Alternate) argument replaces forenames in the text, which strongly shapes the use of \FName. We recap what we saw on page 9, emphasizing forenames:

1 \begin{nameauth}
2 \< Lewis & Clive Staples & Lewis \& Lewis & >
3 \< CSL & Clive Staples & Lewis \& C.S. & >
4 \< Ches & Chesley B. & Sullenberger, III \& >
5 \< Sully & Chesley B. & Sullenberger, III \& Sully >
6 \< Miyaz \& Miyazaki, Hayao \& >
7 \< MSens \& Miyazaki, Hayao \& Sensei >
8 \end{nameauth} |

These share name patterns: \SCSL C.S., \SLewis Clive Staples; \SCChes Chesley B. Sullenberger III, \SSully Sully; \SMiyaz Miyazaki, \SMSens Miyazaki.

Equivalents: \SCSL C.S., \SLewis[C.S.] C.S.; \SSully Sully, \SCChes[Sully] Sully; \ForceFN\SMSens Sensei, \ForceFN\SMiyaz[Sensei] Sensei.

These fail: \SCSL[Jack]: C.S.[Jack]; \SSully[Chesley]: Sully[Chesley]; and \ForceFN\SMSens[Hayao]: Sensei[Hayao]. Whenever \texttt{arg4} of the \nameauth environment is used, the respective shorthands cannot take optional arguments.

Back to Section 1.2

\[9\] If (Alternate) is \texttt{ignorespaces}, the Western long form of \FName looks like the short form of \Name, while the Western short form of \FName acts like \leavevmode and prints nothing. “Native” Eastern and ancient forms would have an extra trailing space.
2.2.3 Variant Names

3.1 This section explains how to manage more complicated variants, which gives one the skills needed to implement a name authority. We draw from Sections 2.4, 2.6.2, 2.6.3, 2.8.1, and 2.9. One might want to consult those sections also.

variant forenames We begin with the easier kind of variant names, namely, variant forenames indexed under a canonical name entry:

\begin{nameauth}
\begin{itemize}
\item \texttt{\begin{nameauth} Tyson & Mike & Tyson & \end{nameauth}}
\item \texttt{\begin{nameauth} Iron & Mike & Tyson & Iron Mike \end{nameauth}}
\end{itemize}
\end{nameauth}

Same pattern:

\texttt{Iron Mike Tyson} \ LTyson Mike Tyson
\texttt{Iron Mike} \ STyson Mike

Since Iron Mike Tyson is indexed as “Tyson, Mike” throughout the document, we can use \IndexRef{Iron Mike}{Tyson, Mike} with no output in the text or \AKA{Mike}{Tyson}{Iron Mike} Iron Mike to print a name. Both create the cross-reference “Iron Mike see Tyson, Mike” in the index.

variant surnames Variant family names are more complicated than variant personal names. For surname variants, one can use the following method to get fairly good results, depending on the trade-offs that one wishes to accept:

\begin{nameauth}
\begin{itemize}
\item \texttt{\begin{nameauth} DuBois & W.E.B. & Du~Bois & \end{nameauth}}
\item \texttt{\begin{nameauth} AltDuBois & W.E.B. & DuBois & \end{nameauth}}
\end{itemize}
\end{nameauth}

\texttt{\PretagName[W.E.B.]{Du~Bois}{Dubois, W.E.B.}}

1. We decide the canonical name form: \texttt{DuBois W.E.B. Du Bois}.

2. Both \texttt{\Name[W.E.B.]{Du Bois}} and \texttt{\Name[W.E.B.]{DuBois}} have the pattern “W.E.B.!DuBois” (Section 1.5). Here we use Du-Bois as the argument because we want no breaks, giving us “W.E.B. !Du-Bois”.

3. We set the sort key for both names to be \{Dubois, W.E.B.\}. If it were of the form \{Du Bois, W.E.B.\}, they would sort differently (Section 2.6.3). One must check a style manual for proper sorting.

4. Instead of using \SkipIndex\AltDuBois many times, we create a cross-reference in the preamble so that no page entry for the alternate form will occur in the index:

\IndexRef[W.E.B.]{DuBois}{Du Bois, W.E.B.}

5. We can use \JustIndex\DuBois\AltDuBois W.E.B. DuBois, keep full stop detection, and check if the name straddles a page break in order to append \JustIndex\DuBois if needed.

6. If we create a macro like the one below, we lose full stop detection but then we do not have to check if the name straddles a page break. Normally, the name macros create two index entries each in order to handle this issue automatically:

\newcommand\NewDuBois{
\JustIndex\DuBois\JustIndex\DuBois
}

23
Example Name Authority

Below are a couple of names from a name authority created for a translation of *De Diaconis et Diaconissis Veteris Ecclesiae Liber Commentarius* by Caspar Ziegler, of which the present author was the editor.\(^\text{10}\)

Constructing that name authority was a challenge. In order to get the names right—the deceased translator unfortunately had left them in abbreviated Latin, as well as leaving many place names in Latin or translating them incorrectly—the present author used the following sources, among several others:

- CERL Thesaurus: [https://data.cerl.org/thesaurus/_search](https://data.cerl.org/thesaurus/_search)
- Virtual International Authority File: [http://viaf.org/](http://viaf.org/)
- WorldCat: [https://www.worldcat.org/](https://www.worldcat.org/)

This author followed the scholarly standards for determining the canonical name forms and used the alternate names (which were the ones actually in the original text) to refer to the canonical forms. I just translated all the place-names.

Below we have candidates for sorting with \texttt{\textbackslash PretagName} (Section 2.6.3) and potential use of \texttt{\textbackslash CapThis} (Section 2.3.4). After using \texttt{\textbackslash IndexRef} with a particular name, using \texttt{\textbackslash Name} with that same name will not create a page reference from that point onward (Section 2.6.2).

1 \texttt{\textbackslash PretagName[Jacques]{De~Pamele}{Depamele, Jacques}}
2 \texttt{\textbackslash Name[Jacques]{De~Pamele}{[Jacques de Joigny]}}
3 \texttt{\textbackslash IndexRef[Jacobus]{Pamelius}{[De-Pamele, Jacques]}}
4 \texttt{\textbackslash Name[Jacobus]{Pamelius}}
5
6 \texttt{\textbackslash PretagName[Giovanni]{d’Andrea}{Dandrea, Giovanni}}
7 \texttt{\textbackslash Name[Giovanni]{d’Andrea}}
8 \texttt{\textbackslash IndexRef[Ioannes]{Andreae}{d’Andrea, Giovanni}}
9 \texttt{\textbackslash Name[Ioannes]{Andreae}}

<table>
<thead>
<tr>
<th>Canonical Name</th>
<th>Alternate Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jacques de Joigny</td>
<td>De Pamele</td>
</tr>
<tr>
<td>Jacobus Pamelius</td>
<td></td>
</tr>
<tr>
<td>Giovanni d’Andrea</td>
<td>Ioannes Andreae</td>
</tr>
</tbody>
</table>

\texttt{D’Andrea \textbackslash CapThis\textbackslash Name[Giovanni]{d’Andrea}} can be used at the beginning of a sentence. \texttt{\textbackslash Name[Jacques]{De-Pamele}} gives De Pamele.

---

\(^{10}\)The book, *The Diaconate of the Ancient and Medieval Church*, originally was typeset using \texttt{\LaTeX}, but had to be converted to a different format. Using \texttt{\LaTeX}, the present author has published Charles P. Schaum and Albert B. Collver III, *Breath of God, Yet Work of Man: Scripture, Philosophy, Dialogue, and Conflict* (St. Louis: Concordia Publishing House, 2019).
2.3 Language Topics

This section looks at how nameauth addresses grammar, usage, and cultural standards. The concept of comma-delimited affixes dominates much of this section.

2.3.1 Affixes Require Commas

A comma is required to separate a Western surname and affix, an Eastern family name and personal name, and an ancient name and affix. Yet we must take care because an example like \Name{\textsc{a Name, Problem}} will halt \LaTeX{} with errors (Section 2.5). Spaces around the comma are ignored (Section 1.6).

<table>
<thead>
<tr>
<th>Name</th>
<th>\Name{Oskar}{Hammerstein, II}</th>
<th>\Name{Oskar}{Hammerstein, II}</th>
<th>\Name{Louis, XIV}</th>
<th>\Name{Louis, XIV}</th>
<th>\Name{Sun, Yat-sen}</th>
<th>\Name{Sun, Yat-sen}</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oskar Hammerstein II</td>
<td>Hammerstein</td>
<td>Louis XIV</td>
<td>Louis</td>
<td>Sun Yat-sen</td>
<td>Sun</td>
</tr>
</tbody>
</table>

Western names with affixes must use the comma-delimited syntax. Using the obsolete syntax, \SkipIndex\Name{Oskar}{Hammerstein}[II] produces \Name{Oskar}{Hammerstein}[II] which is an error. See also (Section 2.9).

\KeepAffix In the text only, \KeepAffix turns the space between \langle SNN \rangle and \langle Affix \rangle into a non-breaking space. This holds for a Western surname and affix, an ancient name and affix, and a “native” Eastern family name and personal name.

\KeepName In the text only, \KeepName turns all spaces between name elements \langle FNN \rangle, \langle SNN \rangle, and \langle Affix \rangle into non-breaking spaces; \KeepName\Name{LJWG}{von} von Goethe will not break. This macro does not alter spaces within name elements like \langle FNN \rangle (French or German forenames) and \langle SNN \rangle (Spanish surnames). Both \KeepAffix and \KeepName can affect nameauth macros that print in the text.

\DropAffix Preceding the naming macros with \DropAffix will suppress an affix in a Western name. \DropAffix\Name*[Oskar]{Hammerstein, II} produces “Oskar Hammerstein.” This does not affect non-Western names.

\ShowComma \ShowComma forces a comma between a Western name and its affix. It works like the comma option on a per-name basis, and only in the body text. \NoComma works like the nocomma option in the body text on a per-name basis. Neither of these macros affect the use of \RevComma, which always prints a comma.

\ShowComma\Name*[Louis]{Gossett, Jr.} Louis Gossett, Jr.
\NoComma\Name*[Louis]{Gossett, Jr.} Louis Gossett Jr.
2.3.2 Listing Western names by Surname

In addition to the options for reversed comma listing (Section 2.1), the macros \ReverseCommaActive and \ReverseCommaInactive function the same way with blocks of text. They all override \RevComma. These all reorder long Western name forms (via \Name* and the like). The first two are broad toggles, while the third works on a per-name basis. These macros only affect Western and “non-native” Eastern name forms.

<table>
<thead>
<tr>
<th>Name</th>
<th>Form</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martin Van Buren</td>
<td>Van Buren, Martin</td>
<td>OK</td>
</tr>
<tr>
<td>Oskar Hammerstein II</td>
<td>Hammerstein II, Oskar</td>
<td>OK</td>
</tr>
<tr>
<td>Hideyo Noguchi</td>
<td>Noguchi, Hideyo</td>
<td>OK</td>
</tr>
<tr>
<td>Æthelred II</td>
<td>Æthelred II</td>
<td>no change</td>
</tr>
<tr>
<td>Chiang Kai-shek</td>
<td>Chiang Kai-shek</td>
<td>no change</td>
</tr>
<tr>
<td>Confucius</td>
<td>Confucius</td>
<td>no change</td>
</tr>
</tbody>
</table>

Both \ReverseCommaActive and \ReverseCommaInactive can be used either as a pair or singly within a local scope. Use \global to force a global effect.

2.3.3 Eastern Names

“non-native” One produces a “non-native” Eastern name in the text by reversing a Western without ⟨Affix⟩ using \RevName:

\RevName\Name*[(FNN)]{(SNN)}[(Alternate)]

The index entry of this name form looks like ⟨SNN⟩, ⟨FNN⟩ (including the comma). This is a Western index entry. This form is used also for Hungarian names, e.g.: \RevName\Name[Frenec]{Molnár} Molnár Frenec, Molnár.

“native” In contrast, “native” Eastern names use either comma-delimited syntax or the obsolete syntax. They have Eastern-form index entries ⟨SNN⟩ ⟨Affix/Alternate⟩ (no comma). The new syntax permits alternate names; the obsolete does not. These forms work also with ancient and medieval names:

\Name{(SNN, Affix)}{(Alternate)}  % new syntax
\Name{(SNN)}{(Alternate)}        % obsolete syntax

People can make mistakes that these forms help one to avoid. For example, in an otherwise excellent German-language history textbook series, one finds an index entry for “Yat-sen, Sun”. It should be “Sun Yat-sen”.11 The form \Name{Sun, Yat-sen} Sun ensures the correct entry.

In addition to the options for reversing (Section 2.1), \ReverseActive and \ReverseInactive reverse name order for blocks of text. These all override the use of \RevName, which reverses once per name. These macros do not affect the

index. They work also with \texttt{\textbackslash AKA} and its derivatives. The reverse mechanism shows only in full names, but it does not force full names. “Non-native” forms are shown by a dagger (†) in the next table:

<table>
<thead>
<tr>
<th></th>
<th>\texttt{\textbackslash LNoguchi}</th>
<th>\texttt{\textbackslash LNoguchi[Doctor]}</th>
<th>\texttt{\textbackslash LNoguchi[Sensei]}</th>
<th>\texttt{\textbackslash Noguchi}</th>
<th>\texttt{\textbackslash SNoguchi}</th>
<th>\texttt{\textbackslash LYamt}</th>
<th>\texttt{\textbackslash LYamt[Admiral]}</th>
<th>\texttt{\textbackslash Yamt}</th>
<th>\texttt{\textbackslash SYamt}</th>
<th>\texttt{\textbackslash ForceFN\textbackslash SYamt}</th>
</tr>
</thead>
<tbody>
<tr>
<td>unchanged</td>
<td>Hideyo Noguchi</td>
<td>Doctor Noguchi</td>
<td>Noguchi Sensei</td>
<td>Noguchi</td>
<td>Noguchi</td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash LNoguchi[Doctor]}</td>
<td>Doctor Noguchi</td>
<td>Noguchi Sensei†</td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash LNoguchi[Sensei]}</td>
<td>Noguchi Sensei†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash Noguchi}</td>
<td>Noguchi</td>
<td>Noguchi†</td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash SNoguchi}</td>
<td>Hideyo</td>
<td>Hideyo†</td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash LYamt}</td>
<td>Yamamoto</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash LYamt[Admiral]}</td>
<td>Isoroku</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash Yamt}</td>
<td>Yamamoto</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash SYamt}</td>
<td>Yamamoto</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
<tr>
<td>\texttt{\textbackslash ForceFN\textbackslash SYamt}</td>
<td>Isoroku</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Isoroku</td>
<td>Admiral Yamamoto</td>
<td>Yamamoto</td>
<td>Yamamoto</td>
<td>Isoroku</td>
</tr>
</tbody>
</table>

\texttt{\textbackslash global} Both \texttt{\textbackslash ReverseActive} and \texttt{\textbackslash ReverseInactive} can be used either as a pair or singly within an explicitly local scope. Use \texttt{\textbackslash global} to force a global effect.

In addition to the options for capitalizing (Section 2.1), \texttt{\textbackslash AllCapsActive} and \texttt{\textbackslash AllCapsInactive} work for blocks of text. All override \texttt{\textbackslash CapName}, which works once per name. These capitalize (\texttt{\textbackslash SNN}) in the body text only. They also work with \texttt{\textbackslash AKA} and friends. For caps in the text and index see Sections 2.5 and 2.10.3. We show “non-native” Eastern forms with a dagger (†) and the old syntax with a double dagger(‡).

\texttt{\textbackslash CapName only} \texttt{\textbackslash CapName\textbackslash RevName}

| \texttt{\textbackslash Name*[Yoko]{Kanno}} | Yoko KANNO | KANNO Yoko†  |
| \texttt{\textbackslash Name*[Arai, Akino]} | ARAI Akino | Akino ARAI   |
| \texttt{\textbackslash Name*[Ishida]{Yoko}} | ISHIDA Yoko‡ | Yoko ISHIDA‡ |
| \texttt{\textbackslash Name*[Yohko]} | YOHKO | YOHKO         |

\texttt{\textbackslash global} Both \texttt{\textbackslash AllCapsActive} and \texttt{\textbackslash AllCapsInactive} can be used either as a pair or singly within an explicitly local scope. Use \texttt{\textbackslash global} to force a global effect.

2.3.4 Particles, Medieval Names, and Ancient Names

\texttt{\textbackslash CapName} English names with particles \textit{de, de la, d', von, van, and ten} often keep them with the last name, using varied capitalization.\footnote{According to \cite{Mulvany} and the \textit{Chicago Manual of Style}.} \textit{Le, La, and L’} always are capitalized unless preceded by \textit{de}. See also Sections 1.3.2, 1.5, 2.2.3, and 2.5.

\texttt{\textbackslash nobreakspace} We recommend inserting a tilde (active character for a non-breaking space) or \texttt{\textbackslash nobreakspace} between some particles and names to prevent bad breaks, sorting them with \texttt{\textbackslash PretagName} (Section 2.6.3). Some particles look similar: \textit{L’} (L+apostrophe) and \textit{d’} (d+apostrophe) are two separate glyphs each. In contrast, \textit{L‘} (L+caron) and \textit{d‘} (d+caron) are one Unicode glyph each (Section 2.11.2).
In English and modern Romance languages, e.g., Hernando de Soto shows that these particles go in the \( \text{SNN} \) argument of \Name{de Soto}. When the particle appears at the beginning of a sentence, one must capitalize it:

\CapThis{Soto} De Soto was a famous Spanish explorer in North America.

\CapName overrides the \( \text{SNN} \) created by \CapThis. \CapThis should work with all of the Unicode characters available in the T1 encoding (its mechanism is explained in Section 2.11.2 and on page 78). For a broader set of Unicode characters, consider using \texttt{xeLaTeX} and \texttt{lualatex}.

For another example, we mention poet e.e. cummings. One can have formatted name caps and inflections, e.g.: “Cummings’s motif of the goat-footed balloon man has underlying sexual themes that nevertheless have a childish facade.” The easiest way to do that is from Section 2.6.2:

\ExcludeName[e.e.]{cummings’s}
\SubvertThis\CapThis{Name[e.e.]{cummings’s}}
\IndexName[e.e.]{cummings}

One must use \SubvertThis only for the first use to avoid “E.e. Cummings’s”; all name elements are capped with \CapThis. Using \ExcludeName keeps one from having to use \SkipIndex every time. With \texttt{nameauth} we can use both simple and complex solutions to name variation. See also Section 2.2.3.

Section 2.5 explains how to use \CapThis with alternate formatting when using macros in name arguments. Page 38 describes how automation lends itself to Continental (French, German, etc.) formats and grammatical inflections.

If one uses this package on a system that does not handle Unicode, one can use \AccentCapThis instead of \CapThis to handle active initial characters. Otherwise, one should not need to use \AccentCapThis.

\AccentCapThis

### Examples

Medieval names present some interesting difficulties, often based on the expected standards of the context in which they are used:

1 \PretagName{Thomas, à-Kempis}{Thomas Akempis} \% medieval
2 \PretagName{Thomas}{à-Kempis}{Akempis, Thomas} \% Western
3 \IndexRef{Thomas}{à-Kempis}{Thomas à-Kempis} \% xref
4 \ExcludeName{Thomas,‘a-Kempis} \% alternate form excluded
5 \begin{nameauth}
6 \< KempMed & & Thomas, à-Kempis & > \% medieval
7 \< KempW & Thomas & à-Kempis & > \% Western
8 \end{nameauth}

The medieval forms Thomas à Kempis and Thomas are indexed as “Thomas à Kempis.” The place name \ForceFN\SKempMed “à Kempis” (Latin for von Kempen) technically is not a Western surname. À Kempis \CapThis\ForceFN\SKempMed starts a sentence. Thomas à Kempis \Name{Thomas,‘a-Kempis} is different. À Kempis is \CapThis\SubvertThis\ForceFN\FName{Thomas,‘a-Kempis}. One should use \PretagName to sort the index entry (Section 2.6.3). We excluded this alternate form (Section 2.6.2).
Western forms like \textit{KempW: Thomas à Kempis} are very different from medieval forms and create different index entries. \textit{CapThis\KempW} gives “À Kempis” in the text and “à Kempis, Thomas” in the index.

Above, we created a cross-reference from the Western form to the medieval form, preventing page entries (Section 2.6.2). If we sorted the cross-reference using \textit{PretagName[Thomas]{à~Kempis}{a Kempis, Thomas}}, it would precede aardvark. We use \textit{PretagName[Thomas]{à~Kempis}{Akempis, Thomas}}, which sorts the cross-reference between ajar and alkaline. One should check a style manual for correct sorting (Section 2.6.3).

Ancient contexts may or may not bind particles to surnames. The \textit{⟨alternate⟩} argument, \textit{PretagName}, and \textit{TagName} address this (Sections 2.6.3, 2.6.4).

The next examples do not use the formatting conventions of this manual and sometimes hide details that are specific to this manual in order to keep things simple and reflect normal document usage. See the \textit{dtx} source code for more information. First we use variants with \textit{⟨alternate⟩}:

\begin{verbatim}
1 \NameAddInfo{Demetrius, I}{ Soter}
2 \PretagName{Demetrius, I}{Demetrius 1}
3 \TagName{Demetrius, I}{ Soter, king}
4 \begin{nameauth}
5 \langle Dem & & Demetrius, I & >
6 \end{nameauth}
\end{verbatim}

\textit{Dem[I Soter]} Demetrius I Soter
\textit{\LDem} Demetrius I
\textit{\Dem} Demetrius

For a more automated approach, we can use “text tags” in the formatting macros (see Sections 2.7, 2.10.2).

\begin{verbatim}
7 \makeatletter
8 \renewcommand*{\NamesFormat[1] {%
9 \begingroup
10 \protected@edef\temp{\endgroup{
11 \noexpand\NameQueryInfo
12 \unexpanded\expandafter{\the\@nameauth@toksa}]
13 \unexpanded\expandafter{\the\@nameauth@toksb}}
14 \unexpanded\expandafter{\the\@nameauth@toksc}]
15 }
16 \}
17 \temp%
18 }
19 \makeatother
\end{verbatim}

\textit{ForgetThis Dem} Demetrius I Soter
\textit{\LDem} Demetrius I
\textit{\Dem} Demetrius

Roman names The Roman naming system does present some challenges. As long as we do not use \textit{CapThis}, we do not need alternate formatting (Section 2.5). Earlier we treated Marcus Tullius Cicero as a Western name. Now we show how to handle Roman names more properly.

\footnote{Copies of these examples are in \textit{examples.tex}, collocated with this manual.}
Roman names have a praenomen, a personal name, then a nomen, a clan name, followed by a cognomen, a "nickname," except it could be inherited from one's father to denote clan branches. Added to that are agnomena, affixed names.

Popular sources tend to treat the cognomen as we might a surname, with the indexed form: ⟨cognomen⟩ ⟨agnomen⟩, ⟨praenomen⟩ ⟨nomen⟩. We want all names in the index, so we define macros in ⟨FNN⟩ and ⟨SNN⟩ that expand to become one or two components: praenomen and nomen; cognomen and agnomen. We begin by defining a name with macros using \noexpand to prevent error:

\begin{nameauth}
\Scipio & \noexpand\SCIPi & \noexpand\SCIPii & >
\end{nameauth}
\PretagName{\noexpand\SCIPi}{\noexpand\SCIPii}{Scipio Africanus}

We define the flags and macros by which the name will change. The global state of \NoGens and \NoAgnomen determine the index form. The local scope in the formatting hooks allows changes that are reset when exiting that scope. The logic is inverted; false prints long, true prints short:

\newif\ifSkipGens
\newif\ifNoGens
\newif\ifSkipAgnomen
\newif\ifNoAgnomen
\newcommand*{\SCIPi}{\ifNoGens Publius\else Publius Cornelius\fi}
\newcommand*{\SCIPii}{\ifNoAgnomen Scipio\else Scipio Africanus\fi}
\newcommand*{\ScipioOnly}{\SkipAgnomentrue\Scipio}
\renewcommand*{\NamesFormat}[1]%^^A
{\ifSkipGens\NoGenstrue\fi}{\ifSkipAgnomen\NoAgnomentrue\fi}#1%
\global\SkipGensfalse\global\SkipAgnomenfalse}
\renewcommand*{\MainNameHook}[1]%^^A
{\ifSkipGens\NoGenstrue\fi}{\ifSkipAgnomen\NoAgnomentrue\fi}#1%
\global\SkipGensfalse\global\SkipAgnomenfalse}

Publius Cornelius Scipio \ScipioOnly was born around 236 BC into the Scipio branch of the Cornelius clan, one of six large patrician clans. Scipio \ScipioOnly rose to military fame during the Second Punic War. Thereafter he was known as Scipio Africanus \Scipio.

An advantage of the popular format is that one can drop both praenomen and nomen automatically in subsequent uses. Yet in any case, one can define helper macros to change Boolean flags. The raw index entry is fairly lengthy by necessity, governed by the global state of the Boolean flags, and expanding to:

Scipio Africanus=Scipio Africanus, Publius Cornelius

The Oxford Classical Dictionary and other scholarly sources index under the nomen. That requires a similar approach, but it moves the nomen from ⟨FNN⟩ to ⟨SNN⟩. Although we will not index the name, we will show how to set up Scipio Africanus to work in that alternate configuration.

\begin{quote}
30
\end{quote}

We keep the Boolean flags and formatting hooks from above. We redefine the name in the following manner:

1 \begin{nameauth}
2 \< OScpio & Publius & \noexpand\CSA & >
3 \end{nameauth}
4 \PretagName{Publius}\{\noexpand\CSA}\{Cornelius Scipio Africanus\}

We use a nested conditional in ⟨SNN⟩. The default still is to show all names so that they can be indexed that way. This time we decided to index under the popular form instead of the scholarly one, so we exclude the scholarly form:

1 \newcommand*\CSA{\ifNoGens
2 \ifNoAgnomen
3 Scipio\else
4 Scipio Africanus\fi
5 \else\ifNoAgnomen
6 Cornelius Scipio\else
7 Cornelius Scipio Africanus\fi\fi}
8 \ExcludeName{Publius}\{\noexpand\CSA\}

The scholarly form has a different name pattern, so it is not compatible with the popular version. Nevertheless, we show what the raw index entry of the scholarly form would be. We include some of the more meaningful forms of both versions:

\ShowPattern{Publius}\{\noexpand\CSA\}:
  Publius\noexpand\CSA
\ShowIdxPageref{Publius}\{\noexpand\CSA\}:
  Cornelius Scipio Africanus=Cornelius Scipio Africanus, Publius\hyperpage

First use:
\OScipio: Publius Cornelius Scipio Africanus
\Scipio : Publius Cornelius Scipio Africanus

Subsequent use:
\OScipio: Cornelius Scipio Africanus
\SkipGenstrue\OScipio: Scipio Africanus
\Scipio : Scipio Africanus

Subsequent use, full, no agnomen:
\SkipAgnomentrue\OScipio: Publius Cornelius Scipio
\SkipAgnomentrue\LScipio : Publius Cornelius Scipio

Subsequent use, shortest forms:
\SkipAgnomentrue\OScipio: Cornelius Scipio
\SkipGenstrue\SkipAgnomentrue\OScipio: Scipio
\SkipAgnomentrue\Scipio : Scipio

Subsequent use, personal name:
\SScipio: Publius
\SkipGenstrue\SScipio : Publius

See Sections 1.6, 2.5, and 2.10 for more guidance on avoiding errors when using name arguments that contain macros.
2.4 Basic Formatting

Below are many of the forms and formats that names can have:

### Full Forms, Front Matter

| \NamesInactive \Name | George S. Patton Jr. |
| \Name | Elizabeth I |
| \Name | Yamamoto Isoroku |
| \Name* | George S. Patton Jr. |
| \FName | George S. Patton Jr. |

### Short Forms, Front Matter

| \NamesInactive \Name | Patton; Elizabeth |
| \Name | Yamamoto |
| \FName | George S.; Elizabeth |
| \S(macro) | Yamamoto |

### Later Use (Default)

| \Name* | George S. Patton Jr. |
| \Name* | Elizabeth I |
| \FName | George S. Patton Jr. |
| \S(macro) | Yamamoto |

### Later Use (* or \L(macro))

| \Name* | George S. Patton Jr. |
| \Name* | Elizabeth I |
| \FName | George S. Patton Jr. |
| \S(macro) | Yamamoto |

### Long, with \DropAffix

| \DropAffix\LPat | George S. Patton |

### Full Forms, Main Matter

| \NamesActive \Name | George S. Patton Jr. |
| \Name | Elizabeth I |
| \Name | Yamamoto Isoroku |
| \Name* | George S. Patton Jr. |
| \FName | George S. Patton Jr. |

### Short Forms, Main Matter

| \NamesActive \Name | Patton; Elizabeth |
| \Name | Yamamoto |
| \FName | George S.; Elizabeth |
| \S(macro) | Yamamoto |

### Later Use (Default)

| \Name | Patton; Elizabeth |
| \Name | Yamamoto |
| \FName | George S.; Elizabeth |
| \S(macro) | Yamamoto |

### Later Use (\ForceName)

| \Name | Patton; Elizabeth |
| \Name | Yamamoto |
| \FName | George S.; Elizabeth |
| \S(macro) | Yamamoto |

### Later Use (\ForceFN)

| \FName, \S(macro) | Isoroku |

### Long, with \DropAffix

| \DropAffix\LPat | George S. Patton |
These formatting features of nameauth can work with name control macros (Section 2.8.1) in, for example, beamer overlays to define consistently the context and outcome of how names appear. There are two kinds of formatting at work that interact with each other:

1. **Syntactic Formatting**: Reversing and caps normally occur only in the body text, not the index. Yet macros in name arguments affect both text and index.

2. **Name Post-Processing**: Hook macros apply formatting only to the printed form of a name after parsing. See also Section 2.10.3.

Independent “main-matter” and “front-matter” systems are used to format first and subsequent name uses. The main-matter system uses \NamesFormat to post-process first occurrences of names and \MainNameHook for subsequent uses. The front-matter system uses \FrontNamesFormat for first uses and \FrontNameHook for subsequent uses. The alwaysformat option causes only \NamesFormat and \FrontNamesFormat to be used (cf. Section 1.5).\textsuperscript{15}

\NamesActive and the frontmatter option make names use the front matter system. \NamesActive switches names to the main matter system.

These two macros can be used explicitly as a pair or singly within an explicit local scope. Use \global to force a global effect.

The two formatting systems are distinct, useful for front matter and main matter, text and footnotes, etc. We show this with different colors:

\begin{verbatim}
1 \colorlet{nared}{red!50!black}
2 \colorlet{nagreen}{green!35!black}
3 \colorlet{nablue}{blue!50!black}
4 \colorlet{nabrown}{brown!55!black}
5 \renewcommand*\FrontNamesFormat[1]{\color{nared}\sffamily #1}
6 \renewcommand*\FrontNameHook[1]{\color{nagreen}\sffamily #1}
7 \renewcommand*\NamesFormat[1]{\color{nablue}\sffamily #1}
8 \renewcommand*\MainNameHook[1]{\color{nabrown}\sffamily #1}
\end{verbatim}

\begin{tabular}{|l|l|}
\hline
\textbf{Front-matter system:} & \textbf{\NamesInactive} \\
\hline
\Name[Rudolph]{Carnap} & Rudolph Carnap \\
\Name[Rudolph]{Carnap} & Carnap \\
\Name[Nicolas]{Malebranche} & Nicolas Malebranche \\
\Name[Nicolas]{Malebranche} & Malebranche \\
\hline
\textbf{Main-matter system:} & \textbf{\NamesActive} \\
\hline
\Name[Rudolph]{Carnap} & Rudolph Carnap \\
\Name[Rudolph]{Carnap} & Carnap \\
\Name[Nicolas]{Malebranche} & Nicolas Malebranche \\
\Name[Nicolas]{Malebranche} & Malebranche \\
\hline
\end{tabular}

\textsuperscript{15}The names of these macros may seem poorly conceived. When starting work on this package, this author was ignorant of the breadth of how names might be handled. Designed to meet the needs of a master’s thesis, this package has evolved to meet the needs of several published works. At one time, \NamesFormat was the only macro that did any formatting. The rest came later. A certain degree of cargo cult programming arose, to be corrected in the 3.0 series of nameauth.
\ForceName Use this prefix macro to force “first use” formatting for the next Name, etc.

3.1 This will not force a full name reference like \ForgetThis. One must use the format\AKA option when using this with \AKA, etc. We show \ForceName in Sections 2.8.1, 2.9, and 2.10.2.

alwaysformat Below we simulate the alwaysformat option by manipulating the package internals. Using first-use hooks will not force full name references. This option made more sense when \NamesFormat was the only formatting hook.

- Using alwaysformat in the front matter will produce: Albert Einstein, then Einstein; Confucius, then Confucius.
- Using alwaysformat in the main matter will produce: Marcus Tullius Cicero, then Cicero; Elizabeth I, then Elizabeth.

hook caveats The internal hook dispatcher calls the formatting hooks using the pattern \bgroup\langle Hook\rangle\{#1\}\egroup. Thus one can use, e.g., \itshape in a local scope. One also can use macros that take one argument (cf. Section 2.10.3), e.g., \renewcommand*\NamesFormat{\sffamily\color{nablue}\textit} will create the forms Albert Einstein and Einstein.

applied to footnotes The independent systems or “species” of names fit independent text elements, like front matter or even footnotes. Names in the body text, such as John Maynard Keynes, also affect names in the footnotes.\footnote{We have Keynes from Name[John Maynard]\{Keynes\} instead of John Maynard Keynes.} In footnote 16 \MainNameHook is called instead of \NamesFormat because Keynes already had occurred above.

If we wanted to format names differently in the footnotes than in the body text, an easy way to do that is to use the front-matter system. For example:

1 \makeatletter
2 \let\@oldfntext\@makefntext
3 \long\def\@makefntext#1{\NamesInactive\@oldfntext#1\NamesActive}
4 \makeatother

When we create another footnote, we see very different results.\footnote{We have John Maynard Keynes from Name[John Maynard]\{Keynes\}, then Keynes.} Footnote 17 shows a completely independent formatting. One also can synchronize the two systems with \ForgetThis and \SubvertThis (Section 2.8 and its subsections).

To finish this example, we change footnotes back to normal:

5 \makeatletter
6 \let\@makefntext\@oldfntext
7 \makeatother

Of course, one can force long and short forms as needed (Section 2.8.1). Yet the main point of nameauth is to do the complex work once, then use that in automated fashion for the rest of the document.


2.5 Alternate Formatting

The formatting hooks only affect names in the body text. Continental formatting occurs in both the text and in the index. One needs to format those names with macros in the name arguments. The basic way formats names in both text and index. The advanced way allows changes in the text, but keeps the index consistent.

2.5.1 Basic Features

Section 1.6 showed us that changing a control sequence will change the index entry of a name, even if one cannot see differences on the page. Alternate formatting helps one avert spurious index entries.

Using, e.g., \Name{\textsc{a Name, Problem}} will halt \LaTeX{} because the comma tries to break \textsc{} and its argument into two elements. We fix that with: \Name{\textsc{a Name}, \textsc{Problem}}. Yet \CapThis{} still needs alternate formatting, given that \textsc{} is robust (Section 2.5.2).\footnote{Pre-version 3.1 methods of Continental formatting should work if one uses the altformat option or \AltFormatActive to protect against the default behavior of \CapThis.}

\AltFormatActive Both the altformat option and \AltFormatActive enable and activate alternate formatting. Both cause \CapThis{} to work via \AltCaps instead of the normal way. \AltFormatActive countermands \AltFormatActive*.

- **Enabled** means that the alternate formatting mechanism inhibits the normal behavior of \CapThis.
- **Activated** means that \textsc{} and other alternate formatting macros (see below) format their arguments. When deactivated, they do not format their arguments.

\AltFormatActive At the start of this section we used \AltFormatActive to enable alternate formatting and “switch on” the alternate formatting macros. That is the basic set of conditions for the simple use of alternate formatting.

\AltFormatActive* The starred form \AltFormatActive* enables alternate formatting but deactivates the special formatting macros, preventing them from changing their arguments. It countermands both the altformat option and \AltFormatActive. It causes \CapThis{} only to work via \AltCaps.

\AltFormatInactive To both disable alternate formatting and deactivate the alternate formatting macros, use \AltFormatInactive. This reverts globally to standard formatting and the normal function of \CapThis.

<table>
<thead>
<tr>
<th></th>
<th>Enabled</th>
<th>Activated</th>
</tr>
</thead>
<tbody>
<tr>
<td>\AltFormatActive</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>\AltFormatActive*</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>\AltFormatInactive</td>
<td>■</td>
<td>■</td>
</tr>
</tbody>
</table>

On the next page we describe the formatting macros that are built in to nameauth in order to use the basic features of alternate formatting and provide a foundation for the advanced features. One should use \PretagName{} (Section 2.6.3) to sort the related index entries for these names.
Continental formatting can be as simple as using the short macro \textSC. Three other macros also implement alternate formatting. These macros make changes only when alternate formatting is active. We sort the index entry with \PreTagName and demonstrate the formatting.

\begin{verbatim}
\PreTagName[Greta]{\textSC{Garbo}}{Garbo, Greta}
\PreTagName[Ada]{\textIT{Lovelace}}{Lovelace, Ada}
\PreTagName[Charles]{\textBF{Babbage}}{Babbage, Charles}
\PreTagName[\textUC{Tokugawa}, Ieyasu]{Tokugawa Ieyasu}
\end{verbatim}

\Name[Greta]{\textSC{Garbo}} ...................... Greta GARBO;  GARBO
\Name[Ada]{\textIT{Lovelace}} ..................... Ada Lovelace;  Lovelace
\Name[Charles]{\textBF{Babbage}} ................. Charles Babbage;  Babbage
\Name[\textUC{Tokugawa}, Ieyasu]{Tokugawa Ieyasu}... TOKUGAWA Ieyasu;  TOKUGAWA

Since we switch to Latin Modern Sans in the formatting hooks, the switch to small caps in \textSC Garbo forces a substitution to Latin Modern Roman. This action varies with the font being used.

Using basic alternate formatting, these macros \textbf{always format their arguments} with the \texttt{altformat} option or \texttt{\AltFormatActive}. Likewise, they \textbf{never format their arguments} when \texttt{\AltFormatActive*} is used. To change the formatting of the name arguments, one must use the advanced features. Whenever a naming macro writes to the index, the formatting macros must be in the same Boolean state to avoid spurious index entries. The next section explains more.

As with normal formatting, \texttt{\CapName} interacts with alternate formatting only in the text. Thus Greta \texttt{GARBO} instead of \texttt{Garbo}. \texttt{\RevComma} likewise gives Lovelace, Ada. \texttt{\RevName} produces Ieyasu \texttt{TOKUGAWA}.

A comma delimiter splits the mandatory macro argument into a root and an affix. To avoid errors, format the name and suffix separately.

\begin{verbatim}
\PreTagName[John David]{\textSC{Rockefeller}, \textSC{III}}{Rockefeller, John David 3}
\PreTagName[\textUC{Fukuyama}, Takeshi]{Fukuyama Takeshi}
\begin{nameauth}
\< RIII & John David & \textSC{Rockefeller}, \textSC{III} & >
\< Fukuyama & & \textUC{Fukuyama} & Takeshi & >
\< OFukuyama & & \textUC{Fukuyama} & Takeshi >
\end{nameauth}
\end{verbatim}

From above we get \texttt{John David ROCKEFELLER III}, then \texttt{ROCKEFELLER}. For non-Western names, the new syntax and the older syntax produce the same control sequence that identifies names. Again we are careful to avoid putting the comma delimiter within a container macro.

Only the new syntax allows one to use alternate names in the text (Section \texttt{2.2.2}). For example, “\texttt{LFukuyama[Sensei]} FUKUYAMA Sensei wrote \texttt{Nihon Fukuiin Ruteru Kyokai Shi} in 1954, after studying in the US in the 1930s.”
2.5.2 Advanced Features

A more complex version of alternate formatting allows us to make formatting and other changes in the text while keeping the index consistent. In order to do this, we will be using \textSC, \textIT, \textBF, and \textUC with \noexpand and special triggering macros. Below we briefly see the difference:

\Name{Martin}\textSC{Luther} \hspace{1cm} % basic alternate formatting
\Name{Martin}\noexpand\textSC{Luther} \hspace{1cm} % advanced version

The reason for this approach is that indexing operations occur outside the formatting hooks, never within the hooks, and \noexpand keeps the two separate.

Using \noexpand is key to consistent index entries.

\AltCaps \CapThis causes \AltCaps to cap its argument only in a formatting hook. It is enabled whenever alternate formatting is enabled. \AltCaps works independently of \AltOn and \AltOff:

\noexpand\AltCaps{⟨Arg⟩}

In the example below we redefine \MainNameHook to suppress formatting:

1 \renewcommand*\MainNameHook%\
2 {\color{nabrown}sffamily\AltOff}% we match the manual\
3 \CapThis\Name{\noexpand\AltCaps{a} Name} smells not,\
4 but a rose does. We avoid \Name{\
5 \noexpand\textSC{\noexpand\AltCaps{a} Name},\
6 \noexpand\textSC{Problem}}.
7 \CapThis\Name*{\
8 \noexpand\textSC{\noexpand\AltCaps{a} Name},\
9 \noexpand\textSC{Problem}} will not occur,
10 even if it smells like a rose.
11
What’s in a \textSC{a Name}? A Name smells not, but a rose does. We avoid \textSC{A Name Problem}. A Name Problem will not occur, even if it smells like a rose.

\AltOff Like a manual automobile clutch and gearbox, \AltOff deactivates \textSC, \textBF, \textIT, and \textUC only in a formatting hook.

\AltOn \AltOn activates \textSC, \textBF, \textIT, and \textUC only in a formatting hook. To summarize:

- \textSC and \textBF set global states.
- \AltFormatActive and \AltFormatActive* set global states.
- \AltFormatActive causes formatting in the text and index, as well as forcing the use of \AltCaps.
- \AltFormatActive* inhibits formatting, but still requires one to use \AltCaps.
- \AltOn and \AltOff change local state only in the formatting hooks.
- The user adds \AltOn and \AltOff to the hooks as needed.
- The actual formatting happens via macros in the name arguments.
Keeping the \MainNameHook example above, we have:

1 \begin{nameauth}
2 \< Luth & Martin & \noexpand\textSC{Luther} & >
3 \end{nameauth}
4 \PretagName[Martin]{\noexpand\textSC{Luther}}{Luther, Martin}

We first mention \Luth Martin LUTHER. Then again, \Luth Luther. Medieval Italian differs from modern Italian with respect to particles. Below the index entry should be “MEDICI, Catherine de’” instead of “de MEDICI, Catherine”:

1 \begin{nameauth}
2 \< Cath & Catherine \noexpand\AltCaps{d}e' & >
3 & \noexpand\textSC{Medici} & >
4 \end{nameauth}
5 \PretagName[Catherine \noexpand\AltCaps{d}e']{\noexpand\textSC{Medici}}{Medici, Catherine de}

This gives us Catherine de’ MEDICI and Medici. To get De’ MEDICI and De' Medici in the text, use \CapThis\LCath[\noexpand\AltCaps{d}e'].

We can use alternate formatting for grammatical inflections (cf. Section 2.10.3). We tell the same set of lies that we did on page 29. \DoGentrue occurs only in the formatting hook, thereby keeping the index entries consistent:\footnote{A copy of this example is in \texttt{examples.tex}, collocated with this manual.}

\newif\ifGenitive
\newif\ifDoGen
\renewcommand*\NamesFormat[1]{\ifGenitive\DoGentrue\fi#1\global\Genitivefalse}
\renewcommand*\MainNameHook[1]{\ifGenitive\DoGentrue\fi\AltOff#1\global\Genitivefalse}
\begin{nameauth}
\< Jeff & Thomas & \noexpand\JEFF & >
\end{nameauth}
\PretagName[Thomas]{\noexpand\JEFF}{Jefferson, Thomas}
\TagName[Thomas]{\noexpand\JEFF}{, pres.|hyperpage}
\newcommand\JEFF{\ifDoGen\textSC{Jefferson's}\else\textSC{Jefferson}\fi}

Consider \Genitivetrue\Jeff\ legacy. More on \Jeff later. \Genitivetrue\Jeff\ reputation has declined in recent decades.

Consider Thomas \textsc{Jefferson’s} legacy. More on Jefferson later. Jefferson’s reputation has declined in recent decades.

For highly inflected languages, this would require two Boolean flags per case and nested conditional statements. Now we resume normal formatting with \AltFormatInactive and we do not use the names in this section outside of it.\footnote{In a \texttt{dtx} file it is best to put the nameauth environment, \PretagName, and \TagName macros in the driver section, especially when names contain macros.}
2.6 Indexing Macros

2.6.1 Index Entries and Control

\IndexName Both package users and the naming macros themselves use this macro to create index entries. It prints nothing in the body text:

\IndexName[(FNN)]{(SN, Affix)}[(Alternate)]

If (FNN) is present, it ignores (Alternate) for Western and “native” Eastern name forms. If (FNN) is absent, \IndexName may use the current or obsolete non-Western syntax (Section 1.4). Indexing follows [Mulvany, 152–82].

If \IndexInactive or the noindex option are used, this macro does nothing until \IndexActive appears. Additionally, it will not create index entries for cross-references made by \IndexRef and \AKA. It will not index names excluded by \ExcludeName. This provides some error protection for professional indexing.

\IndexName and \IndexRef call @nameauth@Index, a macro that assembles an index entry from the sort tag (Section 2.6.2), name arguments, and index tag (Section 2.6.4). Different standards exist for index entries and cross-references. Check with your publisher, style guide, and docs for xindy and makeindex.

\IndexActive The noindex option deactivates the indexing function of this package until \IndexActive appears. Another macro, \IndexInactive, will deactivate indexing again. These can be used throughout the document. \IndexInactive suppresses index sorting and tagging macros. Compare the use of macros \ExcludeName and \IncludeName (Section 2.6.2).

\IndexInactive Both the core name engine @nameauth@Name and \AKA have locks that prevent naming macros in the index. Just in case, now one can use \IndexProtect right before printindex to prevent nameauth macros from producing any output.

This example shows the difference between the effects of the older and newer approaches. We use the tag § in this manual’s index, but not below:

<table>
<thead>
<tr>
<th>Macro</th>
<th>Text</th>
<th>.ind file</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>no protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\Name{foo}\Name{bar}</td>
<td>foo</td>
<td>\item foo\Name {bar}</td>
<td>foo\Name {bar}</td>
</tr>
<tr>
<td>(next iteration adds)→</td>
<td></td>
<td>\item bar</td>
<td></td>
</tr>
<tr>
<td>\IndexProtect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>\Name{foo}\Name{bar}</td>
<td>foo</td>
<td>\item foo\Name {bar}</td>
<td>foo</td>
</tr>
<tr>
<td>(no further output results)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\global \IndexActive and \IndexInactive can be used as a pair or singly within a group. These macros override any prefix macros. \IndexProtect also can be used in a local scope. Use \global with these macros to force a global effect.

\SkipIndex The prefix macro \SkipIndex will suppress indexing for just one instance of a naming or cross-referencing macro. It will not alter name forms or formatting. For example, \SkipIndex\Name{Monty}\{Python\} produces Monty Python in the text with no index entry. The same thing again yields Python. Since prefix macros are meant for macros that print a name, both \IndexName and \IndexRef ignore \SkipIndex and allow the Boolean flags set by the prefix macros, to “pass through” to the next naming macro. That may seem counter-intuitive.
This prefix macro makes `\Name`, `\Name*`, `\Fname`, and the shorthands act like a one-time call to `\IndexName`. Flags set by the prefix macros “pass through” to the next naming macro except these three: `\@nameauth@\JustIndexfalse` (obviously), but also `\@nameauth@\FullNamefalse` and `\@nameauth@\FirstNamefalse`.

- Both `\AKA` and `\PName` ignore and reset the flag set by `\JustIndex`.
- `\SkipIndex \JustIndex \Name{A} \Name{B}` is just like `\JustIndex \Name{A} \SkipIndex \Name{B}`. See the table on page 20.
- Version 3.3 eliminates the undocumented behavior that used to occur when not using, e.g., `\JustIndex\Wash`. Now any version will do:
  
  - `\JustIndex\LWash \Wash` old: George Washington new: Washington
  - `\JustIndex\SWash \Wash` old: George new: Washington
- The `oldpass` option restores the old behavior. Cf. Section 2.10.4.

2.6.2 Cross-References

This macro emerged from the macros in Section 2.9. By default, `\IndexRef` creates a see reference from the name defined by its first three arguments to the target in its final argument:

\[
\text{\IndexRef}\{\langle FNN \rangle}\{\langle SNN, Affix \rangle}\{\langle Alternate \rangle\}\{\langle reference target \rangle\}
\]

The name parsing is like `\IndexName`, except that the final argument is neither parsed nor checked if a target entry exists. For example, to cross-reference “Sun King” with Louis XIV use: `\IndexRef\{Sun King\}\{Louis XIV\}`.

When `\IndexRef` calls `\@nameauth@\Index`, a preexisting tag of the form `⟨some text⟩|⟨some macro⟩` is reduced to `⟨some text⟩`. One cannot tag an extant cross-reference, but one can tag a name, then later create a see also reference. For related warnings activated by the `verbose` option, see Section 1.6.

Next we look at variant names and cross-references. Some can be handled with the `⟨Alternate⟩` argument. Others require more work to implement (Section 2.2.3).

- Variant names potentially can have page numbers in index entries. Cross-references cannot have page numbers.
- `\DropAffix\ForgetThis\Name[J.E.]{Carter, Jr.}\{Jimmy\}` gives a variant name: Jimmy Carter indexed under “Carter, J.E., Jr.”
- `\IndexRef\{Jimmy\}\{Carter\}\{Carter, J.E., Jr.\}` makes an xref but prints nothing. We need only create this cross-reference once.
- By contrast, `\AKA` automatically formats the cross-reference name in the text and in the index.
- Yet `\AKA` has limited formatting. Instead, after creating the xref with `\IndexRef`, one can use `\SubvertThis\Name*[Jimmy]{Carter} Jimmy Carter` with full formatting, but without creating any page entries.
- `\SubvertThis` syncs the variant with the canonical form `\DropAffix \Name*[J.E.]{Carter, Jr.}\{Jimmy\}` Jimmy Carter. Otherwise, they would act as different names. See also Section 2.8.2.
If we use \Name{Jimmy}{Carter} we have to index this alternate name with the canonical one: \IndexName{J.E.}{Carter, Jr.}

\SeeAlso Put \SeeAlso before \IndexRef, \AKA, and \PName to make a see also reference for a name that has appeared already in the index. Yet one should mind the caveats:

- If \SeeAlso{Bar}{Foo} occurs on page 10, \Name{Bar} will not create index entries thereafter. A see also ref follows all page refs.
- If \SeeAlso{Bar}{Foo} occurs on page 10, \Name{Foo} will create index entries thereafter because it is the target of “Bar.”
- If \Name{Baz} occurs on page 12 and \IndexRef{Baz}{Meschugge} on page 16, no xref will be created. A see reference has no page refs.

\ExcludeName This macro prevents a name from being used as either an index entry or as an index cross-reference. It will not exclude extant cross-references:

\ExcludeName{(FNN)}{(SNN, Affix)}{(Alternate)}

\IndexRef works best if one needs a cross-reference from a variant to the canonical name. If no cross-reference is needed, then \ExcludeName is used. Unlike \IndexInactive and \IndexActive, this macro works only on a per-name basis. Below we keep specific names and cross-references out of the index:

1 \ExcludeName{Kris}{Kringle}
2 \ExcludeName{Santa}{Claus}
3 \ExcludeName{Grinch}
4 \Name{Kris}{Kringle} Kris Kringle
5 \Name{Kris}{Kringle} Kringle
6 \AKA{Kris}{Kringle}{Santa}{Claus} Santa Claus

For more examples of using \ExcludeName to handle variants, see Sections 2.2.3 and 2.3.4, among others. We will check on the Grinch later.

\IncludeName For those who might need to break the indexing rules set by nameauth, these two macros get the job done. They remove the protections used for exclusion and cross-referencing. These macros have the same syntax as \ExcludeName:

\IncludeName{(FNN)}{(SNN, Affix)}{(Alternate)}
\IncludeName*({FNN}){(SNN, Affix)}{(Alternate)}

\IncludeName only removes an excluded reference created by \ExcludeName while \IncludeName* completely un-protects a cross-reference. Thereafter, one may create page entries for it like a name.

For example, we used \ExcludeName{Attila, the Hun} at the end of Section 1.3.2. Using \IfAKA{Attila, the Hun}{(an xref)}{(no xref)}{(excluded)} tells us that he is (excluded) (cf. Section 2.8.2).

Once we use \IncludeName{Attila, the Hun}, using \LAtil Attila the Hun will create a name and an index entry on this page. \IfAKA now tells us that he is (no xref). We again have a name that can be indexed.

Cross-references get more protection. \IfAKA{Jay}{Rockefeller} (a reference from Section 1.3.2) tells us that he is (an xref). If we follow the previous example and use \IncludeName{Jay}{Rockefeller} he still is (an xref). After using \IncludeName*[{Jay}{Rockefeller} he finally becomes (no xref), removing all protection from that cross-reference.
Advanced Cross-Referencing

\IndexRef will not merge multiple cross-references. One must manually merge cross-references: \IndexRef{Bar}{Baz; Foo} makes the index entry “Bar, see Baz; Foo.” The preferred standard (in the humanities) suggests that one avoid something like \IndexRef{Bar}{Baz} \IndexRef{Bar}{Foo}.

There is a special case where one cross-reference can point to multiple targets, such as demonstrated in the example below:

1 \PretagName{\textit{Snellius}}{Snellius}
2 \IndexRef{\textit{Snellius}}{Snel van Royen, R.; Snel van Royen, W.}
3
4 Both \Name{W.}{Snel van Royen} and
5 his son \Name{R.}{Snel van Royen}[Rudolph] were known
6 by the Latin moniker \Name{\textit{Snellius}}.

Both Willebrord Snel van Royen and his son Rudolph Snel van Royen were known by the Latin moniker Snellius.

\IndexRef prevents page numbers in cross-references, so one must plan how to set up complex cross-references. Above, \Name{\textit{Snellius}} produces no index entry because \IndexRef comes first.

Below, two names are indexed with page numbers. They have see also cross-references to each other. One of those names also has a see reference to it:

- We use the canonical name to set up page references:
  \Name{Maimonides} ......................... Maimonides

- Maimonides has two other names, one more used than the other. We set up his least-used name as the see reference:
  \IndexRef{Moses, ben-Maimon}{Maimonides}
  \Name{Moses, ben-Maimon} .............. Moses ben-Maimon

- We now have a main name with a page entry and a “see reference” to that name. Moses ben-Maimon has no page entries because we made the xref before we started to use the name.

- Before creating see also cross-references, we use the other alternate name so that all the page entries precede the cross-references:
  \Name{Rambam} ............................. Rambam

- All see also references must come after all page references. For example, one could put both of these macros at the end of the document:
  \SeeAlso\IndexRef{Maimonides}{Rambam}
  \SeeAlso\IndexRef{Rambam}{Maimonides}

This space is intentionally left blank.
Continental Format Reference Work

Let us create a macro for entries in a reference work using the basic form of Continental formatting from Section 2.5.1. We enable alternate formatting, set up tags, and define an article with head-words:

\begin{verbatim}
\AltFormatActive
\PretagName[Greta]{\textSC{Garbo}}\{Garbo, Greta\}
\PretagName[Heinz]{\textSC{Rühmann}}\{Ruehmann, Heinz\}
\PretagName[Heinrich Wilhelm]{\textSC{Rühmann}}\{Ruehmann, Heinrich Wilhelm\}
\newcommand{\RefArticle}{% 
  \def\check{#2} \ifx\check\empty \noindent\ForgetThis#1 {#4}\else \noindent\ForceName#1 ''\ForceName#2'' \ForceName#3 {#4}\fi}
\RefArticle
\RefArticle{\Name[Greta]{\textSC{Garbo}}}{}{}{(18 September 1905\,–\,15 April 1990) was a Swedish film actress during the 1920s and 1930s.}
\RefArticle{\IndexRef[Heinrich Wilhelm]{\textSC{Rühmann}}\{\textSC{Rühmann}, Heinz\}\SubvertThis\FName[Heinrich Wilhelm]{\textSC{Rühmann}}\{\SubvertThis\FName[Heinz]{\textSC{Rühmann}}\{\Name[Heinz]{\textSC{Rühmann}}\{(7 March 1902\,–\,3 October 1994) was a German actor in over 100 films.\}}}
\AltFormatInactive
\end{verbatim}

Greta Garbo (18 September 1905–15 April 1990) was a Swedish film actress during the 1920s and 1930s.

Heinrich Wilhelm “Heinz” Rühmann (7 March 1902–3 October 1994) was a German actor in over 100 films.
2.6.3 Index Sorting

The general practice for sorting with `makeindex -s` involves creating your own `.ist` file (pages 659–65 in *The LaTeX Companion*). The following form works with both `makeindex` and `texindy`: `index({sort key}@{actual})`. By default, the “actual” character is @. If one needs to change the “actual” character, such as when using `gind.ist` with `.dtx` files, one would put `\IndexActual{=}` in the preamble (or driver section) before using `\PretagName`.

The `nameauth` package enables automatic index sorting using a “pretag” (see Section 1.5). `\PretagName` creates a sort key terminated with the “actual” character. Do not put the “actual” character in the “pretag”:

```
\PretagName[⟨FNN⟩]{⟨SNN, Affix⟩}[⟨Alternate⟩]{⟨tag⟩}
```

One need only “pretag” names once in the preamble. Thereafter, they will be sorted automatically. For example:

1. `\PretagName[Jan]{Łukasiewicz}{Lukasiewicz, Jan}
2. `\PretagName[Æthelred, II]{Aethelred 2}
3. `\PretagName[W.E.B.]{Du~Bois}{Dubois, W.E.B.}

Every reference to Jan Łukasiewicz, Æthelred II, and W.E.B. Du Bois is automatically tagged and sorted. One also must “pretag” names that contain spaces, macros, active characters, control spaces, non-breaking spaces, and anything that is not basic ASCII. That can differ when using `xindy` and Unicode-based `LaTeX`.

For example, the sort tag `de Soto` precedes `deal` due to the space: `de`. The sort tag `Desoto` falls between `derp` and `determinism`. German ä ö ü ß map to English ae oe ue ss. Yet Norwegian æ ø å follow z in that order. Check a style guide regarding collating sequences, spaces, and sorting. This is where using `xindy` can be very helpful. See also Section 2.3.4.

One can sort names by creating sub-entries, which depends on the index style and formatting files: `\PretagName[Some]{Name}{⟨category⟩!Name, Some}`. See the documentation for `xindy` and `makeindex`.

Below we show how `\PretagName` helps one to avoid manually sorting cross-references (cf. Section 2.3.4):

1. `\PretagName{\textit{Doctor angelicus}}{Doctor angelicus}
2. `\IndexRef{\textit{Doctor angelicus}}{Thomas, Aquinas}
3. `Perhaps the greatest medieval theologian was
4. `\Name{Thomas, Aquinas}, later known as
5. `\Name{\textit{Doctor angelicus}}.

`\PretagName` differs from the other tagging macros because its function is sorting entries, not appending information to entries:

- You can “pretag” any name and any cross-reference.
- You can “tag” and “untag” only page-reference names, not xrefs, but you can turn a page-reference name into a `see also` xref.
- You can undo a “tag” but you cannot undo a “pretag.”
Debugging Problems with Sorting

If an entry is incorrect in the index, check the following:

- Are there any active characters, internal spaces, or control sequences in the name arguments? Use `\PretagName`.
- Is alternate formatting used consistently? Are any names used within sections of alternate formatting ever used outside of them?
- Are macros in the name arguments that can expand differently under different conditions preceded by `\noexpand`?

Since 2018 changes in the way that Unicode characters are handled in `pdflatex` and `latex` have made indexing simpler and more intuitive, e.g.

<table>
<thead>
<tr>
<th>pre-2018</th>
<th>text</th>
<th>index</th>
<th>post-2018</th>
<th>text</th>
<th>index</th>
</tr>
</thead>
<tbody>
<tr>
<td>ä</td>
<td>→</td>
<td>\IeC/uni2423{&quot;a}</td>
<td>ä</td>
<td>→</td>
<td>å</td>
</tr>
<tr>
<td>æ</td>
<td>→</td>
<td>\IeC/uni2423{æ}</td>
<td>æ</td>
<td>→</td>
<td>æ</td>
</tr>
</tbody>
</table>

One can test for this change and take different approaches with:

`\IfFileExists{utf8-2018.def}{{yes}}{{no}}`

One also should look at the entries in the `.idx` or `.ind` files to see how the name arguments and other index entry components are turned into index entries. If there are entries that do not work, one can find the corresponding page numbers in order to identify the problem.

Extra spaces are significant when sorting index entries, yet usually are not significant in the body text. Hidden spaces, tokens, macros, and control sequences create unique index entries that look similar, yet expand and sort differently. Some macros can add spaces to index entries. For example, index tags in this manual that include `\dag` show up as `\dag/uni2423/uni2423` in the index (two trailing spaces). Below we show a general form of macro that adds extra spaces to index entries:

```
\newcommand\Idx[1]{%  
  \protected@edef\arg{#1}%  
  \index{\arg}}
```

```latex
\Idx{\textsc{football}} \rightarrow \textsc{football}\{\textsc/uni2423/uni2423\{football\}\{page\}}
\Idx{\textsc{football}} \rightarrow \textsc{football}\{\textsc/uni2423/uni2423\{football\}\{page\}}
```

2.6.4 Index Tags

`\TagName` This macro creates a tag appended to all index entries for a corresponding `\Name`. The tag persists until one changes it with `\TagName` or destroys it with `\UntagName`. Tags can include life dates, regnal dates, and other information. Both `\TagName` and `\UntagName` handle their arguments like `\IndexName`:

```
\TagName[\{FNN\}\{SNN, Affix\}\{Alternate\}\{tag\}]
\UntagName[\{FNN\}\{SNN, Affix\}\{Alternate\}]
```
All the indexing macros are keyed to the name patterns. `\PretagName` generates the leading sort key. `\TagName` and `\UntagName` affect the trailing content:

```
\index{Aethelred 20 | Ethelred II, king}
```

Tags created by `\TagName` can be helpful in the indexes of academic texts by adding dates, titles, etc. `\TagName` causes the `nameauth` indexing macros to append “„, pope” to the index entries for the popes below:

```
1 \TagName{Leo, I}{, pope}
2 \TagName{Gregory, I}{, pope}
3 Pope \Name{Leo, I} was known as \AKA{Leo, I}{Leo, the Great}.
4 Pope \Name{Gregory, I} was known as \Name{Gregory, I}
5 ‘\ForceFN\AKA*{Gregory, I}{Gregory, the Great}.’
```

Pope Leo I was known as Leo the Great.
Pope Gregory I was known as Gregory “the Great.”

`\TagName` works with all names, but not with cross-references from `\IndexRef`, `\AKA`, etc. (cf. Sections 2.6.2, 2.9). Tags also can be daggers, asterisks, and so on. For example, all fictional names in the index of this manual are tagged with §. One must add any desired spaces to the start of the tag.

We can format and index one name as two different people with `\TagName` and `\ForgetThis` (Section 2.8.1). The index tags group together their respective entries. In a normal LaTeX document one would write, e.g.:

```
1 \TagName[E.]{Humperdinck}{ (composer)}
2 This refers to the classical composer:
3 \Name[E.]{Humperdinck}[Engelbert].
4
5 \TagName[E.]{Humperdinck}{ (singer)}
6 This refers to the pop singer from the 60s and 70s:
7 \ForgetThis\Name[E.]{Humperdinck}[Engelbert].
```

This refers to the classical composer: Engelbert Humperdinck.
This refers to the pop singer from the 60s and 70s: Engelbert Humperdinck.

One can use `\TagName` to create “special” index entries for names with the general form `\TagName{\{Name\}}{\{1\}(`Macro`)}`, when `\def\{Macro\}{#1{#1}}` exists.

### 3.3 These tags are compatible with `hyperref`.

For example, using the `ltxdoc` class with `hypdoc` does not create hyperlinked page entries with `nameauth`. This behavior does not affect normal LaTeX documents that use `nameauth` and `hyperref`. When creating this manual, we had to tag every name with: `\TagName{\{Name\}}{\{\hyperpage\}}` in the driver section of the `.dtx` file.

In the “commented” package documentation part of a `.dtx` file, the vertical bar is active. This adds an extra layer of complexity. Index tags in the documentation part must use the form: `\TagName{\{Name\}}{\string|\hyperpage}`.

---

21 Before version 3.3 these special tags did not work with `hyperref`. The fix was inspired by the answer of Heiko Oberdiek in: [https://tex.stackexchange.com/questions/201720/index-produces-invalid-idx-entry-with-manual-style-commaparse-hyperref](https://tex.stackexchange.com/questions/201720/index-produces-invalid-idx-entry-with-manual-style-commaparse-hyperref)
Below we use the conventions of this manual to create a special tag:

1. \newcommand\Orphan[2][#1\hyperpage(#2)]
2. \TagName[Lost]{Name}{,|\Orphan{perdit}}
3. \Name[Lost]{Name}

Lost Name

idx file: \indexentry{Name, Lost, |\Orphan{perdit}}{(page)}
ind file: \item Name, Lost, pf\Orphan{perdit}{(page)}

The microtype package and its Spacing environment may be the best solution to fix index entries and sub-entries that break badly across columns or pages. Suppose, however, that we wanted to insert manual breaks into an index at will, preferably after the final page reference in an entry.

We cannot just insert something like \newpage. In order to accomplish our goal, we need a helper macro that can take an argument. Below we use \newpage, but if we instead make use of the multicol or idxlayout packages we can replace that with \columnbreak. Two macros illustrate a similar concept:

1. \newcommand*{\EndBreak}[1]{#1\newpage}
2. \makeatletter
3. \newcommand*{\MidBreak}[1]{#1\newpage\@gobble}
4. \makeatother

Putting a break into the middle of an index entry is quite sketchy and probably should be avoided, but it can be done by using \@gobble to eat the comma after the break. Instead, breaking after the entry is preferable. That entry is a list of page numbers corresponding to several pages:

(page 10) Name{Some, Name}
...
(page 15) Name{Some, Name}
...
(page 18) TagName{Some, Name|EndBreak} Name{Some, Name}

If all instances of Name{Some, Name} on page 18 have the same tag, there will be no duplicate page entries, hyperref will work, and the index will break after:

Some Name ... 10, 15, 18

We can use the same macros in manual index entries. We may need to look at the \idx or \ind files to craft matching entries on the page that corresponds to the placement of the break.\textsuperscript{22}

\idxfile{(page 18) \SkipIndex\Name{Some, Name}|\index{Some Name|EndBreak}}

\textsuperscript{22}Results vary, depending on what distribution of LATEX is being used and how old it is. As we saw in the previous section, any name with active characters needs to be handled differently before 2018 than after 2018.

Back to Section 1.2
2.7 “Text Tags”

Unlike index tags, “text tags” are not printed automatically with every name managed by `nameauth`. Sections 2.8.2 and 2.10.2 have more examples. The macro is \long, allowing for some complexity in the \textit{tag} argument:

\[
\texttt{\NameAddInfo[(FNN)]{(SNN, Affix)}{(Alternate)}{(tag)}}
\]

For example, \NameAddInfo[George]{Washington}{(1732--99)} makes a text tag but does not print whenever \textit{Washington} is used.

\NameQueryInfo

To print the text tag macro associated with a name, we use \NameQueryInfo, which calls the appropriate macro in the name info data set:

\[
\texttt{\NameQueryInfo[(FNN)]{(SNN, Affix)}{(Alternate)}}
\]

\NameQueryInfo[George]{Washington} expands to (1732--99). One can insert a space at its start or use signs like asterisks, daggers, and even footnotes, such as one for Schuyler Colfax.\footnote{He was the seventeenth US vice-president, holding office during the first term (1869--73) of \Name[Ulysses S.]{Grant}.} Below is the source for footnote 23:

\begin{verbatim}
1 \NameAddInfo{Ulysses S.}{Grant}{(president from 1869 to 1877)}%  
2 \NameAddInfo{Schuyler}{Colfax}{\footnote{He was the seventeenth US vice-president, holding office during the first term (1869--73) of \Name[Ulysses S.]{Grant}.}}  
3 ...\Name[Schuyler]{Colfax}.\NameQueryInfo[Schuyler]{Colfax}
\end{verbatim}

Since one can nest “text tags” or have them call each other, one can build complex relations. Yet one must protect against a stack overflow by using Boolean flags to stop the recursion:

\begin{verbatim}
1 \newif\ifA  
2 \newif\ifB  
3 \NameAddInfo{A}{{
4 \true A \ifB Stop \else \NameQueryInfo{B} \fi \false}
5 \NameAddInfo{B}{{
6 \true B \ifA Stop \else \NameQueryInfo{A} \fi \false}
\NameQueryInfo{A} -> A B Stop
\NameQueryInfo{B} -> B A Stop
\end{verbatim}

\NameClearInfo

\NameAddInfo will replace one text tag with another text tag, but it does not delete a text tag. That is the role of \NameClearInfo. The syntax is:

\[
\texttt{\NameClearInfo[(FNN)]{(SNN, Affix)}{(Alternate)}}
\]

After using \NameClearInfo[George]{Washington}, the next attempt to query the tag \NameQueryInfo[George]{Washington} will produce nothing.\footnote{Had any information from a text tag been present, it would have appeared between “nothing” and the full stop.}

Back to Section 1.2
2.8 Name Decisions

The macros in this section force and detect name states. Below we keep names consistent with \texttt{beamer} overlays using some of the macros explained in this section. Otherwise, name forms will change as one advances the slides:  

\begin{verbatim}
\documentclass{beamer}
\usepackage{nameauth}
\mode<presentation>
\beamertemplateoverlayspecification{<+->}
\begin{document}
\begin{frame}{Move Text Without Retyping Names}
\begin{itemize}
\item<1-> Original\texttt{\textbackslash Rename}[George]{Washington}\%
\texttt{\textbackslash Rename}[George]{Washington’s}\\%
\texttt{\textbackslash Name}[Martin]{Van Buren} changes after the first overlay.
\item<2-> \texttt{\IfMainName}[George]{Washington’s}{He}\%
{\texttt{\Name}[George]{Washington}} became the first president of the United States.
\item<3-> \texttt{\IfMainName}[George]{Washington}{His}\%
{\texttt{\SkipIndex\Name}*[George]{Washington’s}} military successes during the Seven Years War readied him to command the army of the Continental Congress.
\end{itemize}
\item<1-> Reordered\texttt{\textbackslash Rename}[George]{Washington}\%
\texttt{\textbackslash Rename}[George]{Washington’s}\\%
\texttt{\textbackslash ForgetThis}\texttt{\Name}[Ulysses S.]{Grant} does not change.
\begin{enumerate}
\item<3-> \texttt{\IfMainName}[George]{Washington}{His}\%
{\texttt{\SkipIndex\Name}*[George]{Washington’s}} military successes during the Seven Years War readied him to command the army of the Continental Congress.
\item<2-> \texttt{\IfMainName}[George]{Washington’s}{He}\%
{\texttt{\Name}[George]{Washington}} became the first president of the United States.
\end{enumerate}
\end{itemize}
\end{frame}
\end{document}
\end{verbatim}

The overlays, numbered progressively from one to three, begin by deleting name control sequence patterns. Uncontrolled names will change. Name conditionals ensure specific, context-dependent forms based on what name has appeared. These conditionals allow the text to be order-independent.

\footnote{A copy of this example is in \texttt{examples.tex}, collocated with this manual.}
2.8.1 Making Decisions

By default, the macros below produce global effects. They change both the \MN and \NF data sets (Section 1.5). With \ForceName (Section 2.4), they change formatting. Apart from \ForceName, they also change long or short name forms and the outcome of the testing macros in the next section:

<table>
<thead>
<tr>
<th>Defaults</th>
<th>Name Length</th>
<th>Format Hooks</th>
<th>Test Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-First Use</td>
<td>Long</td>
<td>First</td>
<td>False</td>
</tr>
<tr>
<td>Subsequent Use</td>
<td>Long or short</td>
<td>Subsequent</td>
<td>True</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modifications</th>
<th>Form</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>\SubvertThis\LAnth</td>
<td>Susan B. Anthony</td>
<td>force subsequent use force long form</td>
</tr>
<tr>
<td>\ForceName\SAnth</td>
<td>Susan B.</td>
<td>default subsequent use force first-use format</td>
</tr>
<tr>
<td>\ForgetThis\SAnth</td>
<td>Susan B. Anthony</td>
<td>force first use; default long default first-use format</td>
</tr>
<tr>
<td>\SAnth</td>
<td>Susan B.</td>
<td>default subsequent use default short form</td>
</tr>
</tbody>
</table>

This macro takes the same arguments as \Name. It “forgets” a name, forcing a “pre-first use” state that will trigger a first-time name use:

\ForgetName[(FNN)]{(SNN, Affix)}[(Alternate)]

This prefix macro causes the next instance of a naming macro or shorthand to “forget” a name before printing it. After knowing \Einstein “Einstein” we forget him and again have a first reference: \ForgetThis\Einstein “Albert Einstein.”

This macro takes the same arguments as \Name. It “subverts” a name, creating a name pattern control sequence and forcing a “subsequent use” case:

\SubvertName[(FNN)]{(SNN, Affix)}[(Alternate)]

This prefix macro causes the next instance of a naming macro or shorthand to “subvert” a name before printing it. As in the table on page 20, \ForgetThis has a higher priority than \SubvertThis and nullifies it when used together.

\LocalNames restricts the effects of the macros above to the current naming system. \GlobalNames restores the default behavior. We define a macro that reports whether a name exists in the main matter, front matter, both, or none:

1 \def\CheckChuck{\textbf{\IfFrontName[Charlie]{Chaplin}}% 2 \{\IfMainName[Charlie]{Chaplin}{both}{front}\}% 3 \{\IfMainName[Charlie]{Chaplin}{main}{none}\}}

We start with no extant name:

\CheckChuck ...................................... none

We create a name in the “main matter”:

\Name*[Charlie]{Chaplin}....................... Charlie Chaplin
\CheckChuck ...................................... main
We switch to the “front-matter” and create a name, but since we are using the quote environment, we add \global:

\global\NamesInactive
\Name*[Charlie]{Chaplin}..................Charlie Chaplin
\CheckChuck..............................both

We now have two names. Their patterns are:

Charlie!Chaplin!MN
Charlie!Chaplin!NF

We use \Localnames to make \ForgetName and \SubvertName work with only the front-matter system. Then we “forget” the front-matter name:

\LocalNames
\ForgetName[Charlie]{Chaplin}
\CheckChuck..............................main

Next we “subvert” the front-matter name to “remember” it again and switch to main matter, again using \global to ignore scoping.

\SubvertName[Charlie]{Chaplin}
\global\NamesActive
\CheckChuck..............................both

We forget the main-matter name and additionally reset the default behavior so that \ForgetName and \SubvertName work with both systems:

\ForgetName[Charlie]{Chaplin}
\GlobalNames
\CheckChuck..............................front

Finally, we forget everything. Even though we are in a main-matter section, the front-matter name also goes away:

\ForgetName[Charlie]{Chaplin}
\CheckChuck..............................none

Back to Section 1.2

2.8.2 Testing Decisions

The macros in this section test for the presence or absence of a name, then expand based on the result. For example, they can synchronize information between a float and body text by each testing whether a name exists and making decisions about the information accordingly.

\IfMainName

In order to test whether or not a “main matter” name control sequence exists, use this long macro that can accommodate paragraph breaks:

\IfMainName[(FNN)]{(SNN, Affix)}{(Alternate)}{(yes)}{(no)}

For example, because we have not seen the equivalent of \Name[Bob]{Hope} or \SubvertName[Bob]{Hope}, we try the following test and get:
\IfMainName[Bob]{Hope}{Bob here!}{No Bob.} . . . . . . No Bob.

Still, we can create an index entry here with \IndexName[Bob]{Hope} and it will not affect the test above. Since, however, we have encountered the equivalent of \Name[Elizabeth,I] many times in the document, we get the following result:

\IfMainName[Elizabeth,I]{Bess here!}{No Bess.} . . . . . . Bess here!

\IfFrontName

In order to test whether or not a “front matter” name control sequence exists, use this long macro that can accommodate paragraph breaks. Its syntax is:

\IfFrontName[(FNN)]{(SNN, Affix)}{(Alternate)}{(yes)}{(no)}

This macro works like \IfMainName, except using the “front matter” name control sequences as the test subject.

For example, based on Section 2.4, we see that “Carnap is both” a main-matter and front-matter name with the following test:

1 \IfFrontName[Rudolph]{Carnap} %
2 {%
3 \IfMainName[Rudolph]{Carnap} %
4 \Name[Rudolph]{Carnap} is both %
5 \Name[Rudolph]{Carnap} is only front-matter %
6 %
7 {%
8 \IfMainName[Rudolph]{Carnap} %
9 \Name[Rudolph]{Carnap} is only main-matter %
10 \Name[Rudolph]{Carnap} is not mentioned %
11 }

\IfAKA

This macro tests whether or not a regular or excluded form of cross-reference control sequence exists. The syntax is:

\IfAKA[(FNN)]{(SNN, Affix)}{(Alternate)}{(y)}{(n)}{(excluded)}

This macro works like \IfMainName, although it has an additional \textit{(excluded)} branch in order to detect the activity of \ExcludeName (Section 2.6.2).

Cross-references are governed by name control sequences ending in !PN (Section 1.5). Regular cross-reference control sequences (the \textit{(y)} path) expand to empty. Excluded control sequences (the \textit{(excluded)} path) expand to !.

\ExcludeName creates excluded xrefs; \IncludeName destroys them. Regular xrefs are created by \IndexRef, \AKA, \AKA*, and \PName; they are destroyed by \IncludeName*. Here is how we use this logic:

1. In the text we refer to former pro-wrestler and Minnesota governor \Name[Jesse]{Ventura}.
2. We establish his lesser-known legal name as an alias: “James Janos,” \IndexRef[James]{Janos}{Ventura, Jesse}\Name[James]{Janos}.
3. We get the result: “Jesse Ventura is a stage name.” If we do not use \ExcludeName, we can leave the \textit{(excluded)} branch empty:

1 \IfAKA[James]{Janos} %
2 {\Name*[Jesse]{Ventura} is a stage name} %
3 {\Name*[Jesse]{Ventura} is a regular name} %
4 {}
Otherwise, based on Section 2.6.2, we get: “Grinch is excluded”:

\IfAKA{Grinch}%
\begin{itemize}
\item \Name{Grinch} is an alias%
\item \Name{Grinch} is not an alias%
\end{itemize}

We can combine all these macros create a complete test:

\IfAKA[FNN]{SNN, Affix}[Alternate]%
\begin{itemize}
\item true; it is a pseudonym%
\item \% if not a pseudonym:
\IfFrontName[FNN]{SNN, Affix}[Alternate] % yes path
\IfMainName[FNN]{SNN, Affix}[Alternate] %
\begin{itemize}
\item both%
\item front%
\end{itemize}
\IfMainName[FNN]{SNN, Affix}[Alternate] % no path
\begin{itemize}
\item main%
\item does not exist%
\end{itemize}
\end{itemize}
\end{itemize}

We can use the text tag macros with the conditional macros to present information that depends on what names have already occurred. One must avoid unbounded recursion that results in a stack overflow (Section 2.7):

\IndexRef{Paul}{Saul of Tarsus}
\NameAddInfo{Saul, of Tarsus}{\IfMainName{Jesus, Christ}
\IfMainName[Lucius]{Sergius Paulus}
\text{renames himself \Name{Paul}}
\text{a preacher to the Gentiles}}
\Name{Saul, of Tarsus} \NameQueryInfo{Saul, of Tarsus}. He saw a vision of \Name{Jesus, Christ} on the road to Damascus and became \NameQueryInfo{Saul, of Tarsus}. After converting \Name[Lucius]{Sergius Paulus}, \Name{Saul, of Tarsus} in honor of that.

\textbf{Saul of Tarsus} wrote that he persecuted Christians. He saw a vision of \textbf{Jesus Christ} on the road to Damascus and became a preacher to the Gentiles. After converting \textbf{Lucius Sergius Paulus}, Saul renamed himself \textbf{Paul} in honor of that.

Using these tests inside other macros or passing control sequences to them may create false results (see \texttt{The \TeX{}book}, 212–15). That is why \texttt{nameauth} uses token registers to save name arguments (Section 2.10.2). Consider using \texttt{\noexpand} in macros passed as name arguments and see also Section 2.11.2. Using the \texttt{trace} package, \texttt{\show}, or \texttt{\meaning} can help one mitigate problems.
2.9 Alternate Name Macros

The macros in this section predate \IndexRef and have a syntax and behavior recalling early package versions.\footnote{Before version 3.0 the lack of modularity resulted in separate name parsing, name display, and indexing for the naming macros and the alternate name macros. The version 3 series has corrected many early missteps while remaining compatible.} Using \IndexRef with \Name can be more flexible (cf. page 41). To save space, we show the syntax of these macros using \langle SAFX \rangle as the equivalent of \langle SNN, Affix \rangle. Common properties include:

- These macros do not create page references.
- The target \langle FNN \rangle{\langle SAFX \rangle} comes before the xref printed in the text: \langle xref FNN \rangle{\langle xref SAFX \rangle}{\langle xref Alternate \rangle}.
- The obsolete syntax cannot be used with \langle FNN \rangle{\langle SAFX \rangle}.
- Only the \langle SAFX \rangle and \langle xref SAFX \rangle arguments are able to use comma-delimited suffixes.
- One cannot use \TagName with a cross-reference, but one can sort it with \PretagName{\langle xref FNN \rangle}{\langle xref SAFX \rangle}{\langle xref Alternate \rangle}.

\AKA (also known as) and its starred form display an alias in the text and create a cross-reference in the index. They display and format names differently than the name macros:

\AKA, \AKA*

Both macros create a cross-reference in the index from the \langle xref FNN \rangle, \langle xref SAFX \rangle, and \langle xref Alternate \rangle arguments to a target defined by \langle FNN \rangle and \langle SAFX \rangle, regardless of whether that name exists. The order of the name and cross-reference in \AKA is opposite that of \IndexRef. Otherwise the \langle xref Alternate \rangle argument would be ambiguous with \langle FNN \rangle. \AKA prints a long form of the cross-reference name in the text. \SeeAlso works with \AKA, \AKA*, and \PName.

\AKA prints the \langle xref FNN \rangle and \langle xref SAFX \rangle arguments in the body text. If \langle xref Alternate \rangle is present with \langle xref FNN \rangle, \AKA swaps them in the text. If \langle xref Alternate \rangle is present without \langle xref FNN \rangle, the old syntax is triggered, which we do not recommend. The caps and reversing macros work with \AKA.

\AKA* prints short name references like \FName, meaning that \ForceFN works with it in the same manner. For the older behavior of \AKA* use the oldAKA option or always precede \AKA* with \ForceFN.

We make cross-references to Bob Hope, where all of the forms below create the cross-reference “Hope, Leslie Townes see Hope, Bob”:

| \AKA[Bob]{Hope}{Leslie Townes}{Hope} | Leslie Townes Hope |
| \RevComma\AKA[Bob]{Hope}{Leslie Townes}{Hope} | Hope, Leslie Townes |
| \AKA[Bob]{Hope}{Leslie Townes}{Hope}[Lester T.] | Lester T. Hope |
| \AKA*[Bob]{Hope}{Leslie Townes}{Hope} | Leslie Townes |
| \AKA*[Bob]{Hope}{Leslie Townes}{Hope}[Lester] | Lester |
Next we have references to Louis XIV, Lao-tzu, and Gregory I, as well as Lafcadio Hearn and Charles du Fresne:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Alternate Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louis XIV</td>
<td>AKA{Louis, XIV}{Sun King}</td>
</tr>
<tr>
<td>Lao-tzu</td>
<td>AKA{Lao-tzu}{Li, Er}</td>
</tr>
<tr>
<td>Gregory I</td>
<td>AKA{Gregory, I}{Gregory}{the Great}</td>
</tr>
<tr>
<td>Lafcadio Hearn</td>
<td>AKA{Lafcadio}{Hearn}{Koizumi, Yakumo}</td>
</tr>
<tr>
<td>Charles du Fresne</td>
<td>AKA{Charles}{du Fresne}{du Cange}</td>
</tr>
</tbody>
</table>

formatAKA \AKA and its derivatives use \MainNamesHook and \FrontNamesHook to print the cross-reference because that helped keep cross-references distinct from names in early package versions.

The formatAKA package option allows first-use formatting of alternate names, but cross-references use their own system for being “first” (Section 1.5). We simulate formatAKA and use \AKA{Elizabeth,I}{Good Queen}{Bess}. The colors indicate which hooks are used.

**Front Matter:** Elizabeth I was known as “Good Queen Bess.”
Again we mention Queen Elizabeth, “Good Queen Bess.”
\ForceName: Good Queen Bess.

**Main Matter:** Elizabeth I was known as “Good Queen Bess.”
Again we mention Queen Elizabeth, “Good Queen Bess.”
\ForceName: Good Queen Bess.

The first appearance of the cross-reference uses the first-use hooks of whatever naming system is active. Thereafter we only use the subsequent-use hooks of both systems unless we use \ForceName.

**alwaysformat** Below we compare the behavior of the alwaysformat option, where all regular names use only \NamesFormat and \FrontNamesFormat:

**Front Matter:** Elizabeth I was known as “Good Queen Bess.”
Again we mention Queen Elizabeth, “Good Queen Bess.”
\ForceName: Good Queen Bess.

**Main Matter:** Elizabeth I was known as “Good Queen Bess.”
Again we mention Queen Elizabeth, “Good Queen Bess.”
\ForceName: Good Queen Bess.

**\PName** These convenience macros (an early feature) print a main name and a cross-reference in parentheses:

\PName [(FNN)]{(SAFX)}{(xref FNN)}{(xref SAFX)}{(xref Alternate)}
\PName* [(FNN)]{(SAFX)}{(xref FNN)}{(xref SAFX)}{(xref Alternate)}

The starred form \PName* is like the starred form \Name* to the extent that it prints a long form of ⟨FNN⟩⟨SAFX⟩. It does not affect the cross-reference arguments ⟨xref FNN⟩⟨xref SAFX⟩⟨xref Alternate⟩.
Except \SkipIndex, prefix macros only affect $\langle FNN \rangle \langle SAFX \rangle$, not the cross-reference, which always takes a long form. \SkipIndex keeps both names out of the index. \PName cannot use the obsolete syntax for the main name, but it can do so for the alternate name.

<table>
<thead>
<tr>
<th>Recommended Macro / Output</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>\PName[Mark]{Twain}%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Mark Twain (Samuel L. Clemens)</td>
<td>Clemens, Samuel L. see Twain, Mark</td>
</tr>
<tr>
<td>Twain (Samuel L. Clemens)</td>
<td>Clemens, Samuel L. see Twain, Mark</td>
</tr>
<tr>
<td>\PName*[Mark]{Twain}%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Mark Twain (Sam Clemens)</td>
<td>Clemens, Samuel L. see Twain, Mark</td>
</tr>
<tr>
<td>\PName{Voltaire}%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltaire (François-Marie Arouet)</td>
<td>Arouet, François-Marie see Voltaire</td>
</tr>
<tr>
<td>Voltaire (François-Marie Arouet)</td>
<td>Arouet, François-Marie see Voltaire</td>
</tr>
<tr>
<td>\PName{William, I}%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>William I (William the Conqueror)</td>
<td>William the Conqueror see William I</td>
</tr>
<tr>
<td>William (William the Conqueror)</td>
<td>William the Conqueror see William I</td>
</tr>
<tr>
<td>\PName*[William, I]%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>William I (William the Conqueror)</td>
<td>William the Conqueror see William I</td>
</tr>
<tr>
<td>\PretagName%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>\textit{Doctor mellifluus}%</td>
<td>Doctor mellifluus see Bernard of Clairvaux</td>
</tr>
<tr>
<td>\PName{Bernard, of Clairvaux}%</td>
<td>Doctor mellifluus see Bernard of Clairvaux</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>\ForgetThis\PName{Lao-tzu}{Li, Er}%</td>
<td>Li Er see Lao-tzu</td>
</tr>
<tr>
<td>Lao-tzu (Li Er)</td>
<td>Li Er see Lao-tzu</td>
</tr>
<tr>
<td>Lao-tzu (Li Er)</td>
<td>Li Er see Lao-tzu</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discouraged Macro / Output</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>\PName{William, I}{William}%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>William (William the Conqueror)</td>
<td>William the Conqueror see William I</td>
</tr>
<tr>
<td>\PName{Lao-tzu}{Li}%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Lao-tzu (Li Er)</td>
<td>Li Er see Lao-tzu</td>
</tr>
<tr>
<td>Lao-tzu (Li Er)</td>
<td>Li Er see Lao-tzu</td>
</tr>
</tbody>
</table>

The newer non-Western syntax does not work with \PName. If we attempted to use \SkipIndex\PName*[William, I]{William}{the Conqueror}, this macro would put “William I (William the Conqueror)” in the body text, but its index entry would be incorrect: “the Conqueror, William see William I”.

Back to Section 1.2
2.10 Longer Examples

Examples from the remainder of this manual are in `examples.tex`, included with the `nameauth` documentation.

When creating package documentation, any name that has a macro in its argument should be set up in the driver section (the `nameauth` environment and tags from \texttt{\PretagName} and \texttt{\TagName}). Otherwise, errors can result.

2.10.1 Hooks: Intro

In these sections on advanced topics we reset all formatting hooks to do nothing. This helps us focus on the modifications made hereafter.

Before we get to the use of text tags and name conditionals in name formatting, we seek to illustrate that something more complex than a font switch can occur in \texttt{\NamesFormat}. Below we put the first mention of a name in boldface, along with a marginal notation if possible.

```
\let\OldFormat\NamesFormat
\renewcommand*{\NamesFormat}[1]{\textbf{#1}\unless\ifinner\marginpar{\raggedleft\scriptsize #1}\fi}
\let\NamesFormat\OldFormat
\PretagName{Vlad, Ţepeş}{Vlad Tepes} % for accented names
\TagName{Vlad, II}{ Dracul} % for index information
\TagName{Vlad, III}{ Dracula}
```

Within the document after the preamble:

```
Name{Vlad, III}[III Dracula], known as
\AKA{Vlad III}{Vlad, Ţepeş} (the Impaler)
after his death, was the son of Name{Vlad, II}[II Dracul], a member of the Order of the Dragon. Later references to "Vlad III" and "Vlad" appear thus.
```

Now we have reverted to the default \texttt{\NamesFormat} and we get:

```
\ForgetThis\Name{Vlad, III}[III Dracula]... Vlad III Dracula
\Name{*}{Vlad, III}.................................Vlad III
\Name{Vlad, III}.................................Vlad
```

We also set up the cross-reference \texttt{\IndexRef{Dracula}{Vlad III}}. Compare the examples for Demetrius I in Section 2.3.4.
2.10.2 Hooks: Life Dates

We can use name conditionals (Section 2.8.2) and text tags (Section 2.7) to add life information to names when desired.

The example \NamesFormat below adds a text tag to the first occurrences of main-matter names. It uses internal macros of \@nameauth@Name. To prevent errors, the Boolean values \if@nameauth@InName and \if@nameauth@InAKA are true only within the scope of \@nameauth@Name and \AKA respectively.

This package makes three token registers available to facilitate using the name conditional macros as we do below. These registers are necessary for names that contain accents and diacritics.\footnote{In \AKA these registers correspond to the last three arguments, the xref.}

Below the first use of a name is in small caps. Text tags are in boldface with naming macros, and roman with \AKA. Just because we set up a cross-reference does not mean that we use \AKA by default, as was the case in early versions of nameauth. We use \ForceName to use it more than once with \AKA:

\begin{verbatim}
\newif\ifNoTag% allows us to work around \ForgetName
\let\OldFormat\NamesFormat
\let\OldFrontFormat\FrontNamesFormat
\makeatletter
\renewcommand*{\NamesFormat[1]}{\begingroup%
\protected@edef\temp{\endgroup\textsc{#1}%
\unless\ifNoTag%
\if@nameauth@InName
{\bfseries\noexpand\NameQueryInfo
[unexpanded]\expandafter{\the\@nameauth@toksa}]
{\unexpanded}\expandafter{\the\@nameauth@toksb}]
{\unexpanded}\expandafter{\the\@nameauth@toksc}]
\fi
\if@nameauth@InAKA
{\normalfont\noexpand\NameQueryInfo
[unexpanded]\expandafter{\the\@nameauth@toksa}]
{\unexpanded}\expandafter{\the\@nameauth@toksb}]
{\unexpanded}\expandafter{\the\@nameauth@toksc}]
\fi}
\temp\global\NoTagfalse%
\fi}%
\let\FrontNamesFormat\NamesFormat
\makeatother
\let\FrontNamesFormat\NamesFormat
\end{verbatim}

We print tags in the first use hooks unless \NoTag is set true. This method uses the two $\epsilon$-TEX primitives \noexpand and \unexpanded to avoid repetition of \expandafter. Since nameauth depends on eToolbox, we assume $\epsilon$-TEX.

Before we can refer to any text tags, we must create them. Using the approach above, we include a leading space in the text tags. The leading space is needed only when a text tag appears.\footnote{Another way to add that space is to put it in the conditional path of the formatting hook and leave it out of the text tags entirely: \ldots( }\noexpand\NameQueryInfo\ldots

\begin{verbatim}
\NameAddInfo[George]{Washington}{ (1732--99)}
\NameAddInfo[Mustafa]{Kemal}{ (1881--1938)}
\NameAddInfo{Atatürk}{ (in 1934, a special surname)}
\IndexRef{Atatürk}{Kemal, Mustafa}
\end{verbatim}
Now we begin with the first example, which, after all the setup, looks deceptively simple, but highly reusable without extra work:

26 \ForgetThis\Wash held office 1789--97.
27 No tags: Wash.\ \\ 
28 First use, dates suppressed: \NoTagtrue\ForgetThis\Wash.

George Washington (1732–99) held office 1789–97.
No tags: Washington.
First use, dates suppressed: George Washington.

Since we already set up a cross-reference with \IndexRef, we can use just the the naming macros with “Atatürk” and get the desired formatting without any page references in the index:

29 \Name[Mustafa]{Kemal} was granted the name
30 \Name{Atatürk}. We mention \Name[Mustafa]{Kemal}
31 and \Name{Atatürk} again.
32
33 First use, no tag:
34 \NoTagtrue\ForgetThis\Name{Atatürk}.

Mustafa Kemal (1881–1938) was granted the name Atatürk (in 1934, a special surname). We mention Kemal and Atatürk again.
First use, no tag: Atatürk.

Since we set up distinct formatting for \AKA (\normalfont instead of boldface for text tags associated with cross-references), we now simulate the formatAKA package option and use \ForceName with \AKA:

35 \makeatletter\nameauth@AKAFormattrue\makeatother
36 \ForgetThis\Name[Mustafa]{Kemal} was granted the name
37 \ForceName\AKA[Mustafa]{Kemal}{Atatürk}. We mention
38 \Name[Mustafa]{Kemal} and \AKA[Mustafa]{Kemal}{Atatürk} again.
39
40 First use, no tag:
41 \NoTagtrue\ForceName\AKA[Mustafa]{Kemal}{Atatürk}.

Mustafa Kemal (1881–1938) was granted the name Atatürk (in 1934, a special surname). We mention Kemal and Atatürk again.
First use, no tag: Atatürk.

Please remember to reset the formatting:

42 \let\NamesFormat\OldFormat
43 \let\FrontNamesFormat\OldFrontFormat

Back to Section 1.2
2.10.3 Hooks: Advanced

Alternate Formatting

3.1 The alternate formatting framework provides features that aid both error protection and ease of use. This section uses `\AltFormatActive`. We do not use the names in this section elsewhere. A name designed for the alternate formatting regime may cause spurious index entries when used in the default formatting regime.

Both `\AltFormatActive` and `\AltFormatActive*` set the internal Boolean flag `\nameauth@AltFormattrue`, enabling alternate formatting. `\AltFormatActive` sets `\nameauth@DoAlttrue`, which activates formatting. `\AltFormatInactive` sets both flags false.

`\AltFormatActive*` normally suppresses formatting changes but still forces `\CapThis` to work through `\AltCaps`. This produces the default look of nameauth and prevents Continental formatting, but it also reduces spurious index entries and errors if many names use macros in their arguments.

Alternate formatting protects against errors created when `\@nameauth@Cap` (used by `\CapThis`) gets a failure result from `\@nameauthUTFtest`, but that result is neither a letter nor a macro that expands to a sequence of letters. Protected macros and other cases may create errors if `\MakeUppercase` is applied to them. `\AltCaps` and `\CapThis` work together to avoid this problem (Section 2.5).

Continental Format

Here we look in greater detail at how nameauth implements the advanced version of Continental formatting. Font changes occur in the short macros `\textSC`, `\textIT`, `\textBF`, and `\textUC`. They all look similar to `\textSC`:

```latex
\newcommand*{\textSC}[1]{
  \if@nameauth@DoAlt\textsc{#1}\else#1\fi
}
```

If the `altformat` option or `\AltFormatActive` is used, formatting occurs in both the text and in the index. We want small caps on by default in the text and index, then off in subsequent uses. Thus, we use `\AltFormatActive`, then redefine `\MainNameHook` because it is the subsequent use hook. `\AltOff` deactivates formatting only in the formatting hooks:

```latex
\newcommand*{\AltOff}{
  \if@nameauth@InHook\@nameauth@DoAltfalse\fi
}
```

`\CapThis` now triggers `\AltCaps` to capitalize its argument:

```latex
\newcommand*{\AltCaps}[1]{
  \if@nameauth@InHook
    \if@nameauth@DoCaps\MakeUppercase{#1}\else#1\fi
  \else#1\fi
}
```

We must put `\noexpand` before `\textSC`, `\AltCaps`, and so on to prevent them from expanding outside of the formatting hooks.

Before we alter the formatting hooks, we either can `\let` the hook macros to recall them later or we can use `\begingroup` and `\endgroup` to create a new scope that localizes any changes. We use scoping in this section.
This final step does not come from the nameauth source. We must redefine the formatting hooks ourselves. One of the simplest ways to do this when using the altformat option or \AltFormatActive is:

```
\renewcommand*\MainNameHook{\AltOff}
\let\FrontNameHook\MainNameHook
```

To suppress all formatting in the front-matter text, one need simply to use \let\FrontNamesFormat\MainNameHook. Continental formatting usually alters at least one element in the required name argument, as we see below:

```
\begin{nameauth}
\begin{tabular}{p{2.5cm}p{2.5cm}p{2.5cm}p{2.5cm}}
First & Next & Long & Short \\
\texttt{\Adams} & \texttt{\Adams} & \texttt{\LAdams} & \texttt{\SAdams} \\
John ADAMS & Adams & John Adams & John \\
\texttt{\SDJR} & \texttt{\SDJR} & \texttt{\LSDJR} & \texttt{\SSDJR} \\
Sammy DAVIS JR. & Davis & Sammy Davis Jr. & Sammy \\
\texttt{\HAR} & \texttt{\HAR} & \texttt{\LHAR} & \texttt{\SHAR} \\
Harun AL-RASHID & Harun & Harun al-Rashid & Harun \\
\texttt{\Mencius} & \texttt{\Mencius} & \texttt{\LMencius} & \texttt{\SMencius} \\
MENCUS & Mencius & Mencius & Mencius \\
\end{tabular}
\end{nameauth}
```

- Punctuation detection works: Sammy DAVIS Jr. Also Sammy Davis Jr. Then DAVIS. Now Davis. (We used \ForceName for formatting.)
- \ForceName\DropAffix\LSDJR gives Sammy Davis. Otherwise, only using the macro \DropAffix\LSDJR gives Sammy Davis.
- \RevComma\LAdams yields Adams, John. All the reversing macros work.
- \ForceName\ForceFN\SHAR produces AL-RASHID. \ForceFN\SHAR produces al-Rashid. If we add \CapThis we get AL-RASHID and Al-Rashid.\footnote{The way that Continental resources treat certain affixes relates to similar issues in \cite{Mulvany, 168–73}. Handling non-Western names in Western sources can be a gray area. One ought take care to be culturally sensitive in these matters.}
- One must include all the macros in the name arguments.

If we use the formatAKA option we can refer to Mencius as MENG Ke, and again Meng Ke. We get that with:
Rolling Your Own: Basic

Here we set out on the path to custom formatting by using package features that have been implemented already and look similar to the solutions in Section 2.5.

When redesigning formatting hooks, one should use `\AltFormatActive` or the `altformat` option to enable alternate formatting and prevent `\CapThis` from breaking custom formatting macros.

We recommend examining the internal package flag `\@nameauth@DoAlt`, which activates alternate formatting, `\@nameauth@DoCaps`, which handles capitalization, and `\@nameauth@InHook`, which is true when the formatting hooks are called. See page 91 and following. If you create your own macros, they will look similar:

```latex
\makeatletter
\newcommand*\Fbox[1]{\if@nameauth@DoAlt\protect\fbox{#1}\else#1\fi}
\makeatother
```

Since `\AltCaps` is part of `nameauth`, you need not reinvent that wheel. Just use it. The final step is redefining the hooks, which can be as simple as:

```latex
\renewcommand*\MainNameHook{\AltOff}
\let\FrontNameHook\MainNameHook
```

When sorting names, be sure to use `\noexpand` as shown previously:

```latex
\begin{nameauth}
\begin{tabular}{l}
\texttt\deSmet & Pierre-Jean & \noexpand\Fbox{\noexpand\AltCaps{d}e Smet} & > \\
\end{tabular}
\end{nameauth}
```

Now we show how the formatting hooks work in the body text. One can check the index to see that it is formatted properly and consistently.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>\deSmet</td>
<td>\deSmet</td>
<td>\LdeSmet</td>
<td>\SdeSmet</td>
</tr>
<tr>
<td>Pierre-Jean</td>
<td>de Smet</td>
<td>Pierre-Jean de Smet</td>
<td>Pierre-Jean</td>
</tr>
</tbody>
</table>

The capitalized version `\CapThis\deSmet` is De Smet. This also works for a formatted use via `\ForceName: [De Smet]`.

Some formatting, such as the use of `\textSC`, is fairly standard. Other formatting, such as `\Fbox` above, is ornamental and may be handled better with custom features (Section 2.10.4), but those features appear only in the text.
“Intermediate” and “advanced” refer to the way hooks were designed before version 3.1. We begin the journey to more customized formatting by looking at \NameParser, whose logic Sections 3.4 and 3.6 show in detail.

This user-accessible parser (Section 3.6) builds a printed name from the internal macros \FNN, \SNN, \rootb and \suffb. It uses the following Boolean flags:

- Only one or the other of these can be true to avoid undocumented behavior.
- \if@nameauth@FullName Print a full name if true.
- \if@nameauth@FirstName Print a first name if true.
- Reversing without commas overrides reversing with commas.
- \if@nameauth@RevThis Reverse name order if true.
- \if@nameauth@EastFN toggled by \ForceFN.
- \if@nameauth@RevThisComma Reverse Western name, add comma.

We create a hook that can ignore the output of \@nameauth@Name, which is the #1 in the hook dispatcher’s code \bgroup\langle Hook\rangle{#1}\egroup:

\renewcommand*\langle FirstHook\rangle[1]{...\NameParser...}

With the altformat option or \AltFormatActive we can design a subsequent-use hook that deactivates formatting inside of it:

\renewcommand*\langle SubsequentHook\rangle[1]{...\AltOff\NameParser...}

If we used \AltFormatActive*, where the formatting macros are enabled, but deactivated, then we might want a hook that activates the macros:

\renewcommand*\langle Hook\rangle[1]{...\AltOn\NameParser...}

Within the hooks we can use the user-level parser as often as we want. We also can change internal Boolean flags, for example:

\makeatletter
\renewcommand*\NamesFormat[1]{\small\hbox to 3.5em{[now]\hfill}\space\NameParser\%\hbox to 3.5em{[long]\hfill}\space\NameParser\%\hbox to 3.5em{[short]\hfill}\space\NameParser}
\makeatother

\let\MainNameHook\NamesFormat

\JRIV displays:

| now   | Rockefeller |
| long  | John David Rockefeller IV |
| short | John David |

The proof of concept above is interesting, but not very useful. Now we move on toward more useful designs, based on Sections 2.10.1 and 2.10.2.

\footnote{These exclude all capitalization macros.}
We begin by defining a name that is composed only of macros:

```latex
\begin{nameauth}
\texttt{\shak & \noexpand\WM & \noexpand\SHK & >}
\end{nameauth}
\texttt{\PretagName[\noexpand\WM]{\noexpand\SHK}{Shakespeare, William}}
\texttt{\PretagName[Robert]{\textSC{Burns}}{Burns, Robert}}
```

Now we define the flags by which the macros `\WM` and `\SHK` expand differently in the formatting hooks than in the index:

```latex
\newif\ifSpecialFN
\newif\ifSpecialSN
\newif\ifRevertSN
\newcommand*\WM{\ifSpecialFN \textsc{Wm.}\else William\fi}
\newcommand*\SHK{\ifRevertSN \textsc{Shakespeare}\else
\ifSpecialSN \noexpand\AltCaps{t}he Bard\else
\textsc{Shakespeare}\fi\fi}
\newcommand*\Revert{\RevertSNtrue}
\makeatletter
Finally, we define the two formatting hooks that trigger these changes:

```latex
\renewcommand*\NamesFormat[1]{%
\RevertSNfalse\SpecialFNfalse\SpecialSNfalse#1%
\unless\ifinner\marginpar{%
\footnotesize\raggedleft%
@nameauth@FullNametrue%
@nameauth@FirstNamefalse%
@nameauth@EastFNfalse%
SpecialFNfalse\SpecialSNfalse%
{NameParser}%
%\fi\global\RevertSNfalse}
\renewcommand*\MainNameHook[1]{%
\AltOff\SpecialFNfalse\SpecialSNtrue#1%
\unless\ifinner
\unless\ifRevertSN
\marginpar{%
\footnotesize\raggedleft%
@nameauth@FullNamefalse%
@nameauth@FirstNamefalse%
@nameauth@EastFNfalse%
SpecialFNfalse\SpecialSNfalse%
{NameParser}%
%\fi
%\fi\global\RevertSNfalse}
\makeatother
```

Win. Shakespeare
Robert Burns
Shakespeare

William Shakespeare `\shak` is the national poet of England in much the same way as Robert Burns `\Name[Robert]{\textsc{Burns}}` is that of Scotland. With the latter's rise of influence in the 1800s, Shakespeare `\Revert\shak` became known as "the Bard" `\shak`.

First, we put macros `\WM` and `\SHK` in name arguments using `\noexpand`. That will make the index work properly. We use `\PretagName` to sort the names. We set up three flags. One is for `\WM` and two are for `\SHK`. `\Revert` is used to print a last name without a margin note.
In the first-use hook we allow only the canonical name via \RevertSNfalse, \SpecialFNfalse, and \SpecialSNfalse. The default global formatting state is set by \AltFormatActive. We print the canonical name in the body text. If not in inner horizontal mode, we print a margin paragraph with an alternate full name using \NameParser and two flags. Both hooks set \RevertSNfalse so that \Revert works on a per-name basis. The subsequent-use hook disables formatting with \AltOff, but it allows variant forms.

### Rolling Your Own: Advanced

Here is how formatting hooks were designed before version 3.0. Updating these older hooks is helpful, but may not be necessary. Here we do not use the internal package macros. We only use \NameParser in the hooks to produce output. We still recommend using \AltFormatActive to prevent problems with \CapThis.

Three flags replace package internals. \@nameauth@DoAlt activates formatting; \@nameauth@DoCaps is set by \CapThis; and \@nameauth@InHook is set by the hook dispatcher. Setting \Fboxtrue is equivalent to using \AltFormatActive:

1 \newif\ifFbox% Replaces \@nameauth@DoAlt
2 \newif\ifFirstCap% Replaces \@nameauth@DoCaps
3 \newif\ifInHook% Replaces \@nameauth@InHook
4 \Fboxtrue

The formatting macro is like what we have seen, except it refers to \ifFbox:

5 \renewcommand*\Fbox[1]{%
6 \ifFbox\protect\fbox{#1}\else#1\fi
7 }%

Our new \AltCaps works like the built-in version, except it does not use the internal macros and flags:

8 \renewcommand*\AltCaps[1]{%
9 \ifInHook
10 \ifFirstCap\MakeUppercase{#1}\else#1\fi
11 \else
12 #1%
13 \fi
14 }

Here we redefine \CapThis to use our flag instead of the internal flag:

15 \renewcommand*\CapThis{\FirstCaptrue}

We have to reproduce the logic and macros that the package would have provided. That means defining everything, including \NamesFormat, from scratch:

16 \renewcommand*\NamesFormat[1]{\InHooktrue\NameParser\global\FirstCapfalse}

Changes to \ifInHook (default false) and \ifFbox (default true) are local to the scope in which the hook macros are called. \ifFirstCap must be set globally. Below we reproduce the logic of \AltOff before \NameParser:

18 \renewcommand*\AltOff[1]{%
We avoid spurious index entries in the front matter by using the same hooks.

\let\FrontNamesFormat\Namesformat
\let\FrontNameHook\MainNameHook

Because we use `noexpand`, our “old-style” macros will index the following names under the same entry as the “new-style” macros.

<table>
<thead>
<tr>
<th>First</th>
<th>Next</th>
<th>Long</th>
<th>Short</th>
</tr>
</thead>
<tbody>
<tr>
<td>deSmet</td>
<td>deSmet</td>
<td>deSmet</td>
<td>deSmet</td>
</tr>
<tr>
<td>Pierre-Jean</td>
<td>de Smet</td>
<td>Pierre-Jean de Smet</td>
<td>Pierre-Jean</td>
</tr>
</tbody>
</table>

The capitalized version \CapThis\deSmet is De Smet. This also works for a formatted use via \ForceName: [De Smet].

We can reuse new-style names with old-style macros, shown below in abbreviated fashion. We keep the flags `ifFirstCap` and `ifInHook`. We also keep the redefined `AltCaps`, `CapThis`, and `NamesFormat`. We then add:

\begin{verbatim}
\newif\ifCaps
\Capstrue
\renewcommand*\textSC[1]{%
  \ifCaps\textsc{#1}\else#1\fi
}
\renewcommand*\MainNameHook[1]{%
  \Capsfalse\InHooktrue\NameParser%
  \global\FirstCapfalse%
}
\let\FrontNameHook\MainNameHook
\end{verbatim}

The names below have the same declarations and index entries as they did above. They look and work the same but use different back-end macros:

<table>
<thead>
<tr>
<th>First</th>
<th>Next</th>
<th>Long</th>
<th>Short</th>
</tr>
</thead>
<tbody>
<tr>
<td>John ADAMS</td>
<td>Adams</td>
<td>John Adams</td>
<td>John</td>
</tr>
<tr>
<td>Sammy DAVIS JR.</td>
<td>Davis</td>
<td>Sammy Davis Jr.</td>
<td>Sammy</td>
</tr>
<tr>
<td>Harun AL-RASHID</td>
<td>Harun</td>
<td>Harun al-Rashid</td>
<td>Harun</td>
</tr>
<tr>
<td>MENCius</td>
<td>Mencius</td>
<td>Mencius</td>
<td>Mencius</td>
</tr>
</tbody>
</table>

- Punctuation detection works: Sammy DAVIS JR. Also Sammy Davis Jr. Then DAVIS. Now Davis. (We used `forceName` for formatting.)
- \ForceName\DropAffix\LSDJR gives Sammy DAVIS. Otherwise, only using the macro `DropAffix\LSDJR` gives Sammy Davis.
- \RevComma\LAdams yields Adams, John. All the reversing macros work.
- `\ForceName\ForceFN\SHAR` produces AL-RASHID. `\ForceFN\SHAR` produces al-Rashid. If we add `CapThis` we get AL-RASHID and Al-Rashid.

We now resume normal formatting with `\AltFormatInactive` and close the scope that we began at the start of Section 2.10.1.
### 2.10.4 Customization

Assuming that redefining hooks and adding control sequences is insufficient, one could redesign the core name macros partially or wholly, then hook those modifications into the `nameauth` package without needing to patch the style file itself.

All these macros are set by default to \@\texttt{nameauth@Name}, the internal name parser. \texttt{Name}, or an unmodified shorthand, calls \texttt{nameauthName}. \texttt{Name*}, or an L-shorthand, sets \@\texttt{nameauth@FullName}true, then calls \texttt{nameauthLName}. \texttt{FName}, or an S-shorthand, sets \@\texttt{nameauth@FirstNametrue}, then calls \texttt{nameauthFName}. One should not modify \texttt{Name} and \texttt{FName} directly.

Next we see a minimal working example that implements the obsolete syntax. We use few internal Boolean values, save those governing name forms. We do not implement short forms or any other features in `nameauth`. We must index the names with \texttt{IndexName}. This example shows how to hook these redefined macros into the user interface:

```latex
\makeatletter
\newcommandx*{MyName}[3][1=\@empty, 3=\@empty]{%
  \protected@edef\a{\trim@spaces{#1}}%
  \protected@edef\b{\trim@spaces{#2}}%
  \protected@edef\c{\trim@spaces{#3}}%
  \ifx\b\empty fail \else
    \ifx\a\empty
      \ifx\c\empty 
        \hbox to 5em{Mononym:\hfill} {\b}\else
        \hbox to 5em{Eastern:\hfill} {\b\ \c}\fi
      \else
        \hbox to 5em{Western:\hfill} {\a\ \b}\else
        \hbox to 5em{Alternate:\hfill} {\c\ \b}\fi
    \fi
  \fi
  \global@\texttt{nameauth@FullNamefalse}%
  \global@\texttt{nameauth@FirstNametrue}%}
\makeatother
\let\MyLName=MyName
\let\MyFName=MyName
\renewcommand*{\NameauthName}{\MyName}
\renewcommand*{\NameauthLName}{\MyLName}
\renewcommand*{\NameauthFName}{\MyFName}
\IndexName[George]{Washington}
\IndexName[M.T.]{Cicero}
\IndexName[Dagobert]{I}
\IndexName{Aristotle}

\begin{tabular}{ll}
  Wash & Western: George Washington \\
  Cicero[Marcus Tullius] & Alternate: Marcus Tullius Cicero \\
  Dagb & Eastern: Dagobert I \\
  Aris & Mononym: Aristotle
\end{tabular}

The previous example is not particularly useful. There is, however, a more practical use for these macros. One could choose to implement additional features, then pass the information in the name argument token registers to the extant parsing macros of `nameauth` (cf. Section 2.10.2).
Below we introduce formatting that is additional to, inter-operative with, yet distinct from the formatting hooks:

\makeatletter
\newcommandx\MyName*[3][1=\@empty, 3=\@empty]{%
  \@nameauth@toksa\expandafter{#1}%
  \@nameauth@toksb\expandafter{#2}%
  \@nameauth@toksc\expandafter{#3}%
  \hbox to 4em{Normal: \hfill}%
  \fcolorbox{black}{gray!25!white}{\@nameauth@Name[#1]{#2}[#3]}%
}
\newcommandx\MyLName*[3][1=\@empty, 3=\@empty]{%
  \@nameauth@toksa\expandafter{#1}%
  \@nameauth@toksb\expandafter{#2}%
  \@nameauth@toksc\expandafter{#3}%
  \hbox to 4em{Long: \hfill}%
  \fcolorbox{black}{green!25!white}{\@nameauth@Name[#1]{#2}[#3]}%
}
\newcommandx\MyFName*[3][1=\@empty, 3=\@empty]{%
  \@nameauth@toksa\expandafter{#1}%
  \@nameauth@toksb\expandafter{#2}%
  \@nameauth@toksc\expandafter{#3}%
  \hbox to 4em{Short: \hfill}%
  \fcolorbox{black}{yellow!25!white}{\@nameauth@Name[#1]{#2}[#3]}%
}
\makeatother
\renewcommand*\NamesFormat[1]{\hbox to 9em{\hfil\scshape#1\hfil}}
\renewcommand*\MainNameHook[1]{\hbox to 9em{\hfil#1\hfil}}
\renewcommand*\NameauthName{\MyName}
\renewcommand*\NameauthLName{\MyLName}
\renewcommand*\NameauthFName{\MyFName}
\ForgetName[Adolf]{Harnack}
\Harnack Normal: \textsc{Adolf Harnack}
\LHarnack[Adolf von] Long: \textsc{Adolf von Harnack}
\Harnack Normal: \textsc{Harnack}
\SHarnack Short: \textsc{Adolf}

3.3 After the name is printed in the body text, the internal macros \texttt{globally} set \@nameauth@FullNamefalse and \@nameauth@FirstNamefalse, as well as other flags related to the prefix macros. This prevents certain cases of undocumented behavior in versions of \texttt{nameauth} before 3.3, where resetting flags locally could cause unexpected name forms. If an existing document leverages the local resetting of flags, one can use the \texttt{oldreset} option. Compare Section 2.6.1.

\texttt{global} Like many of the macros in this package, these naming macros can be redefined or used locally within a scope without making global changes to the document unless you specifically use \texttt{global}.
2.11 Technical Notes

This manual was created with \texttt{pdflatex}

\begin{center}
\textbf{Thanks}
\end{center}

Thanks to Marc van Dongen, Enrico Gregorio, Philipp Stephani, Heiko Oberdiek, Uwe Lueck, Dan Luecking and Robert Schlicht for assistance in early versions of this package. Thanks also to users for valuable feedback.

2.11.1 General

About the package itself:

- For version 3.2 behavior, use both the \texttt{oldpass} and \texttt{oldreset} options.
- For version 2.6 behavior, use \texttt{oldpass}, \texttt{oldreset}, and \texttt{oldAKA}.
- The package works with both \texttt{xindy} and \texttt{makeindex}.

3.0 Name output, index entry creation, and index cross-reference creation occur in independent modules.

3.0 Use the \texttt{verbose} option for warnings about indexing.

- The \texttt{nameauth} environment always will emit warnings as needed.

2.6 The \texttt{comma} option and the older syntax are no longer restrictive, save with \texttt{\textbackslash AKA} and its derivatives. See Sections 1.4, 2.3.1, and 2.9.

2.5 No formatting is selected by default.

About the manual:

- This manual is the test suite.
- This manual is designed for both current and older \LaTeX{} distributions.

3.3 This manual has been redesigned.

- It is compatible with both A4 and US letter formats.
- We mention when this manual changes package internals.

About package building:

- The \texttt{nameauth} package requires \texttt{etoolbox}, \texttt{suffix}, \texttt{trimspaces}, and \texttt{xargs}. The \texttt{dtx} file encoding is UTF-8; we assume Unicode support.
- We tested this release in dvi mode (\texttt{latex} and \texttt{dvilualatex}), and in pdf mode (\texttt{pdflatex}, \texttt{lualatex}, and \texttt{xelatex}). We used \texttt{makeindex}.
- This release has been tested on GNU/Linux (distro TL 2017 and vanilla TL 2019), and Windows (Mik\TeX{}, using GNU make via Cygwin.)
- The release uploaded to CTAN is generated using \texttt{pdflatex} in GNU/Linux.
2.11.2 Active Unicode

With \usepackage[T1]{fontenc} we can use many active Unicode characters automatically.\textsuperscript{31} We already covered using \texttt{\textbackslash PretagName} to sort names with these characters (Section 2.6.3). Below we group by accents and diacritical marks:

<table>
<thead>
<tr>
<th>Accent</th>
<th>Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>acute</td>
<td>Å Ć Ė ĺ Í Ñ Ò Ő Ş Ū Ź á ç ē ĕ í í́ ź</td>
</tr>
<tr>
<td>grave</td>
<td>À Ė · · · Ì Ò Ù</td>
</tr>
<tr>
<td>circumflex</td>
<td>Å Ć Ė Ğ Ļ Ó Ő Ş Ū Ź ā č ē Ė ď ò ź</td>
</tr>
<tr>
<td>tilde</td>
<td>Ĉ Ğ Ũ Ź Ź á ć ē ľ</td>
</tr>
<tr>
<td>diacrusis</td>
<td>À Ė · · · Ì Ò Ù</td>
</tr>
<tr>
<td>cedilla</td>
<td>• Ç Ğ K L N R Ş Ź Ź á ć ē ľ</td>
</tr>
<tr>
<td>macron</td>
<td>Â Ė Ğ Ó Ò Ú Ù</td>
</tr>
<tr>
<td>breve</td>
<td>Â · · · Ì Ò Ù</td>
</tr>
<tr>
<td>dot/dotless</td>
<td>B Ć Ė · · · Ì Ò Ù</td>
</tr>
<tr>
<td>ogonek</td>
<td>A Ė · · · Ì Ò Ù</td>
</tr>
<tr>
<td>caron</td>
<td>Â Ć Ė Ğ Ú Ú Ù Ź Ź á ć ē Ė ď ź</td>
</tr>
<tr>
<td>various</td>
<td>O È Ŗ Ŭ Ź Ź</td>
</tr>
</tbody>
</table>

Additional Unicode characters can be made available when using fonts with TS1 glyphs (pages 455–463 in \textit{The Latex Companion}). Compare the list: \url{http://tug.ctan.org/info/symbols/comprehensive/} or \texttt{texdoc comprehensive}.

When using a font with TS1 glyphs and slots, the following preamble snippet lets one add more Unicode characters. That enables one to write, “In Congress, July 4, 1776” as ‘‘In Congress, July 4, 1776’’:

1 \usepackage[utf8]{inputenc} % For older TL releases  
2 \usepackage[TS1,T1]{fontenc}  
3 \usepackage{lmodern}% Contains TS1 glyph 115  
4 \usepackage[newunicodechar]{tuf blinds}{115}  
5 \DeclareTextSymbolDefault{\textlongs}{}\{TS1\}  
6 \DeclareTextSymbol{{\textlongs}}{}\{TS1\}{115}  
7 \newunicodechar{f}\{\textlongs}\}

Many Unicode characters have native support in \texttt{xelatex} and \texttt{lualatex}, but not in \texttt{pdflatex}. Yet the latter has certain features (e.g., with respect to \texttt{microtype}) that others lack. The features of \texttt{makeindex} do not always equate to those in \texttt{xindy}. Those differences impact design choices.

Before 2018, some index styles excluded characters with macrons, e.g., ā. Even now, control sequences like \texttt{\textbackslash =a} in the index create undocumented behavior when using \texttt{makeindex} and \texttt{gind.ist}, which changes the “actual” character from @ to =. Since 2018, names like \texttt{Ghazāli} work properly due to new Unicode conventions. We allow for backward compatibility using the \texttt{iftex} package thus:

\textsuperscript{31}As of release, most documents typeset with \texttt{latex} and \texttt{pdflatex} do not require explicit loading of either \texttt{inputenc} or \texttt{inputenx}.

\textsuperscript{32}A diacrusis mark is one way to indicate an umlaut, a sound change. German originally used a superscript e over a, o, and u. The cursive form of e simplified to a diacrusis mark in the 1800s. A diacrusis mark also signals a diaresis: reading a diphthong as two monophthongs.
TEX macros that partition their arguments can break active Unicode characters. Consider the simple macro `\def\foo#1#2#3!{<#1#2><#3>}`. It takes three undelimited arguments and groups the first two, then the third:

| Argument Macro Engine Result |
|-------------------------------|-----------------|
| abc `\foo abc!` (any) `<ab><c>` |
| `{æ}`bc `\foo {æ}bc!` (any) `<æb><c>` |
| "\ae bc` `\foo `\ae bc!` (any) `<æb><c>` |
| æbc `\foo æbc!` xelatex `<æb><c>` |
| æbc `\foo æbc!` lualatex `<æb><c>` |
| æbc `\foo æbc!` pdflatex `<æ><bc>` |
| æbc `\foo æbc!` latex `<æ><bc>` |

The letter a is one argument. Since `{æ}` is in a group, it is one argument. The macro `\ae` also is one argument. Thus, the first two glyphs are grouped together in #1#2 and c is left by itself in #3. Both xelatex and lualatex likewise treat the Unicode letter æ as one argument.

In latex and pdflatex, however, æ is an active Unicode control sequence that uses two arguments: #1#2. The tail of the input, bc, is crowded into #3. Any macro where this #1#2 pair is divided into #1 and #2 will produce one of two errors: Unicode char ...not set up for LaTeX or Argument of \UTFviii@two@octets has an extra }.

3.0 We test if \Umathchar is not defined. If so, we check if the leading token of the argument matches the start of an active Unicode control sequence: If \@car(test)\@nil is equal to \@car æ\@nil (page 78) we capitalize #1#2, otherwise just #1. Should #1 be a protected macro or something that does not expand to a sequence of letters, we use alternate formatting and \AltCaps (Section 2.5.2).

A macro defined like `\edef\foo{\CapThis\Name{bar}}` will fail. However, \CapThis\Name{bar} can be an argument to a macro defined with \edef or \xdef. \TeX removes spaces between undelimited macro arguments, except the trailing argument. We use \trim@spaces to address this in nameauth. Explicit spacing macros change the results, but also require sorting with \PretagName. See also Sections 1.6 and 2.3.4, as well as Section 2.6.3.
2.11.3 \LaTeX{} Engines

The following preamble snippet lets one build nameauth also with older TL versions. We do not load iftex.sty if it does not exist. We load the transitional packages when iftex is absent or older than 2019.\footnote{A copy of this example is in examples.tex, collocated with this manual.}

\begin{verbatim}
1 \IfFileExists{iftex.sty}{\usepackage{iftex}}{}
2 \unless\ifdefined\RequireTUTeX
3 \usepackage{iftexetex}
4 \usepackage{ifluatex}
5 \usepackage{ifpdf}
6 \fi

Next we test for the \LaTeX{} engine and include packages accordingly. We could just include inputenc either way, but we are illustrating a point about testing. Some statements below should be modified, depending on one’s workflow.

7 \newif\ifDoTikZ % Perhaps not needed
8 \iftexetex
9 \usepackage{fontspec}
10 \usepackage{polyglossia}
11 \setdefaultlanguage{american} % Use own language
12 \usepackage{tikz}
13 \DoTikZtrue % Perhaps not needed
14 \else
15 \ifluatex
16 \ifpdf
17 \usepackage{fontspec}
18 \usepackage{polyglossia}
19 \setdefaultlanguage{american} % Use own language
20 \usepackage{tikz}
21 \DoTikZtrue % Perhaps not needed
22 \else
23 \IfFileExists{utf8-2018.def}{}
24 {\usepackage[utf8]{inputenc}}
25 \usepackage[TS1,T1]{fontenc}
26 \usepackage[american]{babel} % Use own language
27 \usepackage{lmodern}
28 % Perhaps add \usepackage{tikz}
29 \fi
30 \else
31 \IfFileExists{utf8-2018.def}{}
32 {\usepackage[utf8]{inputenc}}
33 \usepackage[TS1,T1]{fontenc}
34 \usepackage[american]{babel} % Use own language
35 \usepackage{lmodern}
36 \ifpdf % Perhaps not needed
37 \usepackage{tikz}
38 \DoTikZtrue % Perhaps not needed
39 \fi
40 \fi
41 \fi
\end{verbatim}
For the sake of comparing dvi viewers xdvi, yap, and others, we load tikz only when making a pdf because some dvi viewers crash otherwise. This may be wholly unnecessary in a dvips workflow or the like. With fontspec, Latin Modern is the default. If we only make pdf documents, the test simplifies to testing for \Umathchar, then loading either fontspec (success) or fontenc (failure).

In the body text we can use something like the test below for doing pdf things:

\ifDoTikZ
  doing \texttt{pdf} things\else
  doing \texttt{dvi} things\fi

The following equivalent conditional statements can help a macro or just the body text to work under multiple engines:

1 \ifxetex xelatex%  
2 \else
3 \ifluatex
4 \ifpdf lualatex (pdf)%
5 \else lualatex (dvi)%
6 \fi
7 \else
8 \ifpdf pdflatex%
9 \else latex (dvi)%
10 \fi
11 \fi
12 \fi

1 \unless\ifxetex
2 \unless\ifluatex
3 \ifpdf pdflatex%
4 \else latex (dvi)%
5 \fi
6 \else
7 \ifpdf lualatex (pdf)%
8 \else lualatex (dvi)%
9 \fi
10 \fi
11 \else xelatex%
12 \fi

This space is intentionally left blank.
3 Implementation

3.1 Flags and Registers

The flags below are grouped according to function. We begin with flow control

Who Called Me?

Various macros use these flags to protect against stack overflows or choose the right output.

1 \newif\if@nameauth@InAKA
2 \newif\if@nameauth@InName
3 \newif\if@nameauth@Xref

Core Macro Locks

The macros \@nameauth@Name and \AKA, with some auxiliary macros, process names in a “locked” state to avoid a stack overflow. The BigLock always locks the macros, preventing execution. See also Sections 2.10.2 and 2.10.3.

4 \newif\if@nameauth@Lock
5 \newif\if@nameauth@BigLock
6 \newif\if@nameauth@InHook

Indexing

The indexing flags permit or prevent indexing and tags. \IndexActive and \IndexInactive or the index and noindex options toggle the first flag; \SkipIndex toggles the second. \JustIndex toggles the third, which makes the core naming engine act like a call to \IndexName:

7 \newif\if@nameauth@DoIndex
8 \newif\if@nameauth@SkipIndex
9 \newif\if@nameauth@JustIndex

The pretag and nopretag options toggle the flag below, which allows or prevents the insertion of index sort keys.

10 \newif\if@nameauth@Pretag

This flag determines whether \IndexRef creates a see reference or a see also reference.

11 \newif\if@nameauth@SeeAlso

Formatting

\NamesActive and \NamesInactive, with the mainmatter and frontmatter options, toggle formatting hooks via \if@nameauth@MainFormat. \if@nameauth@AKAFormat permits \AKA to call the first-use hooks once.

12 \newif\if@nameauth@MainFormat
13 \newif\if@nameauth@AKAFormat

The next flag works with \LocalNames and \GlobalNames.

14 \newif\if@nameauth@LocalNames

These two flags are used only for backward compatibility. The first broadly determines how per-name flags are reset, while the second affects the behavior of \JustIndex.

15 \newif\if@nameauth@OldReset
16 \newif\if@nameauth@OldPass

These two flags trigger \ForgetName and \SubvertName within \@nameauth@Name.

17 \newif\if@nameauth@Forget
18 \newif\if@nameauth@Subvert
\ifnameauth@FirstFormat triggers the first-use hooks to be called; otherwise the second-use hooks are called. Additionally, \ifnameauth@AlwaysFormat forces this true, except when \ifnameauth@AKAFormat is false.

Next we move from general flow control to specific modification of name forms.

**Affix Commas**

The \texttt{comma} and \texttt{nocomma} options toggle the first flag value below. \texttt{ShowComma} and \texttt{NoComma} respectively toggle the second and third.

**Name Breaking**

\texttt{KeepAffix} toggles the first flag below, while \texttt{KeepName} toggles the second. Both affect the use of non-breaking spaces in the text.

**Detect Punctuation**

This Boolean value is used to prevent double full stops at the end of a name in the text.

**Long and Short Names**

\texttt{FullName} is true for a long name reference. \texttt{FirstName} disables full-name references and causes only Western forenames to be displayed. The default is to reset both globally on a per-name basis.

\texttt{AltAKA} is toggled respectively by \texttt{AKA} and \texttt{AKA*} to print a longer or shorter name. \texttt{OldAKA} forces the pre-3.0 behavior of \texttt{AKA*}.

\texttt{ShortSNN} is used with \texttt{DropAffix} to suppress the affix of a Western name. \texttt{EastFN} toggles the forced printing of Eastern forenames.

**Eastern Names**

The next flags values govern name reversing and full surname capitalization. The first of each pair is a global state. The second of each pair is an individual state.

**Last-Comma-First**

This pair of flags deals with Western names reordered in a list according to surname.
Cap First Letter and Format

The next flags deal with first-letter capitalization. \CapThis sets the first Boolean value. The second is triggered by \@nameauth@UTFtest when it encounters an active Unicode character. The third is a fallback triggered by \AccentCapThis. The fourth disables \CapThis for alternate formatting. The fifth toggles alternate formatting.

```
\newif\if@nameauth@DoCaps
\newif\if@nameauth@UTF
\newif\if@nameauth@Accent
\newif\if@nameauth@AltFormat
\newif\if@nameauth@DoAlt
```

Warning Levels

This flag controls how many warnings you get. Defaults to few warnings. Verbose gives you plenty of warnings about cross-references in the index.

```
\newif\if@nameauth@Verbose
```

Name Argument Token Registers

These three token registers contain the current values of the name arguments passed to \Name, its variants, and the cross-reference arguments of \AKA. Users can access them especially in formatting hooks.

```
\newtoks\@nameauth@toksa
\newtoks\@nameauth@toksb
\newtoks\@nameauth@toksc
```

These three token registers contain the current values of the name arguments in each line of the nameauth environment.

```
\newtoks\@nameauth@etoksb
\newtoks\@nameauth@etoksc
\newtoks\@nameauth@etoksd
```

3.2 Hooks

```
\NamesFormat Post-process “first” instance of final complete name form in text. See Sections 2.4 and 2.10.1f. Called when both \@nameauth@MainFormat and \@nameauth@FirstFormat are true.
\newcommand*{\NamesFormat{}}
```

```
\MainNameHook Post-process subsequent instance of final complete name form in main-matter text. See Sections 2.4 and 2.10.1f. Called when \@nameauth@MainFormat is true and the Boolean flag \@nameauth@FirstFormat is false.
\newcommand*{\MainNameHook{}}
```

```
\FrontNamesFormat Post-process “first” instance of final complete name form in front-matter text. Called when \@nameauth@MainFormat is false and \@nameauth@FirstFormat is true.
\newcommand*{\FrontNamesFormat{}}
```

```
\FrontNameHook Post-process subsequent instance of final complete name form in front-matter text. Called when \@nameauth@MainFormat is false and \@nameauth@FirstFormat is false.
\newcommand*{\FrontNameHook{}}
```

```
\NameauthName The last three hooks usually point to \@nameauth@Name. See Section 2.10.4.
\newcommand*{\NameauthName{\@nameauth@Name}}
```

```
\NameauthLName Customization hook called after \@nameauth@FullName is set true. See Section 2.10.4.
\newcommand*{\NameauthLName{\@nameauth@Name}}
```

```
\NameauthFName Customization hook called after \@nameauth@FirstName is set true. See Section 2.10.4.
\newcommand*{\NameauthFName{\@nameauth@Name}}
```
3.3 Package Options

The following package options interact with many of the prior Boolean values.

\DeclareOption{comma}{\@nameauth@AlwaysCommatrue}
\DeclareOption{nocomma}{\@nameauth@AlwaysCommafalse}
\DeclareOption{mainmatter}{\@nameauth@MainFormattrue}
\DeclareOption{frontmatter}{\@nameauth@MainFormatfalse}
\DeclareOption{formatAKA}{\@nameauth@AKAFormattrue}
\DeclareOption{oldAKA}{\@nameauth@OldAKAtrue}
\DeclareOption{oldreset}{\@nameauth@OldResettrue}
\DeclareOption{oldpass}{\@nameauth@OldPasstrue}
\DeclareOption{index}{\@nameauth@DoIndextrue}
\DeclareOption{noindex}{\@nameauth@DoIndexfalse}
\DeclareOption{pretag}{\@nameauth@Pretagtrue}
\DeclareOption{nopretag}{\@nameauth@Pretagfalse}
\DeclareOption{allcaps}{\@nameauth@AllCapstrue}
\DeclareOption{normalcaps}{\@nameauth@AllCapsfalse}
\DeclareOption{allreversed}{\@nameauth@RevAlltrue\@nameauth@RevAllCommatrue}
\DeclareOption{allrevcomma}{\@nameauth@RevAllfalse\@nameauth@RevAllCommafalse}
\DeclareOption{notreversed}{\@nameauth@RevAllfalse\@nameauth@RevAllCommafalse}
\DeclareOption{alwaysformat}{\@nameauth@AlwaysFormattrue}
\DeclareOption{smallcaps}{\renewcommand*\NamesFormat{\scshape}}
\DeclareOption{italic}{\renewcommand*\NamesFormat{\itshape}}
\DeclareOption{boldface}{\renewcommand*\NamesFormat{\bfseries}}
\DeclareOption{noformat}{\renewcommand*\NamesFormat{}}
\DeclareOption{verbose}{\@nameauth@Verbosetrue}
\DeclareOption{altformat}{\@nameauth@AltFormattrue \@nameauth@DoAltttrue}
\ExecuteOptions{nocomma,mainmatter,index,pretag,normalcaps,notreversed,noformat}
\ProcessOptions\relax

Now we load the required packages. They facilitate the first/subsequent name uses, the parsing of arguments, and the implementation of starred forms.

\RequirePackage{etoolbox}
\RequirePackage{suffix}
\RequirePackage{trimspaces}
\RequirePackage{xargs}

The etoolbox package is essential for processing name control sequences. Using xargs allows the optional arguments to work. Using suffix facilitated the starred form of macros. Finally, trimspaces helps the fault tolerance of name arguments.

This space is intentionally left blank.
3.4 Internal Macros

Name Control Sequence: Who Am I?

\@nameauth@Clean Thanks to Heiko Oberdiek, this macro produces a “sanitized” string used to make a (hopefully) unique control sequence for a name. We can test the existence of that control string to determine first occurrences of a name or cross-reference.

\newcommand*{\@nameauth@Clean}[1]{\expandafter\zap@space\detokenize{#1}\@empty}

Parsing: Root and Suffix

\@nameauth@Root The following two macros return everything before a comma in ⟨SNN⟩.

\newcommand*{\@nameauth@@Root}[1]{\trim@spaces{#1}}

\@nameauth@TrimTag The following two macros return everything before a vertical bar (|) in an index tag.

\newcommand*{\@nameauth@@TrimTag}[1]{#1}

\@nameauth@Suffix The following two macros parse ⟨SNN⟩ into a radix and a comma-delimited suffix, returning only the suffix after a comma in the argument, or nothing.

\newcommand*{\@nameauth@@Suffix}[1]{\trim@spaces{#2}}

\@nameauth@GetSuff The following two macros just grab the suffix for testing if the first non-space character is an active character from inputenc.

\newcommand*{\@nameauth@@GetSuff}[1]{#2}

Parsing: Capitalization

\@nameauth@TestToks Test if the leading token is the same as the leading token of an active Unicode character, using an Esszet (ß) as the control. We only run this macro if we are in the inputenc regime.

\newcommand*{\@nameauth@TestToks}[1]{\ifx\@car#1\@nil\%\edef\one{\the\toks@}\edef\two{\the\toks@}\if\one\two\@nameauth@UTFtrue\else\@nameauth@UTFfalse\fi\else\toks@\expandafter{\@car#1\@nil}\%\edef\one{\the\toks@}\edef\two{\the\toks@}\if\one\two\@nameauth@UTFtrue\else\@nameauth@UTFfalse\fi\fi}

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Before we attempt at capitalizing anything, we need to determine if we are running under \texttt{xelatex} or \texttt{lualatex} by testing for \texttt{Umathchar}. Then we see if \texttt{inputenc} is loaded. We set up the comparison and pass off to \texttt{@nameauth@TestToks}.

\begin{verbatim}
\newcommand*{@nameauth@UTFtest}[1]{%
  \def@testarg{#1}%
  \ifdef_defined{Umathchar}
    \@nameauth@UTFfalse%
  \else\ifdef_defined{UTFviii@two@octets}
    \ifdef_defined{UTFtrue}\@nameauth@Accentfalse\@nameauth@UTFtrue\@nameauth@Accentfalse%
  \else\expandafter\@nameauth@TestToks\expandafter{\testarg}%
  \fi\else\@nameauth@UTFfalse%
  \fi%
}
\end{verbatim}

\texttt{@nameauth@UTFtestS} This test is like the one above, but a special case when we have a suffix. We have to do a bit more in the way of expansion to get the comparison to work properly. Moreover, we only use this when the regular suffix macro is not \texttt{@empty}.

\begin{verbatim}
\newcommand*{@nameauth@UTFtestS}[1]{%
  \let\ex\expandafter%
  \expandafter\let\expandafter\ex\testarg\expandafter%
  \expandafter\edef\expandafter\testarg\expandafter{\begin{tabular}{c}
    \@nameauth@GetSuff{#1}\end{tabular}}%
  \ifdef_defined{Umathchar}
    \@nameauth@UTFfalse%
  \else\ifdef_defined{UTFviii@two@octets}
    \ifdef_defined{UTFtrue}\@nameauth@Accentfalse\@nameauth@UTFtrue\@nameauth@Accentfalse%
  \else\expandafter\@nameauth@TestToks\expandafter{\testarg}%
  \fi\else\@nameauth@UTFfalse%
  \fi%
}
\end{verbatim}

\texttt{@nameauth@Cap} The following two macros cap the first letter of the argument.

\begin{verbatim}
\newcommand*{@nameauth@Cap}[1]{\@nameauth@C@p#1\}
\def\@nameauth@C@p#1#2\{%\expandafter\trim@spaces\expandafter{\MakeUppercase{#1}#2}\}
\end{verbatim}

\texttt{@nameauth@CapUTF} The following two macros cap the first active Unicode letter under \texttt{inputenc}.

\begin{verbatim}
\newcommand*{@nameauth@CapUTF}[1]{\@nameauth@C@pUTF#1\}
\end{verbatim}
\@nameauth@C@pUTF  Helper macro for the one above.
\def\@nameauth@C@pUTF#1#2#3\%
{\expandafter\trim@spaces\expandafter{\MakeUppercase{#1#2#3}}}

Parsing: Punctuation Detection
\@nameauth@TestDot  This macro, based on a snippet by Uwe Lueck, checks for a period at the end of its argument. It determines whether we need to call \@nameauth@CheckDot below.
\newcommand*{\@nameauth@TestDot}[1]{%  \def/TestDot##1.\TestEnd##2\{%  \def/TestPunct##1\{%  \ifx/TestPunct##1/TestPunct%  \else  \@nameauth@Puncttrue%  \fi  \@nameauth@Punctfalse%  \TestDot#1\TestEnd.\TestEnd\%  \else  \@nameauth@Punctfalse%  \fi
\@nameauth@CheckDot
We assume that \expandafter precedes the invocation of \@nameauth@CheckDot, which only is called if the terminal character of the input is a period. We evaluate the lookahead \@token while keeping it on the list of input tokens.
\newcommand*{\@nameauth@CheckDot}{\futurelet\@token\@nameauth@EvalDot}
\@nameauth@EvalDot  If \@token is a full stop, we gobble the token.
\newcommand*{\@nameauth@EvalDot}{%  \let\@period=.%  \ifx\@token\@period\expandafter\@gobble \fi
\@nameauth@Error
One can cause nameauth to halt with an error by leaving a required name argument empty, providing an argument that expands to empty, or creating an empty root within a root / suffix pair.
\newcommand*{\@nameauth@Error}[2]{%  \edef\msga{#2 SNN arg empty}%  \edef\msgb{#2 SNN arg malformed}%  \protected@edef\testname{\trim@spaces{#1}}%  \protected@edef\testroot{\@nameauth@Root{#1}}%  \ifx\testname\@empty\PackageError{nameauth}{\msga}%  \fi  \ifx\testroot\@empty\PackageError{nameauth}{\msgb}%  \fi
\fi
Core Name Engine

Here is the heart of the package. Marc van Dongen provided the original basic structure. Parsing, indexing, and formatting are more discrete than in earlier versions.

\newcommandx*{\nameauth@Name}[3][1=\@empty, 3=\@empty]

Both \nameauth@Name and \AKA engage the lock below, preventing a stack overflow. Tell the formatting mechanism that it is being called from \nameauth@Name.

\if\nameauth@BigLock\nameauth@Locktrue\fi
\unless\if\nameauth@Lock
\@nameauth@Locktrue%
\@nameauth@InNametruese%

Test for malformed input.
\@nameauth@Error{#2}{macro \string\nameauth@name}%

If we use \JustIndex then skip everything else. The oldpass option restores what we did before version 3.3, where we locally reset \nameauth@JustIndexfalse and were done. Now, however, the default is a global reset to avoid undocumented behavior.

\if\nameauth@JustIndex
\IndexName[#1]{#2}[#3]
\if\nameauth@OldPass
\@nameauth@JustIndexfalse%
\else
\if\nameauth@OldReset
\@nameauth@FullNametruese%
\@nameauth@FirstNametruese%
\@nameauth@JustIndexfalse%
\else
\global\@nameauth@FullNametruese%
\global\@nameauth@FirstNametruese%
\global\@nameauth@JustIndexfalse%
\fi
\fi
\else
\fi
\fi
\else
\fi

Delete/create name cseq if directed. If the delete flag is set, the create flag is ignored. Ensure that names are printed in horizontal mode. Wrap the name with two index entries in case a page break occurs between name elements.

\if\nameauth@Forget
\ForgetName[#1]{#2}[#3]
\else
\if\nameauth@Subvert
\SubvertName[#1]{#2}[#3]
\fi
\fi
\leavevmode\hbox{}
\unless\if\nameauth@SkipIndex\IndexName[#1]{#2}[#3]\fi
\if\nameauth@MainFormat
\@nameauth@Parse[#1]{#2}[#3]{!MN}
\else
\@nameauth@Parse[#1]{#2}[#3]{!NF}
\fi
\unless\if\nameauth@SkipIndex\IndexName[#1]{#2}[#3]\fi

Reset all the “per name” Boolean values. The default is global.
\if\nameauth@OldReset
\@nameauth@SkipIndexfalse%
Close the “locked” branch.

Call the full stop detection.

\nameauth@Parse Parse and print a name in the text. The final required argument tells us which naming system we are in (Section 1.5). Both \nameauth@Name and \AKA call this parser.

We want these arguments to expand to \empty (or not) when we test them.
If global caps. reversing, and commas are true, set the local flags true.

```
\if@nameauth@AllCaps\@nameauth@AllThistrue\fi
\if@nameauth@RevAll\@nameauth@RevThistrue\fi
\if@nameauth@RevAllComma\@nameauth@RevThisCommatrue\fi
```

Make (usually) unique control sequence values from the name arguments.

```
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%
```

Make token register copies of the current name args to be available for the hook macros.

```
\@nameauth@toksa\expandafter{#1}%
\@nameauth@toksb\expandafter{#2}%
\@nameauth@toksc\expandafter{#3}%
```

Implement capitalization on demand in the body text if not in Continental mode.

```
\if@nameauth@DoCaps
  \let\carga\arga%
  \let\crootb\rootb%
  \let\csuffb\suffb%
  \let\cargc\argc%
  \unless\if@nameauth@AltFormat
    \def\test{#1}%
    \@nameauth@UTFtest\@nameauth@Cap\test
  \else
    \def\test{#1}%
    \@nameauth@Cap\test
  \fi
\fi
```

```
\def\test{#2}%
\@nameauth@UTFtest\@nameauth@Cap\rootb
\def\test{#2}%
\@nameauth@UTFtest\@nameauth@Cap\suffb
```

```
\unless\if@nameauth@AltFormat
  \def\test{#2}%
  \@nameauth@Cap\test
\fi
```

```
\unless\ifx\arga\@empty
\def\test{#1}%
\@nameauth@UTFtest\@nameauth@CapUTF\test
\else
  \def\test{#1}%
  \@nameauth@Cap\test
\fi
```

```
\def\test{#2}%
\@nameauth@UTFtest\@nameauth@Cap\rootb
\edef\test{\@nameauth@Suffix{#2}}%
```

```
\unless\ifx\argc\@empty
\def\test{#1}%
\@nameauth@UTFtest\@nameauth@CapUTF\test
\else
  \def\test{#1}%
  \@nameauth@Cap\test
\fi
```

We test the root surname for active Unicode characters. Then we capitalize the first letter.

```
\def\test{#2}%
\@nameauth@UTFtest\@nameauth@Cap\rootb
```

We test the suffix for active Unicode characters. Then we capitalize the first letter.

```
\unless\ifx\suffb\@empty
\protected@edef\test{\@nameauth@GetSuff{#2}}%
\if@nameauth@UTF
  \protected@edef\test{\@nameauth@Suffix{#2}}%
  \def\test{#2}%
  \@nameauth@Cap\test
\else
  \edef\test{\@nameauth@Suffix{#2}}%
  \def\test{#2}%
  \@nameauth@Cap\test
\fi
```

We test the final optarg for active Unicode characters. Then we capitalize the first letter.

```
\unless\ifx\argc\@empty
```

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\def\test{#3}\
\if@nameauth@UTF\ex\@nameauth@UTFtest\ex{\test}\fi
\else
\ex\def\ex\cargc\ex{\ex\@nameauth@CapUTF\ex{\test}}\fi
\fi
\let\arga\carga\fi
\let\rootb\crootb\fi
\let\suffb\csuffb\fi
\let\argc\cargc\fi

We capitalize the entire surname when desired; different from above.
\if@nameauth@AllThis\protected@edef\rootb{\MakeUppercase{\@nameauth@Root{#2}}}\fi

Use non-breaking spaces and commas as desired.
\edef\Space{\space}\edef\SpaceX{\space}\if@nameauth@NBSP\edef\Space{\nobreakspace}\fi
\if@nameauth@NBSPX\edef\SpaceX{\nobreakspace}\fi
\unless\ifx\arga\@empty
\if@nameauth@AlwaysComma\edef\Space{,\space}\fi
\if@nameauth@NBSP\edef\Space{,\nobreakspace}\fi\fi
\if@nameauth@ShowComma\edef\Space{,\space}\fi
\if@nameauth@NBSP\edef\Space{,\nobreakspace}\fi\fi
\if@nameauth@NoComma\edef\Space{\space}\fi
\if@nameauth@NBSP\edef\Space{\nobreakspace}\fi\fi
\fi

We parse names by attaching “meaning” to patterns of macro arguments primarily via \FNN and \SNN. Then we call the name printing macros, based on the optional arguments.
\let\SNN\rootb\fi
\ifx\arga\@empty
\ifx\argc\@empty
When \arga, \argc, and \suffb are empty, we have a mononym. When \suffb is not empty, we have a “native” Eastern name or non-Western name.
\let\FNN\suffb\let\SNN\rootb\fi
\let\SNN\rootb\fi
\@nameauth@NonWest{\csb#4}\fi
\else
When \arga and \suffb are empty, but \argc is not, we have the older syntax. When \arga is empty, but \argc and \suffb are not, we have alternate names for non-Western names.
\ifx\suffb\@empty
\let\FNN\argc\let\SNN\rootb\fi
84
When \texttt{\arga} is not empty, we have either a Western name or a “non-native” Eastern name. When \texttt{\argc} is not empty, we use alternate names. When \texttt{\suffb} is not empty we use suffixed forms.

\begin{verbatim}
\@nameauth@NonWest\{csbc#4}\%
\else
\let\FNN\arga\%
\let\SNN\rootb\%
\@nameauth@NonWest\{csb#4}\%
\fi
\fi
\else
When \texttt{\arga} is not empty, we have either a Western name or a “non-native” Eastern name. When \texttt{\argc} is not empty, we use alternate names. When \texttt{\suffb} is not empty we use suffixed forms.

\begin{verbatim}
\ifx\argc@empty
\let\FNN\arga\%
\else
\let\FNN\argc\%
\fi
\unless\ifx\suffb@empty
\def\SNN{\rootb\Space\suffb}\%
\if@nameauth@ShortSNN\let\SNN\rootb\fi
\fi
\@nameauth@West\{csab#4}\%
\fi
\fi
\end{verbatim}

\@nameauth@NonWest\ Print non-Western names from \@nameauth@name and \texttt{\AKA}. We inherit internal macros from the parser and do nothing apart from the locked state.

\begin{verbatim}
\newcommand*\@nameauth@NonWest[1]{%
\if@nameauth@BigLock\@nameauth@Lockfalse\fi
\if@nameauth@Lock
\unless\ifcsname#1\endcsname\@nameauth@FirstFormattrue\%
\fi
\if@nameauth@InAKA
\if@nameauth@AltAKA
\if@nameauth@OldAKA\@nameauth@EastFNtrue\fi
\@nameauth@FullNamefalse\%
\@nameauth@FirstNamefalse\%
\else
\@nameauth@FullNamefalse\%
\@nameauth@FirstNametrue\%
\fi
\else
\@nameauth@InAKAfalse\%
\@nameauth@AltAKAfalse\%
\@nameauth@OldAKAfalse\%
\@nameauth@FirstNametrue\%
\@nameauth@FullNamefalse\%
\fi
\fi
\unless\ifcsname#1\endcsname\@nameauth@FullNametrue\%
\@nameauth@FirstNametrue\%
\fi
\if@nameauth@FirstName
\@nameauth@FirstNametrue\%
\fi
\ifx\FNN@empty
\@nameauth@Hook{\SNN}\%
\else
\if@nameauth@FullName
\@nameauth@Hook{\SNN}\%
\else
\if@nameauth@FirstName
\@nameauth@Hook{\SNN}\%
\fi
\fi
\fi
\end{verbatim}

\@nameauth@NonWest\ Print non-Western names from \@nameauth@name and \texttt{\AKA}. We inherit internal macros from the parser and do nothing apart from the locked state.

\begin{verbatim}
\newcommand*\@nameauth@NonWest[1]{%
\if@nameauth@BigLock\@nameauth@Lockfalse\fi
\if@nameauth@Lock
\unless\ifcsname#1\endcsname\@nameauth@FirstFormattrue\%
\fi
\if@nameauth@InAKA
\if@nameauth@AltAKA
\if@nameauth@OldAKA\@nameauth@EastFNtrue\fi
\@nameauth@FullNamefalse\%
\@nameauth@FirstNametrue\%
\else
\@nameauth@FullNamefalse\%
\@nameauth@FirstNametrue\%
\fi
\else
\@nameauth@InAKAfalse\%
\@nameauth@AltAKAfalse\%
\@nameauth@OldAKAfalse\%
\@nameauth@FirstNametrue\%
\@nameauth@FullNamefalse\%
\fi
\fi
\unless\ifcsname#1\endcsname\@nameauth@FullNametrue\%
\@nameauth@FirstNametrue\%
\fi
\if@nameauth@FirstName
\@nameauth@FirstNametrue\%
\fi
\ifx\FNN@empty
\@nameauth@Hook{\SNN}\%
\else
\if@nameauth@FullName
\@nameauth@Hook{\SNN}\%
\else
\if@nameauth@FirstName
\@nameauth@Hook{\SNN}\%
\fi
\fi
\fi
\end{verbatim}

\@nameauth@NonWest\ Print non-Western names from \@nameauth@name and \texttt{\AKA}. We inherit internal macros from the parser and do nothing apart from the locked state.
We have to reset these flags here because both the naming and cross-referencing macros use the parser.

\if@nameauth@OldReset
  \@nameauth@FullNamefalse%
  \@nameauth@FirstNamefalse%
\else
  \global\@nameauth@FullNametrue%
  \global\@nameauth@FirstNamefalse%
\fi
\fi
\fi
\fi
\unless\ifcsname#1\endcsname
\unless\if@nameauth@InAKA\csgdef{#1}{}i
\fi
\fi

\@nameauth@West Print Western names and “non-native” Eastern names from \@nameauth@name and \AKA. We inherit internal macros from the parser and do nothing apart from the locked state.
\newcommand*\@nameauth@West[1]{\%
  \if@nameauth@BigLock\@nameauth@Lockfalse\fi
  \if@nameauth@Lock
    \unless\ifcsname#1\endcsname
    \@nameauth@FirstFormattrue%
    \fi
  \if@nameauth@InAKA
    \if@nameauth@AltAKA
      \@nameauth@FullNametrue%
      \@nameauth@FirstNametrue%
    \else
      \@nameauth@FullNametrue%
      \@nameauth@FirstNametrue%
    \fi
    \fi
  \else
    \unless\ifcsname#1\endcsname
    \@nameauth@FirstNametrue%
    \@nameauth@FirstNametrue%
    \fi
  \fi
  \fi
}\fi
\if@nameauth@FirstName
We have to reset these flags here because both the naming and cross-referencing macros use the parser.

\if@nameauth@OldReset
  \@nameauth@FullNamefalse%
  \@nameauth@FirstNamefalse%
\else
  \global\@nameauth@FullNamefalse%
  \global\@nameauth@FirstNamefalse%
\fi

Format Hook Dispatcher
\@nameauth@Hook Flags help the dispatcher invoke the correct formatting hooks. The flags control which hook is called (first/subsequent use, name type). The first set of tests handles formatting within `\AKA`. The second set of tests handles regular name formatting.

\newcommand*{\@nameauth@Hook}[1]{
  \if@nameauth@BigLock\@nameauth@Lockfalse\fi
  \if@nameauth@Lock
    \@nameauth@InHooktrue%
    \protectededef\test{#1}%
    \expandafter\@nameauth@TestDot\expandafter{\test}%
    \if@nameauth@MainFormat
      \if@nameauth@FirstFormat
        ...
      \else
        ...
      \fi
    \fi
  \fi
  \if@nameauth@AlwaysFormat
    \@nameauth@FirstFormattrue%
  \else
    \unless\if@nameauth@AKAFormat
    \@nameauth@FirstFormatfalse\fi
  \fi
  \if@nameauth@MainFormat
    ...
  \fi
}
We have to reset this flag here because both the naming and cross-referencing macros use the parser.

\@nameauth@Index

If the indexing flag is true, create an index entry, otherwise do nothing. Add tags automatically if they exist.
This sets the “actual” character used by nameauth for index sorting.
\newcommand*{\nameauthActual}@

Debugging Help

This Swiss-army knife for debugging shows name control sequence patterns, full index entries with tags, and short index entries with just the name. Other macros call it to get the desired info. We set up a local scope, redefine \index to print an argument in the text, force indexing to occur, and ignore whether we are working with xrefs.
\newcommandx*{\nameauthDebug}[3][1=\@empty, 3=\@empty]{%
  \bgroup
  \def\index##1{##1}%
  \@nameauthDoIndextrue%
  \protected@edef\arga{\trim@spaces{#1}}%
  \protected@edef\argc{\trim@spaces{#3}}%
  \protected@edef\suffb{\@nameauthSuffix{#2}}%
  \def\csb{\@nameauthClean{#2}}%
  \def\csbc{\@nameauthClean{#2,#3}}%
  \def\csab{\@nameauthClean{#1!#2}}%
  \@nameauthError{#2}{macro \string\@nameauthDebug}%
  \ifx\arga\@empty
    \ifx\argc\@empty
      \ifdefined\ShortIdxEntry
        \csundef{\csb!PRE}%
        \csundef{\csb!TAG}%
        \csundef{\csb!PN}%
        \IndexName[#1]{#2}[#3]%
      \else
        \else
      \fi
    \fi
  \fi
  \ex\index\ex{\Entry}%
  \fi
}\fi
\fi}

We interleave printing name patterns (\ShowPattern), printing full index entries as if they were page refs (\ShowIdxPageref*), and printing short index entries (\ShowIdxPageref). Since we are in a local scope we delete the tag and xref control sequences as needed. They will be restored when the scope ends. We do not care about xrefs because we just want to see what happens with the name. We can always go to the idx and ind files if needed.
\ifx\arga\@empty
  \ifx\argc\@empty
    \ifdefined\ShortIdxEntry
      \csundef{\csb!PRE}%
      \csundef{\csb!TAG}%
      \csundef{\csb!PN}%
      \IndexName[#1]{#2}[#3]%
    \else
      \else
    \fi
  \fi
\fi
\ifdefined\LongIdxEntry
  \else
  \fi
\csundef{\csb!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\csb\% 
\fi 
\fi 
\else 
\ifx\suffb\@empty 
\ifdefined\ShortIdxEntry 
\csundef{\csbc!PRE}\% 
\csundef{\csbc!TAG}\% 
\csundef{\csbc!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\ifdefined\LongIdxEntry 
\csundef{\csbc!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\csbc\% 
\fi 
\fi 
\else 
\ifdefined\ShortIdxEntry 
\csundef{\csb!PRE}\% 
\csundef{\csb!TAG}\% 
\csundef{\csb!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\ifdefined\LongIdxEntry 
\csundef{\csb!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\csb\% 
\fi 
\fi 
\else 
\ifdefined\ShortIdxEntry 
\csundef{\csab!PRE}\% 
\csundef{\csab!TAG}\% 
\csundef{\csab!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\ifdefined\LongIdxEntry 
\csundef{\csab!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\csab\% 
\fi 
\fi 
\fi 
\else 
\ifdefined\ShortIdxEntry 
\csundef{\csab!PRE}\% 
\csundef{\csab!TAG}\% 
\csundef{\csab!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\ifdefined\LongIdxEntry 
\csundef{\csab!PN}\% 
\IndexName[#1]{#2}[#3]\% 
\else 
\csab\% 
\fi 
\fi 
\fi 
\global\undefined\LongIdxEntry\% 
\global\undefined\ShortIdxEntry\% 
\egroup\%
3.5 User Interface Macros: Prefix Macros

Syntactic Formatting — Capitalization

\CapThis Tells the root capping macro to cap the first character of all name elements.
\newcommand*{\CapThis}{\@nameauth@DoCapstrue}
\AccentCapThis Overrides the automatic test for active Unicode characters. This is a fall-back in case the automatic test for active Unicode characters fails.
\newcommand*{\AccentCapThis}{\@nameauth@Accenttrue\@nameauth@DoCapstrue}
\CapName Capitalize entire required name. Overrides \CapThis for surnames.
\newcommand*{\CapName}{\@nameauth@AllThistrue}
\AllCapsInactive Turn off global surname capitalization.
\newcommand*{\AllCapsInactive}{\@nameauth@AllCapsfalse}
\AllCapsActive Turn on global surname capitalization. Activates \CapName for every name.
\newcommand*{\AllCapsActive}{\@nameauth@AllCapstrue}

Syntactic Formatting — Reversing

\RevName Reverse name order.
\newcommand*{\RevName}{\@nameauth@RevThistrue}
\ReverseInactive Turn off global name reversing.
\newcommand*{\ReverseInactive}{\@nameauth@RevAllfalse}
\ReverseActive Turn on global name reversing. Activates \RevName for every name.
\newcommand*{\ReverseActive}{\@nameauth@RevAlltrue}
\ForceFN Force the printing of an Eastern forename or ancient affix in the text, but only when using the “short name” macro \FName and the \S{macro}.
\newcommand*{\ForceFN}{\@nameauth@EastFNtrue}

Syntactic Formatting — Reversing with Commas

\RevComma Last name, comma, first name.
\newcommand*{\RevComma}{\@nameauth@RevThisCommatrue}
\ReverseCommaInactive Turn off global “last-name-comma-first.”
\newcommand*{\ReverseCommaInactive}{\@nameauth@RevAllCommafalse}
\ReverseCommaActive Turn on global “last-name-comma-first.” Activates \RevComma for every name.
\newcommand*{\ReverseCommaActive}{\@nameauth@RevAllCommatrue}

Alternate Formatting

\AltFormatActive Turn on alternate formatting, engage the formatting macros.
\newcommand*{\AltFormatActive}{\@nameauth@AltFormattrue\@global\@nameauth@AltFormattrue\@global\@nameauth@DoAlttrue}
\textbf{\texttt{\textbackslash AltFormatActive}} Turn on alternate formatting, disengage the formatting macros.

\begin{verbatim}
\newcommand*{\AltFormatActive}{\global\@nameauth@AltFormattrue\global\@nameauth@DoAltfalse}
\end{verbatim}

\textbf{\texttt{\textbackslash AltFormatInactive}} Turn off alternate formatting altogether.

\begin{verbatim}
\newcommand*{\AltFormatInactive}{\global\@nameauth@AltFormatfalse\global\@nameauth@DoAltfalse}
\end{verbatim}

\textbf{\texttt{\textbackslash AltOn}} Locally turn on alternate formatting.

\begin{verbatim}
\newcommand*{\AltOn}{\if\@nameauth@InHook\if\@nameauth@AltFormat\@nameauth@DoAlttrue\fi\fi}
\end{verbatim}

\textbf{\texttt{\textbackslash AltOff}} Locally turn off alternate formatting.

\begin{verbatim}
\newcommand*{\AltOff}{\if\@nameauth@InHook\if\@nameauth@AltFormat\@nameauth@DoAltfalse\fi\fi}
\end{verbatim}

\textbf{\texttt{\textbackslash AltCaps}} Alternate discretionary capping macro triggered by \texttt{\CapThis}.

\begin{verbatim}
\newcommand*{\AltCaps}[1]{\if\@nameauth@InHook\if\@nameauth@DoCaps\MakeUppercase{#1}\else#1\fi\else#1\fi}
\end{verbatim}

\textbf{\texttt{\textsc{\textbackslash textSC}} Alternate formatting macro: small caps when active.}

\begin{verbatim}
\newcommand*{\textSC}[1]{\if\@nameauth@DoAlt\textsc{#1}\else#1\fi}
\end{verbatim}

\textbf{\texttt{\textsc{\textsc{\textbackslash textUC}} Alternate formatting macro: uppercase when active.}}

\begin{verbatim}
\newcommand*{\textUC}[1]{\if\@nameauth@DoAlt\MakeUppercase{#1}\else#1\fi}
\end{verbatim}

\textbf{\texttt{\textsc{\textit{\textbackslash textIT}} Alternate formatting macro: italic when active.}}

\begin{verbatim}
\newcommand*{\textIT}[1]{\if\@nameauth@DoAlt\textit{#1}\else#1\fi}
\end{verbatim}

\textbf{\texttt{\textsc{\textbf{\textbackslash textBF}} Alternate formatting macro: boldface when active.}}

\begin{verbatim}
\newcommand*{\textBF}[1]{\if\@nameauth@DoAlt\textbf{#1}\else#1\fi}
\end{verbatim}

\textbf{Syntactic Formatting — Affixes}

\textbf{\texttt{\textbackslash ShowComma}} Put comma between name and suffix one time.

\begin{verbatim}
\newcommand*{\ShowComma}{\@nameauth@ShowCommatrue}
\end{verbatim}
**Post-Processing — Main Versus Front Matter**

\NamesInactive Switch to the “non-formatted” species of names.
\NamesActive Switch to the “formatted” species of names.

**Name Decisions — First / Subsequent Reference**

\ForgetThis Have the naming engine \@nameauth@Name call \ForgetName internally.
\SubvertThis Have the naming engine \@nameauth@Name call \SubvertName internally.
\ForceName Set \@nameauth@FirstFormat to be true even for subsequent name uses. Works for one name only.

**Name Occurrence Tweaks**

\LocalNames \LocalNames sets \@nameauth@LocalNames true so \ForgetName and \SubvertName do not affect both main and front matter naming systems.
\GlobalNames \GlobalNames sets \@nameauth@LocalNames false. This restores the default behavior of \ForgetName and \SubvertName.

**Index Operations**

\IndexInactive Turn off global indexing of names.
\SkipIndex Turn off the next instance of indexing in \Name, \FName, and starred forms.
\JustIndex Makes the next call to \Name, \FName, and starred forms act like \IndexName. Overrides \SkipIndex.
\IndexActive Turn on global indexing of names.
\textbf{IndexActual} Change the “actual” character from the default.
\begin{verbatim}
725 \newcommand*{\IndexActual}[1]
    {\global\renewcommand*{\@nameauth@Actual}{#1}}
\end{verbatim}

\textbf{SeeAlso} Change the type of cross-reference from a \textit{see} reference to a \textit{see also} reference. Works once per xref, unless one uses $\texttt{\Include*}$, in which case, take care!
\begin{verbatim}
727 \newcommand*{\SeeAlso}{\@nameauth@SeeAlsotrue}
\end{verbatim}

### 3.6 User Interface Macros: General

\textbf{ShowPattern} This displays the pattern that the name arguments generate; maybe useful for debugging.
\begin{verbatim}
728 \newcommand*{\ShowPattern}{\@nameauth@Debug}
\end{verbatim}

\textbf{ShowIdxPageref} This displays the index entry that will be generated. This may be useful for debugging.
\begin{verbatim}
729 \newcommand*{\ShowIdxPageref%}{\def{\LongIdxEntry{}}\ShowPattern}
730 \newcommand*{\ShowIdxPageref*%}{\def{\ShortIdxEntry{}}\ShowPattern}
\end{verbatim}

\textbf{NameParser} Generate a name form based on the current state of the \texttt{nameauth} macros in the locked path. Available for use only in the hook macros.
\begin{verbatim}
733 \newcommand*{\NameParser}{
734 \if@nameauth@InHook
735 \let{\SNN}\rootb%
736 \let{\FNN}\suffb%
737 \let{\argv}{\@empty}
738 \else
739 \let{\FNN}\suffb%
740 \fi
\end{verbatim}

If the first optarg is empty, it is a non-Western name. The forename will be either the suffix or the final optarg.
\begin{verbatim}
741 \let{\argv}{\@empty}
742 \fi
\end{verbatim}

\textbf{Mononym case}
\begin{verbatim}
743 \let{\FNN}{\@empty}
744 \else
745 \FNN%
\end{verbatim}

Eastern or ancient name, using the older syntax, with name reversing and forcing
\begin{verbatim}
746 \if@nameauth@FullName%
747 \if@nameauth@RevThis
748 \FNN\Space\SNN%
749 \else
750 \SNN\Space\FNN%
751 \fi
752 \fi
753 \else
754 \if@nameauth@FirstName
755 \if@nameauth@EastFN
756 \FNN%
757 \else
758 \SNN%
759 \fi
\end{verbatim}
Eastern or ancient name, using the new syntax, with name reversing and forcing

```latex
\if@nameauth@FullName
  \if@nameauth@RevThis
    \FNN\Space\SNN%
  \else
    \SNN\Space\FNN%
  \fi
\fi
\fi
\else
  \if@nameauth@FirstName
    \if@nameauth@EastFN
      \FNN%
    \else
      \SNN%
    \fi
  \else
    \SNN%
  \fi
\fi
\else
  \if@nameauth@FullName
    \if@nameauth@RevThis
      \SNN\SpaceX\FNN%
    \else
      \if@nameauth@RevThisComma
        \SNN\RevSpace\FNN%
      \else
        \FNN\SpaceX\SNN%
      \fi
    \fi
  \else
    \if@nameauth@FirstName
      \FNN%
    \else
      \let\SNN\rootb%
      \SNN%
    \fi
  \fi
\fi
\fi
\fi
\fi
```

Western name with name reversing and suffixes

```latex
\ifx\argc@empty
  \let\FNN\arga%
\else
  \let\FNN\argc%
\fi
\unless\ifx\suffb@empty
  \def\SNN{\rootb\Space\suffb}%
  \if@nameauth@ShortSNN\let\SNN\rootb\fi%
\fi
\if@nameauth@FullName
  \if@nameauth@RevThis
    \SNN\SpaceX\FNN%
  \else
    \if@nameauth@RevThisComma
      \SNN\RevSpace\FNN%
    \else
      \FNN\SpaceX\SNN%
    \fi
  \fi
\fi
\fi
\else
  \if@nameauth@FirstName
    \FNN%
  \else
    \let\SNN\rootb%
    \SNN%
  \fi
\fi
```

95
Traditional Naming Interface
\Name \Name calls \NameauthName, the interface hook.
newcommand\Name\NameauthName

\Name* \Name* sets up a long name reference and calls \NameauthLName, the interface hook.
\WithSuffix\newcommand\Name*\% \Name\Name\% \NameauthLName\% \NameauthLName

\FName \FName sets up a short name reference and calls \NameauthFName, the interface hook.
\newcommand\FName\@nameauth@FirstNametrue\NameauthFName

\FName* \FName\% \FName*\% \FName*\% are identical in function.
\WithSuffix\newcommand\FName*\% \NameauthFName\% \NameauthFName\% \NameauthFName

Index Operations
\IndexProtect We shut down all output from the naming and indexing macros to protect against problems in the index in case a macro in an index entry should expand into one of the naming macros.
\newcommand*\IndexProtect\% \@nameauth@DoIndexfalse\% \@nameauth@BigLocktrue\% }

\IndexName This creates an index entry with page references. It issues warnings if the verbose option is selected. It prints nothing. First we make copies of the arguments.
\newcommandx*\IndexName[3][1=\@empty, 3=\@empty]\% \protected@edef\arga{\trim@spaces{#1}}\%
\protected@edef\rootb{\@nameauth@Root{#2}}\%
\protected@edef\suffb{\@nameauth@Suffix{#2}}\%
\protected@edef\argc{\trim@spaces{#3}}\%
\def\csb{\@nameauth@Clean{#2}}\%
\def\csbc{\@nameauth@Clean{#2,#3}}\%
\def\csab{\@nameauth@Clean{#1!#2}}\%
\@nameauth@Error{#2}{macro \string\IndexName}\
We create the appropriate index entries, calling \@nameauth@Index to handle sorting and tagging. We do not create an index entry for a cross-reference (code !PN for pseudonym), used by \IndexRef, \Excludename, \Includename, \AKA, and \PName. If the first optarg is empty, it is a non-Western name.
\ifx\arga\@empty\% \ifx\argc\@empty\% \@nameauth@Error{#2}{macro \string\IndexName}\
\protected@edef\argv{\trim@spaces{#1}}\%
\def\csb{\@nameauth@Clean{#2}}\%
\def\csbc{\@nameauth@Clean{#2,#3}}\%
\def\csab{\@nameauth@Clean{#1!#2}}\%
\PackageWarning{nameauth}{macro \IndexName: XRef: #2 exists}\
\fi
\fi
\else
\ifx\suffb\@empty\%
mononym or Eastern/ancient name, new syntax
\@nameauth@Index{\csb}{\rootb}\
else
\@nameauth@Index{\csb}{\rootb\space\suffb}\
fi\
\fi\
\else\
\ifx\suffb@empty\
\ifsurname\csbc!PN\endsurname\
\if@nameauth@Verbose\
\PackageWarning{nameauth}\
{macro \IndexName: XRef: #2 #3 exists}\
\fi\
\else\
\ifsurname\csbc!PN\endsurname\
\if@nameauth@Verbose\
\PackageWarning{nameauth}\
{macro \IndexName: XRef: #2 exists}\
\fi\
\else\
\ifsurname\csab!PN\endsurname\
\if@nameauth@Verbose\
\PackageWarning{nameauth}\
{macro \IndexName: XRef: #1 #2 exists}\
\fi\
\else\
\ifsurname\csab!PN\endsurname\
\if@nameauth@Verbose\
\PackageWarning{nameauth}\
{macro \IndexName: XRef: #1 #2 exists}\
\fi\
\else\
\ifx\suffb@empty\
\@nameauth@Index{\csab}{\rootb,\space\arga}\
\else\
\@nameauth@Index{\csab}{\rootb,\space\arga,\space\suffb}\
fi\
\fi\
\fi\
\fi\
\fi\
\fi\
\fi\

\IndexRef This creates an index cross-reference that is not already a pseudonym. It prints nothing.
First we make copies of the arguments to test them and make parsing decisions.
\newcommandx*{\IndexRef}[4][1=\@empty, 3=\@empty]{%\
\protected@edef\arga{\trim@spaces{#1}}\
\protected@edef\rootb{\@nameauth\Root{#2}}
}
Test for malformed input.

We create either see also entries or see entries. The former are unrestricted. The latter are only created if they do not already exist as main entries.

mononym or Eastern/ancient name, new syntax

Eastern or ancient name, older syntax
Eastern or ancient name, new syntax, alternate name ignored

Western name, without and with affix

This may not be necessary, but we do it for consistency.
\ExcludeName This macro prevents a name from being indexed.
\newcommandx*{ExcludeName}[3][1=\@empty, 3=\@empty]{%
\protected@edef\arga{\trim@spaces{#1}}%
\protected@edef\argc{\trim@spaces{#3}}%
\protected@edef\suffb{\@nameauth@Suffix{#2}}%
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%
\below we parse the name arguments and create a non-empty pseudonym macro.
@if\arga\@empty
  \if\argc\@empty
    \if@nameauth@Verbose
      \ifcsname\csb!MN\endcsname
        \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 exists}%
      \fi
    \fi
    \ifcsname\csb!NF\endcsname
      \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 exists}%
    \fi
    \else
      \csgdef{\csb!PN}{!}%
    \fi
  \fi
  \ifcsname\csb!PN\endcsname
    \if@nameauth@Verbose
      \ifcsname\csbc!MN\endcsname
        \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 #3 exists}%
      \fi
    \fi
    \ifcsname\csbc!NF\endcsname
      \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 #3 exists}%
    \fi
    \else
      \csgdef{\csbc!PN}{!}%
    \fi
  \fi
  \else
    \if\suffb\@empty
      \if@nameauth@Verbose
        \ifcsname\csbc!MN\endcsname
          \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 #3 exists}%
        \fi
      \fi
      \ifcsname\csbc!NF\endcsname
        \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 #3 exists}%
      \fi
      \else
        \csgdef{\csbc!PN}{!}%
      \fi
    \fi
    \else
      \if\arga\@empty
        \if\argc\@empty
          \if\arga\@empty
            \if\argc\@empty
              \if\arga\@empty
                \if\argc\@empty
                  \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 #3 #4 exists}%
                \fi
              \fi
            \fi
          \fi
        \fi
      \fi
    \fi
  \fi
\end{verbatim}
\IncludeName This macro allows a name to be indexed if it is not a cross-reference.
\newcommandx*{IncludeName}[3][1=\@empty, 3=\@empty] {%
  \protected@edef\arga{\trim@spaces{#1}}%
  \protected@edef\argc{\trim@spaces{#3}}%
  \protected@edef\suffb{\@nameauth@Suffix{#2}}%
  \def\csb{\@nameauth@Clean{#2}}%
  \def\csbc{\@nameauth@Clean{#2,#3}}%
  \def\csab{\@nameauth@Clean{#1!#2}}%
  Below we parse the name arguments and undefine only an “excluded” name.
  \@nameauth@Error{#2}{macro \string \IncludeName}%
  \ifx\arga\@empty
    \ifx\argc\@empty
      \ifcsname\csb!PN\endcsname
        \PackageWarning{nameauth}{macro \ExcludeName: Xref: #2 exists}%
      \fi
      \ifsname\csb!MN\endsname
        \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 exists}%
      \fi
      \ifsname\csb!NF\endsname
        \PackageWarning{nameauth}{macro \ExcludeName: Reference: #2 exists}%
      \fi
    \else
      \csgdef{\csb!PN}{!}%
    \fi
  \fi
  \else
    \if@nameauth@Verbose
      \PackageWarning{nameauth}{macro \ExcludeName: Reference: #1 #2 exists}%
    \fi
    \ifsname\csab!MN\endsname
      \PackageWarning{nameauth}{macro \ExcludeName: Reference: #1 #2 exists}%
    \fi
    \ifsname\csab!NF\endsname
      \PackageWarning{nameauth}{macro \ExcludeName: Reference: #1 #2 exists}%
    \fi
    \else
      \csgdef{\csab!PN}{!}%
    \fi
  \fi
}\IncludeName
This macro allows any name to be indexed, undefining cross-references.

\IncludeName* \WithSuffix{\newcommandx*}{\IncludeName*}[3][1=\@empty, 3=\@empty] %
\protected@edef{\arga}{\trim@spaces{#1}}% 
\protected@edef{\argc}{\trim@spaces{#3}}% 
\protected@edef{\suffb}{\@nameauth@Suffix{#2}}% 
\def{\csb}{\@nameauth@Clean{#2}}% 
\def{\csbc}{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%

Below we parse the name arguments and undefine an xref control sequence.
\@nameauth@Error{#2}{macro \string\IncludeName*}%
\ifx\arga\@empty
  \ifx\argc\@empty
    \global\csundef{\csb!PN}%
  \else
    \ifx\suffb\@empty
      \global\csundef{\csbc!PN}%
    \else
      \global\csundef{\csb!PN}%
    \fi
  \fi
\fi
\else
  \global\csundef{\csab!PN}%
\fi}

\PretagName

This creates an index entry tag that is applied before a name.
\newcommandx*[4][1=\@empty, 3=\@empty]{\PretagName}{%
\protected@edef\arga{\trim@spaces{#1}}%
\protected@edef\argc{\trim@spaces{#3}}%
\protected@edef\suffb{\@nameauth@Suffix{#2}}%
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%

We parse the arguments, defining the sort tag control sequences used by \@nameauth@Index.
\@nameauth@Error{#2}{macro \string\PretagName}%
\ifx\arga\@empty
  \ifx\argc\@empty
    \ifcsname\csb!PN\endcsname
      \if@nameauth@Verbose
        \PackageWarning{nameauth}{macro \PretagName: tagging xref: #2}%
      \fi
    \fi
  \else
    \ifcsname\csbc!PN\endcsname
      \if@nameauth@Verbose
        \PackageWarning{nameauth}{macro \PretagName: tagging xref: #2 #3}%
      \fi
    \fi
  \fi
\else
  \ifcsname\csb!PN\endcsname
    \if@nameauth@Verbose
      \PackageWarning{nameauth}{macro \PretagName: tagging xref: #2}%
    \fi
  \fi
\fi}

\@nameauth@Index
This creates an index entry tag for a name that is not used as a cross-reference.

\newcommandx*\TagName[4][1=\@empty, 3=\@empty]{\protected@edef\arga{\trim@spaces{#1}}\protect\edef\argc{\trim@spaces{#3}}\protected@edef\suffb{\@nameauth@Suffix{#2}}\def\csb{\@nameauth@Clean{#2}}\def\csbc{\@nameauth@Clean{#2,#3}}\def\csab{\@nameauth@Clean{#1!#2}}

We parse the arguments, defining the macros used by \@nameauth@Index.
\begin{verbatim}
\newcommandx*\UntagName[3][1=\@empty, 3=\@empty]{%
\protected@edef\arga{\trim@spaces{#1}}%
\protected@edef\argc{\trim@spaces{#3}}%
\protected@edef\Suff{\@nameauth@Suffix{#2}}%
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%
We parse the arguments, undefining the index tag macros.
\@nameauth@Error{#2}{macro \string\UntagName}%
\ifx\arga\@empty
  \ifx\argc\@empty
    \global\csundef{\csb!TAG}%
  \else
    \global\csundef{\csbc!TAG}%
  \fi
\else
  \global\csundef{\csab!TAG}%
\fi}
\newcommandx*\NameAddInfo[4][1=\@empty, 3=\@empty]{%
\protected@edef\arga{\trim@spaces{#1}}%
\protected@edef\argc{\trim@spaces{#3}}%
\protected@edef\Suff{\@nameauth@Suffix{#2}}%
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%
We parse the arguments, defining the text tag control sequences.
\@nameauth@Error{#2}{macro \string\NameAddInfo}%
\ifx\arga\@empty
  \ifx\argc\@empty
    \csgdef{\csb!DB}{#4}%
  \else
    \csgdef{\csb!DB}{#4}%
  \fi
\end{verbatim}

\textbf{Name Info Data Set: “Text Tags”}

\texttt{\NameAddInfo} This creates a macro that expands to information associated with a given name, similar to an index tag, but usable in the body text.
\NameQueryInfo  This prints the information created by \NameAddInfo if it exists.

\NameClearInfo  This deletes a text tag. It has the same structure as \UntagName.
Name Decisions

\IfMainName This macro expands one path if a main matter name exists, or else the other.
\newcommandx\IfMainName[5][1=\@empty, 3=\@empty]{%}
\protected@edef\arga{\trim@spaces{#1}}%
\protected@edef\argc{\trim@spaces{#3}}%
\protected@edef\suffb{\@nameauth@Suffix{#2}}%
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%
Below we parse the name arguments and choose the path.
\@nameauth@Error{#2}{macro \string\IfMainName}%
\ifx\arga\@empty
\ifx\argc\@empty
\ifcsname\csb!MN\endcsname{#4}\else{#5}\fi
\else
\ifx\suffb\@empty
\ifcsname\csbc!MN\endcsname{#4}\else{#5}\fi
\else
\ifcsname\csb!MN\endcsname{#4}\else{#5}\fi
\fi
\fi
\else
\ifcsname\csab!MN\endcsname{#4}\else{#5}\fi
\fi
\fi\fi
\IfFrontName This macro expands one path if a front matter name exists, or else the other.
\newcommandx\IfFrontName[5][1=\@empty, 3=\@empty]{%}
\protected@edef\arga{\trim@spaces{#1}}%
\protected@edef\argc{\trim@spaces{#3}}%
\protected@edef\suffb{\@nameauth@Suffix{#2}}%
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%
Below we parse the name arguments and choose the path.
\@nameauth@Error{#2}{macro \string\IfFrontName}%
\ifx\arga\@empty
\ifx\argc\@empty
\ifcsname\csb!NF\endcsname{#4}\else{#5}\fi
\else
\ifx\suffb\@empty
\ifcsname\csbc!MN\endcsname{#4}\else{#5}\fi
\else
\ifcsname\csb!MN\endcsname{#4}\else{#5}\fi
\fi
\fi
\else
\ifcsname\csab!MN\endcsname{#4}\else{#5}\fi
\fi
\fi
\fi
\fi
\IfAKA This macro expands one path if a cross-reference exists, another if it does not exist, and a third if it is excluded.
\newcommandx\IfAKA[6][1={@empty, 3={@empty}]{%\protected@edef\arga{\trim@spaces{#1}}%\protected@edef\argc{\trim@spaces{#3}}%\protected@edef\suffb{@nameauth@Suffix{#2}}%\def\csb{@nameauth@Clean{#2}}%\def\csbc{@nameauth@Clean{#2,#3}}%\def\csab{@nameauth@Clean{#1!#2}}%For each class of name we test first if a cross-reference exists, then if it is excluded.\@nameauth@Error{#2}{macro \string\IfAKA}%\ifx\arga@empty\ifx\argc@empty\if\csbc!PN\edef\testex{\csbc!PN}\if\testex@empty{#4}\else{#6}\fi\else{#5}\fi\else\if\csb!PN\edef\testex{\csb!PN}\if\testex@empty{#4}\else{#6}\fi\else{#5}\fi\fi\else\if\csab!PN\edef\testex{\csab!PN}\if\testex@empty{#4}\else{#6}\fi\else{#5}\fi\fi\fi\fi\else\if\csbc!PN\edef\testex{\csbc!PN}\if\testex@empty{#4}\else{#6}\fi\else{#5}\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi}

\ForgetName This undefines a control sequence to force a “first use.”
\newcommandx*\ForgetName[3][1={@empty, 3={@empty}]{%\protected@edef\arga{\trim@spaces{#1}}%\protected@edef\argc{\trim@spaces{#3}}%
Now we parse the arguments, undefining the control sequences either by current name type (via \texttt{@nameauth@MainFormat}) or completely (toggled by \texttt{@nameauth@LocalNames}).

\begin{verbatim}
\protected@edef\suffb{\@nameauth@Suffix\{#2\}}%
\def\csb{\@nameauth@Clean\{#2\}}%
\def\csbc{\@nameauth@Clean\{#2,#3\}}%
\def\csab{\@nameauth@Clean\{#1!#2\}}%
\@nameauth@Error\{#2\}{macro \string\ForgetName}
\ifx\arga\@empty
  \ifx\argc\@empty
    \if\@nameauth@LocalNames
      \if\@nameauth@MainFormat
        \global\csundef{\csb!MN}%
      \else
        \global\csundef{\csb!NF}%
      \fi
    \else
      \global\csundef{\csb!NF}%
    \fi
  \else
    \global\csundef{\csb!MN}%
    \global\csundef{\csb!NF}%
  \fi
\else
  \ifx\suffb\@empty
    \if\@nameauth@LocalNames
      \if\@nameauth@MainFormat
        \global\csundef{\csbc!MN}%
      \else
        \global\csundef{\csbc!NF}%
      \fi
    \else
      \global\csundef{\csbc!NF}%
    \fi
  \else
    \global\csundef{\csb!MN}%
    \global\csundef{\csb!NF}%
  \fi
\fi
\else
  \if\@nameauth@LocalNames
    \if\@nameauth@MainFormat
      \global\csundef{\csab!MN}%
    \else
      \global\csundef{\csab!NF}%
    \fi
  \else
    \global\csundef{\csab!MN}%
    \global\csundef{\csab!NF}%
  \fi
\fi
\end{verbatim}

This defines a control sequence to force a “subsequent use.”

\newcommandx*{SubvertName}[3][1=\empty, 3=\empty]{%
\protected@edef\arga{\trim@spaces{#1}}%
\protected@edef\argc{\trim@spaces{#3}}%
\def\suffb{\@nameauth@Suffix{#2}}%
\def\csb{\@nameauth@Clean{#2}}%
\def\csbc{\@nameauth@Clean{#2,#3}}%
\def\csab{\@nameauth@Clean{#1!#2}}%

We make copies of the arguments to test them.

@nameauth@Error{#2}{macro \string\SubvertName}%

Now we parse the arguments, defining the control sequences either locally by section type or globally. @nameauth@LocalNames toggles the local or global behavior, while we select the type of name with @nameauth@MainFormat.

\if\arga\@empty
  \if\argc\@empty
    \if@nameauth@LocalNames
      \if@nameauth@MainFormat
        \csgdef{\csb!MN}{%}
      \else
        \csgdef{\csb!NF}{%}
      \fi
    \else
      \csgdef{\csb!MN}{%}
      \csgdef{\csb!NF}{%}
    \fi
  \else
    \csgdef{\csbc!MN}{%}
    \csgdef{\csbc!NF}{%}
  \fi
  \fi
\else
  \if\suffb\@empty
    \if@nameauth@LocalNames
      \if@nameauth@MainFormat
        \csgdef{\csbc!MN}{%}
      \else
        \csgdef{\csbc!NF}{%}
      \fi
    \else
      \csgdef{\csbc!MN}{%}
      \csgdef{\csbc!NF}{%}
    \fi
  \else
    \if@nameauth@LocalNames
      \if@nameauth@MainFormat
        \csgdef{\csb!MN}{%}
      \else
        \csgdef{\csb!NF}{%}
      \fi
    \else
      \csgdef{\csb!MN}{%}
      \csgdef{\csb!NF}{%}
    \fi
  \fi
\else
  \if\argc\@empty
    \if@nameauth@LocalNames
      \if@nameauth@MainFormat
        \csgdef{\csb!MN}{%}
      \else
        \csgdef{\csb!NF}{%}
      \fi
    \else
      \csgdef{\csb!MN}{%}
      \csgdef{\csb!NF}{%}
    \fi
  \else
    \csgdef{\csbc!MN}{%}
    \csgdef{\csbc!NF}{%}
  \fi
\fi
\fi
\fi
\fi
\fi
\fi
\fi
Alternate Names
\AKA \AKA prints an alternate name and creates index cross-references. It prevents multiple
generation of cross-references and suppresses double periods.
\newcommandx*\AKA[5][1=\empty, 3=\empty, 5=\empty]{% Prevent entering \AKA via itself or \@nameauth@Name. Prevent the index-only flag. Tell the
formatting system that \AKA is running.
\if@nameauth@BigLock\@nameauth@Locktrue\fi
\unless\if@nameauth@Lock\@nameauth@Locktrue%
\@nameauth@InAKAtrue%
\if@nameauth@OldReset\@nameauth@JustIndexfalse%
\else\global\@nameauth@JustIndexfalse%
\fi
Test for malformed input.
\@nameauth@Error{#2}{macro \string\AKA}%
\@nameauth@Error{#4}{macro \string\AKA}%
Names occur in horizontal mode; we ensure that. Next we make copies of the target name
arguments and we parse and print the cross-reference name.
\leavevmode\hbox{}
\protected@edef\argi{\trim@spaces{#1}}%
\protected@edef\rooti{\@nameauth@Root{#2}}%
\protected@edef\suffi{\@nameauth@Suffix{#2}}%
\@nameauth@Parse[#3]{#4}{#5}{!PN}%
Create an index cross-reference based on the arguments.
\unless\if@nameauth@SkipIndex
\ifx\argi\empty\ifx\suffi\empty\IndexRef[#3]{#4}{#5}{\rooti}%
\else\IndexRef[#3]{#4}{#5}{\rooti\space\suffi}%
\fi
\else\ifx\suffi\empty\IndexRef[#3]{#4}{#5}{\rooti,\argi}%
\else\IndexRef[#3]{#4}{#5}{\rooti,\space\argi,\space\suffi}%
\fi
\fi
Reset all the “per name” Boolean values. The default is global.

\if@nameauth@OldReset
\@nameauth@SkipIndexfalse\%
\@nameauth@AltAKAfalse\%
\@nameauth@NBSPfalse\%
\@nameauth@NBSPXfalse\%
\@nameauth@DoCapsfalse\%
\@nameauth@Accentfalse\%
\@nameauth@AllThisfalse\%
\@nameauth@ShowCommafalse\%
\@nameauth@NoCommafalse\%
\@nameauth@RevThisfalse\%
\@nameauth@RevThisCommafalse\%
\@nameauth@ShortSNNfalse\%
\@nameauth@EastFNfalse\%
\else
\global\@nameauth@SkipIndexfalse\%
\global\@nameauth@AltAKAfalse\%
\global\@nameauth@NBSPfalse\%
\global\@nameauth@NBSPXfalse\%
\global\@nameauth@DoCapsfalse\%
\global\@nameauth@Accentfalse\%
\global\@nameauth@AllThisfalse\%
\global\@nameauth@ShowCommafalse\%
\global\@nameauth@NoCommafalse\%
\global\@nameauth@RevThisfalse\%
\global\@nameauth@RevThisCommafalse\%
\global\@nameauth@ShortSNNfalse\%
\global\@nameauth@EastFNfalse\%
\fi
\@nameauth@Lockfalse\%
\@nameauth@InAKAfalse\%

Close the “locked” branch.

\fi

Call the full stop detection.
\fi

\@nameauth@Punct\expandafter\@nameauth@CheckDot\fi

\AKA*  This starred form sets a Boolean to print only the alternate name argument, if that exists, and calls \AKA.
\WithSuffix{\newcommand*}{\AKA*}{\@nameauth@AltAKAtrue}\AKA

\PName  \PName is a convenience macro that calls \NameauthName, then \AKA. It prevents the index-only feature from triggering.
\newcommandx*{\PName}[5][1=\@empty,3=\@empty,5=\@empty]{% 
\@nameauth@JustIndexfalse\%
\if@nameauth@SkipIndex
\@NameauthName[#1]{#2}\space(\SkipIndex\AKA[#1]{#2}[#3]{#4}[#5])%
\else
\@NameauthName[#1]{#2}\space(\AKA[#1]{#2}[#3]{#4}[#5])%
\fi
}
This sets up a long name reference and calls \PName.*

\WithSuffix{\newcommand*}\PName*{\@nameauth@FullNametrue\PName}

\textbf{Simplified Interface}

\texttt{nameauth} The \texttt{nameauth} environment creates macro shorthands. First we define a control sequence \texttt{<} that takes four parameters, delimited by three ampersands and \texttt{>}.  

\newenvironment{nameauth}{%  
\begingroup%  
\let\ex\expandafter%  
\csdef{<}##1&##2&##3&##4>{%  
\protected@edef\@arga{\trim@spaces{##1}}%  
\protected@edef\@testb{\trim@spaces{##2}}%  
\protected@edef\@testd{\trim@spaces{##4}}%  
\@nameauth@etoksb\expandafter{##2}%  
\@nameauth@etoksc\expandafter{##3}%  
\@nameauth@etoksd\expandafter{##4}%
\The first argument must have some text to create a set of control sequences with it. The third argument is the required name argument. Redefining a shorthand creates a warning.

\ifx\@arga\@empty\PackageError{nameauth}{environment nameauth: Control sequence missing}%\fi
\@nameauth@Error{##3}{environment nameauth}%\ifcsname\@arga\endcsname\PackageWarning{nameauth}{environment nameauth: Shorthand macro already exists}%\fi

\set up shorthands according to name form. We have to use \texttt{\expandafter}, not the \texttt{\epsilon-\TeX} way, due to \texttt{\protected@edef} in the naming macros.

We begin with mononyms and non-Western names that use the new syntax. We use one \texttt{\expandafter} per token because we only have one argument to expand first.

\ifx@arga\@empty
\PackageError{nameauth}{environment nameauth}%
{environment nameauth: Control sequence missing}%%\fi
\@nameauth@Error{#3}{environment nameauth}%%\ifcsname@arga\endcsname\PackageWarning{nameauth}{environment nameauth: Shorthand macro already exists}%%\fi

\set up shorthands according to name form. We have to use \texttt{\expandafter}, not the \texttt{\epsilon-\TeX} way, due to \texttt{\protected@edef} in the naming macros.

We begin with mononyms and non-Western names that use the new syntax. We use one \texttt{\expandafter} per token because we only have one argument to expand first.

\ifx@arga\@empty
\PackageError{nameauth}{environment nameauth}%
{environment nameauth: Control sequence missing}%%\fi
\@nameauth@Error{#3}{environment nameauth}%%\ifcsname@arga\endcsname\PackageWarning{nameauth}{environment nameauth: Shorthand macro already exists}%%\fi

\set up shorthands according to name form. We have to use \texttt{\expandafter}, not the \texttt{\epsilon-\TeX} way, due to \texttt{\protected@edef} in the naming macros.

We begin with mononyms and non-Western names that use the new syntax. We use one \texttt{\expandafter} per token because we only have one argument to expand first.

\ifx@arga\@empty
\PackageError{nameauth}{environment nameauth}%
{environment nameauth: Control sequence missing}%%\fi
\@nameauth@Error{#3}{environment nameauth}%%\ifcsname@arga\endcsname\PackageWarning{nameauth}{environment nameauth: Shorthand macro already exists}%%\fi

\set up shorthands according to name form. We have to use \texttt{\expandafter}, not the \texttt{\epsilon-\TeX} way, due to \texttt{\protected@edef} in the naming macros.

We begin with mononyms and non-Western names that use the new syntax. We use one \texttt{\expandafter} per token because we only have one argument to expand first.
Below are "native" Eastern names with alternates and the older syntax. Again, we have three or one use of \texttt{\expandafter} per step before the respective arguments.

\begin{verbatim}
\fi \else
\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi
\\fi\end{verbatim}

Here are Western names with alternates. We have three arguments to expand, so we have seven, three, and one respective use of \texttt{\expandafter}.

\begin{verbatim}
\fi
\fi\ignorespaces\
\\fi\ignorespaces\
\end{verbatim}
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