STEP Tools

A Suite of Add-Ons to STEP

Presentation and User Guide

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STEP Transcriptor
STEP Emendator
STEP Image Browser
STEP Text Comparator

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I. ABOUT STEP TOOLS

1. STEP: Scholarly Text-Editing Platform

STEP is an online, open-source, Scholarly Text-Editing Platform that allows the staff of scholarly editions to transcribe, critically edit, annotate, format, and lay out an author’s texts without relying on ever-changing proprietary software. STEP in its conception is XML-based and complies with the international tagging standards dictated by the latest fifth edition of the Text Encoding Initiative (TEI) Guidelines. STEP has been designed by a team of scholars and web developers in the Institute for American Thought (IAT) at IUPUI under the leadership of the Peirce Edition Project.

Partially funded through an NEH digital-humanities grant the IAT received in fall 2011, STEP is powered by Drupal, a remarkably versatile open-source contents management system. It feeds into and out of Drupal-managed MySQL databases.

STEP has been engineered to streamline editorial workflows, support multiple versioning, and implement access-permission protocols. It will eventually include nine dynamically linked modules that will offer the following capabilities:

(a) importation of digitized images of original documents or electroprint copies thereof;
(b) production of rigorous, TEI-tagged, scholarly transcriptions;
(c) enabling the online scholarly editing, annotating, and formatting of texts in a WYSIWYG interface that keeps track of and archives every iteration of a document through multiple stages of corrections and editorial interventions;
(d) linking edited texts and their components to the digitized documents on the one hand, and to their critical editorial apparatus on the other; and
(e) streamlining the conversion of copy-texts to fully laid-out and hyperlinked texts readied for online or printed publication.

2. The Need for specialized STEP Tools in external applications programmed in LiveCode

STEP was initially conceived to be a comprehensive and self-sufficient scholarly editing platform. Over time it became evident that STEP could be comprehensive but not self-sufficient. STEP development followed the principles and protocols of Human-Computer Interaction (HCI) design, including a series of usability tests. Once the online TEI-XML editor was developed, testing showed that it was one thing to use the TEI editor to transcribe relatively simple texts with few authorial corrections. But when it came to complex copy-texts strewn with multiple levels of insertions and deletions—as is the rule with Peirce’s manuscripts—the difficulty and tedium of tagging complex alterations became quickly an unbearable burden on transcribers, professional or not. TEI tagging is not for the faint of heart, if it is to be done as correctly as possible— and exact TEI tagging is what STEP is about.

And so arose a pressing need for specialized tools that would alleviate the tedium, automatize complex tagging procedures, and decrease errors. It became evident that transcribers could not be expected to master all aspects of TEI nor to enjoy creating a forest of tags within documents while maintaining their sanity. The need to retain them and to flatten a stiff learning curve required therefore that tagging
tools be programmed in such a way that users would be spared the labor of tagging textual elements (including attributes and values) and anchoring tags to the largest degree possible.

It also became clear that programming such specialized tools would be arduous. Take for example a specialized TEI-XML transcription tool. If well conceived, such a tool should enable users to overcome many difficulties and achieve many goals. Here is a sample list:

(a) Have ready at hand, at the fingertips, several options for entering TEI tags and attributes: pull-down menus, pop-up menus, clickable buttons, autocomplete features, self-correcting features, keyboard shortcuts, programmable function keys, efficient connection to relevant online TEI documentation, and access to examples.

(b) The flexibility to import the relevant XML document from the STEP platform into the specialized tool, but also the option to import any other untagged transcription from any other source.

(c) Ways of tagging multilevel alterations (say, a phrase deleted and replaced five times through superimposed deletions and insertions, partial or full) through tag nesting without having to type a single angle bracket.

(d) Ways of tagging complex transpositions, including their special TEI attributes and anchors.

(e) Automatic tagging and anchoring of deletion and addition spans.

(f) Easy ways of inserting special characters with diacritical marks, foreign characters, symbols, unusual punctuation, fractions, in automatic HTML code.

(g) Automatic administration of all TEI-approved anchoring systems, including the correct syntax and placement of abbreviations and numbers.

(h) Automatic generation of syntactical descriptions of alterations based on their tags, attributes, and anchors, in good English.

(i) Automatic generation of pragmatic descriptions of alterations, ready for the critical apparatus, also based on an intelligent translation of tags and attributes.

(j) Ability to change and customize all aspects and features of the tagging tools, including the assignment of colors to distinct classes of tags, the arrangement of tags within pull-down menus and pop-up menus, the addition or deletion of tags, attributes, and values within those menus.

(k) Ability to export any content of any field associated with the tool either to the STEP platform or to any other text or browser software.

(l) Ability to view the tagged transcription in run-on or indented view, with or without the anchors, and with or without the tags.

(m) Ability to completely separate the tagging of authorial alterations from the tagging of descriptive elements in order to achieve tag clarity while avoiding the scourge of overlapping tags (an XML restriction).

(n) Ability to consult a digitized image of the source text on screen while transcribing.

The STEP platform implements several of those requisites partially or fully, but not all: requisites requiring sophisticated programming (such as c, d, e, g, h, j, l, m) are not within its reach. Two thoughts occurred to us: (1) that all of those requisites could be programmed externally far more efficiently than within the browser interface; and (2) that it was actually perfectly acceptable for some STEP tasks to be accomplished outside the platform. From the standpoint of transcribers and users, it is really immaterial whether the software they use is a browser online or an app within their workstation.

What mattered, therefore, was to find a way of programming those external tools (or apps) fast, efficiently, using a web-aware, open-source, community-supported, cross-platform programming environment compatible with online browsers, capable of communicating with other applications, of launching them, of opening, reading and writing processes, or executing shell commands. Several options were considered but in the end we chose one that was most appealing for its power and reputation for rapid
development: LiveCode, a software developed by Runtime Revolution (aka RunRev), a company based in Edinburgh, Scotland. RunRev was founded in 1997 with the goal of enabling fast creation of applications for enterprise, commercial, creative and academic environments. LiveCode, that company’s cross-platform programming environment, was launched in 1998, initially under the name Revolution. It began as an expert Integrated Development Environment (IDE) for a graphical user interface and development environment that supported UNIX, Windows and Mac. Over time, the technology developed into software that could be deployed to mobile platforms (iOS and Android) as well as desktop (Mac, Windows, UNIX, Linux). In 2009 a server management system was added and Revolution was renamed to LiveCode in 2010. In 2013 RunRev launched an ambitious initiative to provide an open source version of the LiveCode software. The first version of this, LiveCode Community, launched in April 2013. The LiveCode open source edition includes the entire code base for all platforms, including the development environment and documentation.

The beauty of LiveCode comes from its fourth-generation scripting language, which is English-like and therefore highly readable and easy to debug and correct. LiveCode allows the programmer to develop and edit a program while that program is running (no wait time, no separate compilation). The consequence is that software created in LiveCode can be easily shared with everyone, and understanding what another programmer has done in that language is not complicated: reading the program in English is all it takes (almost).

Having adopted LiveCode as our open-source solution, it took us only a few months to develop the first of a suite of tools (STEP Tools), which we called “STEP Transcriptor.” What STEP Transcriptor does is everything that has been listed above, from (a) to (n).

3. Four STEP Tools

Four STEP Tools are in the works at the moment, and two more are in the offing. The Transcriptor, Image Browser, and Text Comparator were programmed by André De Tienne, and the Emendator has been prototyped by Matthew O’Haver.

(1) **STEP Transcriptor** is by far the most complex, and it is fully functional and almost completely done (only one of its sub-tools remains to be programmed: a tool that automatically tags TEI-defined alternations, one of the most arduous kinds of TEI tagging protocols).

(2) **STEP Emendator** has so far been prototyped, and the prototype is presented further below. STEP Emendator is a tool to help textual editors tag emendations in perfected transcriptions. Its goal is again to allow textual editors to do their work without having to type a single angle bracket. For instance, the idea is to have the textual editor highlight a word in need of editing, type the correction in a special field, and click a button that will automatically create the emendation entry, with on the one hand the correct tags and attributes, and on the other a full complement of lemmas, square brackets, sigla, glosses, and anchors intended for the emendations list in the critical apparatus.

(3) **STEP Image Browser**, a tool that can be used along with STEP Transcriptor, STEP Emendator, and STEP Annotator (it can be made to float above them); its function is to provide visual access to digitized images of manuscripts, for transcription, critical editing, or annotation purposes. STEP Image Browser is also fully functional at this writing.

(4) **STEP Text Comparator**, a tool to help with text collations, to be used in conjunction with STEP Emendator. It compares two texts at once, in both directions, according to three classes of text ranges.
A fifth tool, **STEP Annotator**, will be in the works when STEP Emendator is done. STEP Annotator will be a tool specialized in the administration and tagging of scholarly annotations to an author’s text (data collection, drafting of editorial scholarly notes, selection of notes, editing, correction, layout). A sixth tool, **STEP Formulator**, will help create LaTeX-based mathematical formula embeddable in TEI tags.

The major part of the present series of guides describes and illustrates in detail how the first of STEP’s suite of external tools, STEP Transcriptor, works. The other three are also presented.

### 4. Installing STEP Tools: How to Get Started

There are two versions of STEP Tools, one for the MacOS (it runs on any MacOS, whether the machine is a PowerPC or Intel-core), and the other for Windows (it runs on any version of Windows up to Windows 8). The two versions provide identical functionalities and work in the same way. The Windows version differs in cosmetic matters: its esthetics is of course different from the Mac version, but the programming itself is nearly identical.

- **MAC:** Install the application inside one folder *preferably* within the Macintosh’s “Documents” folder (the Installer does it automatically for you). You may also install it within the “Applications” folder but **only** if you have administrator-level access to the computer.
- **WINDOWS:** Install the STEP Tools application folder within your “My Documents” folder.

**NB:** The intention is that STEP Platform users will download at the same time the platform itself and STEP Tools.

Two methods for launching the application.

1. Double-clicking the STEP Tools application is all it takes to launch it. A splash screen (at right) will come and go very fast, and then a dialog will pop up asking you to select the tool you need (below). Click the button corresponding to your choice. In the present case, click the first button, **STEP Transcriptor**.

2. Alternatively, dragging and dropping a text file on the application’s icon will launch it as well. If the text is a STEP file produced by STEP’s Transcription Module, dragging it onto the application icon will automatically launch **STEP Transcriptor**.
5. A Tour of STEP Tools’ Menu Bar

The STEP Tools menu bar is shared by all its sub-applications with few differences. That menu bar is at the top of the screen in Macs, and at the top of the application window in PCs. It is self-evident for the most part.

1. STEP Tools’ application menu

The About STEP Transcriptor command is sub-application specific (thus it could also be “About STEP Emendator,” “About STEP Annotator,” and about “STEP Image Browser”). It simply shows a modal dialog crediting the application’s maker.

The Preferences command is an OS requirement but shows nothing, because customizing STEP Tools is done in ways more convenient (see the Customize Tags/Menus button in STEP Transcriptor).

2. The File menu

This menu is reduced to two commands, Save and Close. There is no Open command because file importation is done either by drag and drop on the application’s icon or by using the Import Text for TEI Tagging… Button in the button bar at the top of the application window.

In STEP Transcriptor, choosing the Save command is equivalent to clicking the Save button on the bottom right side of the window. Do save your work regularly.

3. The Edit menu

The Undo command is limited to undo the last typing you have done. It does not undo complex actions caused by clicking buttons and menu commands.

The Restore Last Save command returns the sub-application to the state it was before the last saving occurred. It is equivalent to clicking the Restore button on the bottom right side of the window.

Select All and Deselect All work on any field under current focus.

4. The Font menu

There is currently only one command in this menu, Text Font and Size... Choosing it brings up a dialog that allows you to change at once the font, the character size, and the text height (= line spacing) of ALL TEXT FIELDS in STEP Transcriptor’s main window. Select your choices, and click the Apply button. If satisfied with the resulting look, click Close, otherwise change the settings again.
5. The **Tools** menu

This menu provides access to STEP Tools’ four sub-applications. When accessed from one of those sub-applications, this menu displays not four but three sub-applications (each sub-application excluding itself).

6. The **Window** menu

This first command in this menu toggle between **Backdrop** and **Remove Backdrop**. Choosing **Backdrop** turns the screen background (behind the STEP Tools windows) completely black, to help decrease visual distraction. Choosing **Remove Backdrop** unveils the clutter of your desktop.

The rest of the menu lists all STEP Tools windows that are open. Selecting any window name brings you to it.

7. The **Help** menu

The **Help** command is not functioning yet but may eventually be linked to a dedicated website. Access to the user guide’s PDF will also be made available here.

Choosing the command **Hide Tooltips** turns off the appearance of little yellow boxes that come up whenever your mouse pointer enters a button or a field. Those yellow boxes provide very helpful hints and reminders, brief or not so brief, about how to use various features of STEP Tools. They are especially helpful to beginners. But when they get too much in the way, this command allows you to dismiss them. If you do, the command changes its name into **Show Tooltips**, thus giving you the opportunity to turn this feature on again.

Hopefully, you will never need to use the **Reset Window Geometry** command. Sometimes, however, the positioning of buttons and fields within a window may suddenly become irregular due to a geometry cache malfunction (this only happens when resizing a window). Selecting this command restores the window’s normal appearance.
STEP Transcriptor's main interface is shown above (Mac view). There are multiple smaller windows that are subordinated to it. There are three main regions in that interface (explained further below in detail).

(a) At left. A large field takes most of that space, which is where the transcriber types and tags the text with all of its authorial alterations (insertions, deletions, transpositions, etc.). That field can be viewed in five different ways.

(b) In the center. That center region has three parts.
   - At the top is the tagging area. It contains among other things pull-down menus filled with specialized transcription, structural, and descriptive TEI tags. Two buttons allow the user to insert a tag at a point in the text, or around a selected string of characters.
   - In the middle is a field containing the automatic syntactical description of alterations based on their tagging.
   - At the bottom is a field containing the automatic pragmatic description of alterations based on their tagging.

Both these fields are viewable in plain and XML form, and their content can be edited in a separate field.

(c) At right. The main field there is where the transcriber tags the transcribed, post-alteration text with descriptive tags (as opposed to transcriptional tags): such tags identify proper names, bibliographical references, and a multitude of other textual or semantic properties. That field is viewable in three different ways (run-on, indented, tagless).

   - That same area is occupied by a second field, which offers the user the option to tag the pre-alteration text: i.e., those segments of texts that the author deleted, for oftentimes those deletions can be quite significant and tag-worthy. That second field is also viewable in three different ways.
• Underneath that field is a smaller field surmounted by a pull-down menu. It displays the content of every other field in this interface (17 fields) in regular HTML or in XHTML form, both of which can be exported to .html files (useful for website purposes).

• The bottom right corner shows 10 practical buttons, the first one of which is marvelous. It is called Example. Click it, and you are in example mode (its radio button gets highlighted). All fields get filled with tagged texts of all sorts, for you to observe and learn from. Click the button again to leave the example mode and return to normal work mode.

1. Beginning a Transcription from scratch or from an imported document

To begin transcribing a text, all you need to do is click inside the empty transcription field on the left side of the window so that the insertion point is inside it, and then you press the return key on your keyboard. This will instantly insert the tags “<body><p></p></body>” within the field, and you will be ready to begin typing your first paragraph between <p> and </p>. Whenever you press the return key afterward, the sequence “<p></p>” will be entered automatically. And don’t worry if you hit return inside an existing paragraph: STEP Transcriptor will not let you insert <p></p> inside a <p></p>.

The reason the text begins and ends with the <body> tag reflects the fact that what STEP Transcriptor does is precisely to help you create that exact section of a TEI document. The STEP platform takes care of the TEI header and much else. STEP Transcriptor allows you to focus your attention on the body text exclusively. If you don’t need the <body> tag, simply delete it.

You may also start a transcription by importing an existing text in need of specialized tagging either from the STEP platform (where you may have begun a transcription until you hit a snag such as a nested authorial alteration too complex to tag correctly) or from some other source.

The top of the STEP Transcriptor window consists of a row of clickable buttons and pull-down menu buttons. The first leftmost button, Import Text for TEI Tagging..., is the one you click in order to import a text into STEP Transcriptor.

Clicking that button brings up the dialog shown above at left. It provides you two options: “Import STEP Text File...” and “Import Other File...”. The first option allows you to import a .step file. A STEP text file is one generated inside the Transcription module in the STEP platform when clicking the “Export” button in that platform’s interface. That “Export” button extracts the <body>[text]</body> part of the TEI doc-
ument and puts it into a file with the “.step” extension in some directory on your computer. Those files are recognizable by their dark blue square icons showing three white steps (just like the STEP Tools application icon). Clicking “Import STEP Text File...” brings up a new dialog (shown above at right) where you need to select a .step file and import it by clicking the “Open” button.

The second option allows you to import a non-STEP file: any other text in need of tagging. That file may be a plain text file (.txt), a rich text format file (.rtf), an HTML file (.html), a Microsoft Word file (.doc and .docx), or an OpenOffice file (.odt). When such files are imported, STEP Transcriptor automatically add the <body></body> around the text and the <p></p> tags around each paragraph of it.

You may also import those files (including .step files) by dragging and dropping them onto the STEP Tools application icon (only one at a time: any file so dragged and dropped automatically replaces whatever file was there before—so beware). This works only if STEP Tools is not already open. STEP files are automatically recognized as files intended for either STEP Transcriptor, Emendator, or Annotator. Non-STEP files may be intended for STEP Transcriptor or STEP Annotator, and the dialog shown below will ask you which of the two should be launched.

![Which STEP tool do you want to bring the file into?](image)

2. Distinction between Transcription and Description of a Text

As intimated earlier [see requisite (m)], STEP Transcriptor makes a sharp distinction between purely transcriptive tags and descriptive tags. It is one thing to tag an author’s insertions, deletions, marginal notations, and suchlike, that is, to create a tagged record of an author’s inscriptions, and quite another to mark up that text in order to identify its syntactic and semantic structure. The latter is a work of textual analysis requiring both a different set of competences and especially a different working mindset. Tagging alterations and other inscriptions as inscriptions is one thing, tagging proper names, bibliographical references, place names, etc., is quite another.

It is not desirable that both sets of tags be entered inside the same file. It creates nightmarish confusion as soon as the text offers any level of complexity. For one thing, it becomes difficult to see the text and proofread it because of the profusion of tags. For another, tags will need to overlap, which is forbidden in XML files. Techniques to work around overlaps are dreadfully complicated, a huge waste of effort, and a boundless source of errors. It is therefore preferable to keep the two tagging activities separate.

STEP Transcriptor offers that separation of activities. The left side of the interface is reserved for transcriptive tags, and yields automatic lists of alterations ready for a critical apparatus. The right side is reserved for descriptive tags (the word “descriptive” being broadly understood).

The way this works is logical. It is assumed that text deleted by an author will not be undeleted by editors in the transcription workflow itself. And so AFTER a text has been fully transcribed on the left side, the user clicks the **Base Text → TEI Descr.** button located just under the “Color Tags” and “Hide Tags” button. This transfers the perfected transcription *without* its transcriptive tags, as viewable under the “Descr. Base Text” view of the transcription (the fifth and last tab above the left field), to the top field on the right side of the window, viewable under the first tab “TEI Base Descr.” If the user prefers tagging the fully rendered TEI transcription that includes the author’s deletions, that, too, is possible: in this case, what is on the left side view-
able under the “TEI Rendition” tab is transferred to what on the right side is viewable under the “TEI Rend. Descr.” tab.

### 3. Transcriptive and Descriptive Tags

Transcriptive tags are available to the transcriber in two ways: through a pop-up menu that appears when right-clicking the left field (either at an insertion point or on a selected string of characters), and through the pull-down menu at the left top center of the window under the label “Alteration tags.” Those two menus are not identical: the pop-up menu offers a reduced set of frequent transcriptive tags, while the pull-down menu offers a fuller complement of tags, augmented by the Attributes and Values pull-down menus beneath it. The content of both menus is customizable by using the utilities under the “Customize Tags/Menus” (second rightmost button at the top of the window).
Descriptive tags are also available to the describer in two ways: through a pop-up menu that appears when right-clicking the right field (either at an insertion point or on a selected string of characters), and through the pull-down menu at the right top center of the window under the label “Description tags.” Those two menus are again not identical: the pop-up menu offers a reduced set of frequent descriptive tags, while the pull-down menu offers a fuller complement of tags, augmented by the Attributes and Values pull-down menus beneath it. The content of both menus is also customizable by using the utilities under the Customize Tags/Menus button (second rightmost button at the top of the window).

Between the two pull-down menus for “Alteration tags” and “Description tags” is a third pull-down menu labeled “Type/Structure.” That menu offers a series of typeface and syntactical tags, plus in-house messages tags, that can be used both in the left field and in the right field (depending where the insertion point is).

The two pop-up menus above provide the basic structural tags (pagebreaks, linebreaks, paragraph breaks).

As said before, the content of all those menus is customizable. How to customize them is illustrated further down in this guide.
4. Setting anchoring parameters: document and pagination abbreviations

Most tags need to be anchored precisely within a text to keep track of their exact positioning, which helps with creating lists of alterations that are key to their respective textual locations. The sample below illustrates several types of anchored tags (a deletion, a span addition, a note, and a transposition). It is immediately apparent that transcribers would be driven crazy within minutes if they had to type these horrid things entirely by themselves. STEP Transcriptor does this automatically, and constantly updates anchors.

```
<del xml:id="LL1a-309">I suppose</del> you have <pb n="p1" xml:id="LL1a-01"/>
<app from="LL1a-309" to="LL1-328">and] before del I suppose</app>

<addSpan spanTo="#addend02-01" place="p2"/>in<anchor xml:id="addend02-01"/>
<app from="addend02-01">I was] before inserted [in]</app>

<anchor xml:id="LL1a02-01"/> <note n="asterisk" target="#LL1a02-01" type="authorial" place="footer"/>

<seg xml:id="LL1a-tr03">whole</seg><metamark target="#LL1-a-tr03" function="transposition" type="arrow"></metamark>
<seg xml:id="LL1a-tr04">nodus of the</seg><metamark target="#LL1-a-tr04" function="transposition"></metamark>
<transpose><ptr target="#LL1a-tr04"/></transpose>
```

For this to be possible, however, transcribers need to supply three or four tiny pieces of information. At the bottom of the left field there is a series of small fields that need to be filled in.

<table>
<thead>
<tr>
<th>Doc.</th>
<th>LL1</th>
<th>Var. #:</th>
<th>a</th>
<th>Leaf type:</th>
<th>p</th>
<th>Initial #:</th>
<th>01</th>
<th>Current #:</th>
<th>02</th>
<th>r/v:</th>
<th>Last #:</th>
<th>33</th>
</tr>
</thead>
</table>

Each document needs a distinct document abbreviation (ex.: LL1 for “Lowell Lecture 1”), in order for each list to be text-specific. Type it directly into the small white field labeled “Doc.”

If there are several variants of a same text, type some character (letter or number) identifying that variant (this is optional) in the box next to “Var. #”. Ex.: the letter a.

Also useful is an identifier for the sheet or leaf a particular string of characters is on. Abbreviations such as p, f, If, sh are handy for page, folio, leaf, and sheet (in the box labeled “Leaf type”).

There are three small boxes for the page number: Initial #, Current #, Last #. The initial number is desirable and the last number is optional (for your own informational purpose). The “Current #” box MUST be filled, however (which is why it is colored in light green, to make it stand out). It is used by the system to assign correct anchor numbers to page breaks. Leading zeroes (01 instead of 1, or 001 if pages number in the hundreds) are automatically supplied for good sorting purposes when you press the TAB key. The letter r or v (recto, verso) can be added to the page number if needed: type it in the “r/v” box.

SUPPLYING THOSE ANCHORING ELEMENTS IS THE FIRST THING YOU NEED TO DO BEFORE TAGGING. It is not difficult, and pays very high dividends: automatic TEI-compliant anchoring of tags!

NB: The syntax of certain tag anchors can be customized using the Customize Tag Anchors... command in the Customize Tags/Anchors menu button explained further down. Span anchors and note anchors will also be customizable eventually (customization not programmed yet).
5. The Tagging Area

The three pull-down menus at the top of this illustration were described above. Selecting a tag in one of the menus in the first row drives what attributes will be available in the “Attrib.” pull-down menu. In turn, selecting an attribute will in turn determine what values are available in the “Values” pull-down menu. If you don’t find an expected value or attribute in either menu button, simply add it to the system using the Customize TEI Tags… command in the Customize Tags/Anchors menu button, or just type it in the khaki field.

Selecting anything in the tag, attribute, and value menus places them in correct syntactical form in the khaki field below them. Whatever shows in that field is what either will get inserted at the current point of insertion in the field (click Insert tag) or will be placed around a selected (highlighted) character string in the transcription field (click Tag selection).

Selecting a string of characters in the transcription field automatically highlights the Tag selection button to indicate that is the button you will want to click. Similarly, merely inserting the insertion point in the transcription field automatically highlights the Insert tag button to indicate that is the button you will want to click to insert whatever tagging structure is in the khaki field.

NB: Clicking those buttons (and nearly any other button) can be assigned to a function key or other keyboard combination. See commands Assign Shortcuts to Function Keys... and Customize Keyboard Shortcuts... in the Customize Tags/Anchors menu button (explained further down).

Note that you may type a tag and its attributes and related values directly in the khaki field. You do not need to type angle brackets to do so. The example illustrated above shows the alteration tag <add place="before"></add> (where “place” is an attribute and “before” a value of that attribute). They were entered by using the three menu buttons. But you could also type them by entering the three following...
words, **add place above**, and then pressing the TAB key. As soon as you press the TAB key, STEP Transcriber completes the tag syntax automatically. Had you typed the sequence **add type inserted place above**, then pressed the TAB key, the result would read `<add type="inserted" place="above"></add>`. This khaki field is pretty nifty indeed.

---

### 6. Inserting or anchoring page breaks

STEP Transcriber automates the anchoring of page breaks. This section explains how to insert the initial page break in a document, and how to insert all subsequent page breaks.

You begin a new transcription as described in rubric #1 above. Let’s say you begin from scratch: you click inside the Transcription field so that it holds the insertion point, then you press the **return** key, and obtain the `<body><p></p></body>` tag sequence.

**a) Inserting the first page break.**

The first thing is to make sure the required document abbreviations and pagination information have been entered in the related boxes at the bottom left of the Transcriber window, as described above.

<table>
<thead>
<tr>
<th>Doc.:</th>
<th>LL1</th>
<th>Var. #:</th>
<th>b</th>
<th>Leaf type:</th>
<th>p</th>
<th>Initial #:</th>
<th>01</th>
<th>Current #:</th>
<th>02</th>
<th>r/v:</th>
<th>Last #:</th>
<th>18</th>
</tr>
</thead>
</table>

Then you click just between the `<body>` tag and the first `<p>` tag (thus before that `<p>` tag). Doing so highlights the **Insert tag** button in the tagging area. Pull down the **Type/Structure** dropdown menu in the top center of the tagging area. Choose the fourth command, **pagebreak/pb**.

Doing so enters a self-closing page break tag sequence in the khaki field in that tagging area. Example: `<pb n="p1" xml:id="LL2b-01"/>`.

Check it for accuracy: it has been formed by using the information supplied in the boxes at the bottom left of the Transcriber window. If satisfied, click the **Insert tag** button. Congratulations: your first page break has been entered.

If you forgot to fill the document abbreviation and pagination boxes, STEP Transcriber will alert you as soon as you choose the **pagebreak/pb** command as illustrated.

**b) Inserting subsequent page breaks**

Each time you reach a transition to a new sheet in the document you are transcribing, you need to click three times as follows:

- **Click the immediately preceding page break tag sequence.** Say you have reached the end of page 1 and need to begin page 2. What you click is the tag sequence for page 1: `<pb n="p1" xml:id="LL2b-01"/>`.

Doing so instantly enters the subsequent tag sequence in the tagging area’s khaki field: `<pb n="p2" xml:id="LL2b-02"/>`.
• **Click** the exact spot in the text where you need to insert the new page break.

• **Click** the highlighted **Insert tag** button. Et voilà!

**NB1:** If the page break occurs in the middle of a paragraph, you may insert it right there, thus somewhere inside a text inside a `<p>` tag. That is just fine.

**NB2:** If the author altered, say crossed out, the end of a page and also the top of the following page, treat it as two separate deletions, one that stopped at the bottom of the first page, and a new one that begins at the top of the next page, even if the deletion was meant to be a continuous move. That is because you do not want to insert a page break tag (or any other non-alteration tag) inside a deletion or other alteration tag.

**NB3:** If the previous page number (the one you clicked on) is a number followed by the letter *r* for recto (say 2r), STEP Transcriptor will automatically ask you whether the next page number ought to be the same number followed by the letter *v* for verso (2v), or that number increased by 1 (3).

```xml
<p n="p2v" xml:id="LL1a-02v"/>
```

or

```xml
<p n="p3" xml:id="LL1a-03"/>
```

### 7. Right-clicking words and using the pop-up contextual menus

As indicated above, you may decide not to use the central tagging area, and right-click while your pointer is in the transcription field, either at an insertion point or over a highlighted string of characters.

Say you need to insert the tag `<add type="inserted"></add>`. Click the location in the text then right-click. The pop-up menu at right will show up. Click down on `<add>` then move to the submenu which offers the attribute **type**, itself followed by a submenu of values in which you select the word **inserted**. Release the mouse button, and the full tag will be inserted. Should you want to insert only the tag `<add></add>`, select the value **none** in the sub-submenu.

Another example: you select a word that is barely legible, and want to tag it as `<unclear reason="faded"></unclear>`. Right-click the selection and follow the menu and submenus shown at right.

**NB1:** You may of course always decide to type the tags directly into the transcription field yourself, of course. For simple deletions, this may just as fast.

**NB2:** Even faster is the fact that **you may assign a function key or keyboard shortcuts to insert specific tags**, even tags with attributes and values! See commands **Assign Shortcuts to Function Keys...** and **Customize Keyboard Shortcuts...** in the **Customize Tags/Anchors** menu button.
NB3: To clear the tags around a string of characters, select the string with the tags and choose the first command **Delete outer tags** in the pop-up menu. The outer tags will be deleted—meaning that in the case of nested tags, choosing this command will not delete the inner tags.

NB4: You can also insert a tag displayed in the khaki field by using the second pop-up menu command, **Insert displayed tags**.

### 8. Using function keys to insert tags and click buttons

For users who prefer keeping their fingers on the keyboard rather than on the mouse, function keys can be assigned all sorts of operations (F1 to F12 or F15, depending on keyboards and how a particular OS governs function keys). For this you begin by selecting the command **Assign Shortcuts to Function Keys**... in the **Customize Tags/Anchors** menu button. This brings the dialog shown below.

The first thing you do is click the **View All** button to check what are the current STEP Transcriptor function key assignments. The dialog will expand vertically, revealing which function keys have already been assigned a specific task such as clicking what button or inserting which tags.

The second thing is to do is pull down the menu labeled “2. Select New Assignment” in order to explore the MANY options.
The first section of this menu shows six tags that are especially frequent when transcribing alterations.

The second section lists the buttons found in the central tagging area and other tag-related functions.

The third and largest sections provides more than 65 tags arranged in alphabetical order.

To assign any of these commands to a function key, begin by selecting a function key.

If that function key is already assigned and you want to change its assignment, click the Unassign button to free it from that assignment. Then select the desired command in the pull-down menu partially shown at left. The new command will be instantly assigned to that function key. You may print the assignment list for ease of reference using the Print… button.

Say you assigned the tag <add></add> to F2. Pressing F2 when the pointer is in the Transcription field will insert that tag automatically, either at the insertion point or around a selected string of characters.

9. Using keyboard shortcuts

Besides function keys, multiple other keyboard shortcuts can be created for the same purposes. For this you begin by selecting the command Customize Keyboard Shortcuts… in the Customize Tags/Anchors menu button. This brings the dialog shown below.
Using this dialog is very simple. Select either a tag in the left field or a button or menu command in the right field. Click in the narrow field above the **Assign** button, and press a combination key on your keyboard. If it is already assigned to something, a red message will indicate the fact. If not, click the **Assign** button, and that’s it.

Clicking any tag or command in either field will automatically display the current key combination(s) already assigned to it, if any, in the grey box on the lower left side. To unassign a key combination, select it in that box and click the **Unassign** button.

Should you want to add a tag form to the list of tags in the upper left field, click the **Add tag to list** button.

A dialog will ask you to simply type the tag word, the attribute, and the value, each separated by a space (just as you would in the khaki field). **STEP Transcriptor** will complete the syntax for you.

If you want to remove all key combinations and reset them to their original defaults, click the **Reset All to Default** button.

To review all existing shortcuts, click the **View Current Shortcuts** button. This will expand the dialog to the right, and display the complete list of “Current Shortcuts,” including function key assignments.
Clicking the button **Palette** brings the list of shortcuts into a floating window convenient for visual reference.

That same palette can be called from STEP Transcriptor by choosing the last command, **Shortcut Palette**, in the **Customize Tags/ Anchors** menu button.

You may also print that list of shortcuts by clicking the **Print...** button.

### 10. Inserting special characters

XML requires that most non-ASCII characters be encoded as Unicode characters, and STEP Transcriptor provides an easy way for doing so. Whenever you need to insert such a character in your transcription, click the location where that character needs to be inserted, then use the menu button labeled **Insert Special Characters**.

That menu gives you access to several categories of special characters: uppercase and lowercase vowels with diacritical accents, non-English consonant letters, indexical marks, mathematical symbols, numbers (including common fractions), and less common punctuation marks.

Whenever you choose the name of a special character, either it itself will be inserted in the XML transcription if it can be displayed as such, or, if not, its HTML code will be inserted instead (e.g., &infin; for the infinity sign ∞). If successful, the character should be rendered correctly in the TEI Rendition view of that transcription (click the fourth tab, **TEI Rendition**, above the Transcription field). TEI recommends that all special characters be typed in their HTML code form within the XML text. To force every special character selected in the menu to be inserted in its HTML form, OPTION (ALT)-click it in the menu.

The **Add Extra Character...** command allows you to add special characters not already listed in the existing submenus. Any addition will then be listed under the submenu **Extra Characters**.

Choosing the **Add Extra Character...** command brings up the dialog below.
STEP Tools

(a) If you can (depending on the computer platform and character availability), type or paste the actual character in the first box. If you cannot, that has no consequence.

(b) Type the name of the character (preferably the official one provided by the Unicode standard) in the second box. If you don’t know the name and the code numbers, click the Check Unicode Table button. You will be brought to the official Unicode Character Table website (http://unicode-table.com/en/). Search for the character, and you will find its name, its Unicode number, and its HTML code.

(c) Type the 4-character Unicode number (don’t type “U+”: that will be done automatically) in the third box, and the HTML code number—not an HTML abbreviation—in the fourth box (again, just the number, not the initial “&#” and terminal “;”).

(d) Click the Add Character to List button. The new special character will now be available under the Extra Characters submenu, which will list it by its name. Be exact and careful: this operation cannot be undone.

NB: If the special character is not rendered in the TEI Rendition field (i.e., it is replaced by a question mark or some empty or crossed box), this is likely a limitation of the font in use in the field. Choosing a Unicode-friendly font such as Lucida Sans Unicode in the Font menu will normally solve that problem.

11. Using the Nested Alteration Tagging Tool

STEP Transcriptor is all about preserving the mental health and inner joy of TEI transcribers. The nested alteration tagging tool, aka “stacked alteration tagger,” is designed to remove the anxiety of dealing with complex sets of insertions and deletions nested within one another. Tagging those intricate inscriptions (monuments to an author’s hesitations) correctly is equivalent to the art of nesting multiple sets and subsets of parentheses within logical formulas or software algorithms. The chief notational difference here is that opening and closing tags replace parentheses.

One way of getting out of the problem is by cheating one’s way out of it: one simply describes each alteration component independently of each other one, one at a time. But this fails to capture or do justice to the complexity of multi-level deletions and additions. STEP’s answer to the problem is the utility
shown below. It is called by choosing the first command, **Nested Alteration Tagging Tool**, under the **Tagging Tools** menu button in the top center of the window.

![Nested Alteration Tagging Tool](image)

- **Example**: The utility is pretty much self-explanatory, since it tells you what to do step by step. When you open it, all fields will be empty. Just click the **Example** button down on the left side to populate the window with a suitably complex alteration, so that you can observe what is going on and refresh yourself whenever you use this utility.

1. Since every alteration description in a textual apparatus needs to refer to a textual element within the text to be published, begin by typing that textual element in the first box. It will serve as the lemma of the alteration entry.
2. That textual element can either be the ultimate result of the alteration, or some word(s) that precede or follow it within the published text. Your second step is therefore to indicate the position of that lemma relative to the alteration description. STEP Transcriptor will use that information when it describes the nest of alterations.

3. Indicate whether the entire set of alterations, regardless of its internal sub-alterations, was itself completely inserted or deleted. This also matters for an accurate description.

4. Enter the stacked alteration level by level, from the baseline up (or down if the alteration was interlined below the deleted string). The initial insertion (presumably deleted) goes into the baseline field.

Let’s look at a simple example. The author first wrote the word “mature.” Then he deleted it and replaced it with the phrase “full grown.” Then he deleted that, too, and replaced it with “fully developed”; but he then deleted “fully” and replaced it with “completely” to get “completely developed.” But since that was a mouthful, he deleted the whole phrase and replaced it with “masterful.” As that was a bit pompous, he ultimately opted for the word “accomplished.”

How to tag this whole thing—a stacked nest of five alterations—in one fell swoop? By filling the form, as illustrated below, beginning with the baseline (the yeller line), and moving up, level by level.

Notice that if a level ended up being completely deleted by the author, you should click the **Deleted** checkmark button to the right of that line. Don’t click that button if the author did not delete the whole line (even if mistakenly so). Instead treat partial deletions internal to a level as an “internal matter” to be tagged internally.

Alterations internal to each level should be tagged inside that level. All you need to do is select the altered element and click one of the buttons made available in the row below.

In the present example, we happen to have a substitution occurring within level 3. The author replaced “fully” with “completely”. Since a substitution is the combination of a deletion with an addition (that replaces the deleted matter), the TEI tag to be used for such a purpose is `<subst><del></del><add></add></subst>`. The first thing you do is to type “fully developed” in line 3. You then need to do two things: put the word “fully” inside the `<del></del>` tag, and the word “com-
pletely” inside the `<add>` tag. To do so, select the word “fully” and click the `<subst>` button (fifth button in the row). The result will read “<subst><del>fully</del><add></add><subst>developed”’. Now all you need to do is type the word “completely” inside the `<add>` tag. The result will then read “<subst><del>fully</del><add>completely</add><subst>developed”’. As promised, STEP Transcriptor types all the tags for you.

Now examine the example provided in the Stacked Alteration Tagger window itself. That example is more complicated than the one just given, for it includes an insertion within level 2, a deletion within level 3, and a substitution within level 4. Observe how it all gets entered from the baseline to level 4.

We are now ready for the last step, the simplest one for the user (though not for the uncomplaining software).

5. Just click the red **Form full tags** button. It instantly creates a fully nested complex alteration, the logical rigor of which is unassailable.

Not only that, but even better, it also creates an English syntactical description of the whole alteration ready for the critical apparatus.

What do you do next? Two things need to be done. (1) You want to insert the entire tagged alteration exactly where it belongs inside the transcription text. (2) You want to add the syntactical description of that complex alteration to the exact spot in the list of syntactical descriptions.

Again, this is done most easily.

1. Click the blue **Copy for pasting** button. The instructive message at right appears. Click **OK** and obey.
2. Move back to the STEP Transcriptor window.

3. Set the insertion point at the exact location in the transcription text by clicking in that spot.
4. Paste. You paste either by pressing Command-P (on Mac) or Control-P (on a PC), or by choosing the command **Paste** in the **Edit** menu of the menu bar. The result will look as follows.
And that's it. But what about adding the syntactical description to the list? Ah, that was already done, as soon as you clicked the Copy for pasting button (look below). And so there is nothing more for you to do.

NB: The baseline can also be used alone. A complex alteration that consists of a single level—for instance a substitution that contains an internal deletion within its own addition part—can be entered in the baseline, without adding anything at a higher level. Clicking the Form full tags button will create the requisite tagged alteration even in that case.

Click the Clear all fields button to start tagging and describing a brand-new complex alteration.

12. Customizing Alteration Tag Anchors

Apparatus list elements (e.g., alterations, emendations, rejected substantives) need to be keyed or linked to their textual source. This is done by cross-linking transcription tags with apparatus tags. There are several cross-linking techniques relying on different types of anchoring methods. The anchoring method is normally declared within the <encodingDesc> tag where one inserts a <variantEncoding> tag with two attributes: method and location. In the case of print editions where the critical apparatus is at the back of the volume, the recommended value for the “method” attribute is “double-end-point,” while the value for the “location” attribute is “external.”

Ex.: <encodingDesc> <variantEncoding method="double-end-point" location="external"/> </encodingDesc>.

STEP Transcriptor uses the double-end-point method only for simple types of alteration tags, and uses other methods for anchoring page-breaks, segments, authorial notes, and span tags (delSpan, addSpan, damageSpan) in accordance with TEI guidelines. The double-end-point method functions as follows.

An xml:id attribute value is attached to the initial alteration tag (ex.: <del xml:id="1913"/> and an anchor tag with an xml:id value is inserted before the closing tag (ex.: <anchor xml:id="1946"></del>). STEP Transcriptor generates those xml:id values automatically, assigning them numbers that correspond to the character number of the initial tag’s opening bracket and of the final tag’s closing bracket in the transcription file. In the example just given, “1913” means that the opening angle bracket at “<del xml:id” is the 1913rd character in the text, while the ending angle bracket in “</del>” is the 1946th character in the text. Those numbers are otherwise arbitrary, but what matters is that they be updatable, and always unique and in numerical order, for good listing purposes.
STEP Transcriptor allows you to customize double-end-point anchors to some extent. You may want to prefix the character numbers with an abbreviation standing for the source text, the filename, or some other documentary reference. And then you may want that prefix to be separated from the number by some punctuation mark of your choosing. This is done by selecting the command **Customize Tag Anchors**... in the **Customize Tags/Menus** button. This calls up the self-explanatory dialog shown below.

1. Type a document abbreviation in the window’s first box. Note that if you typed a document abbreviation in the row of small document information boxes at the bottom left of the STEP Transcriptor window, the software will automatically fill the first box here with that information. For instance, if the doc abbreviation is \textit{LL1}, with a variant labeled \textit{a}, the first box will already show \textit{LL1a}. Feel free to change it.

2. You may also choose what punctuation should separate the document abbreviation from the number assigned to the anchor—what sign should for instance be used between \textit{LL1a} and 1913. A hyphen is usual (\textit{LL1a-1913}), but you may prefer some other punctuation, like a colon (\textit{LL1:1913}). Choose it in the little pull-down menu below the first box.

How your choices will visually pan out is illustrated automatically in the example field, where the numbers are randomly assigned.

3. Click the red **Record Custom Anchor Prefix** button when you are done.
STEP Transcriptor will use your declared preference from here on.
Click the **Clear Fields & Recorded Values** button to clear and refresh the window.

13. Using the Transposition Tagging Tool

Another powerful tool in STEP Transcriptor is the Transposition Tagging Tool. It is called by choosing the second command, **Transposition Tagging Tool**, under the **Tagging Tools** menu button in the top center of the window. This brings up the impressive-looking, fully self-explanatory window below.
Since the field at the bottom of that window may be too small for ideal contemplation, clicking the tiny arrow button just above it on the right side expands the window to the right, to provide a much fuller view of its sometimes rich content.

There are four tabs just above that bottom field, indicating that there are actually four fields superimposed over each other. Clicking any tab will bring its corresponding field into view, both at the bottom and at the right side of the window.

“Transpositions” occur when marks (or “metamarks”) are found in a document indicating that passages should be moved to a different position. Those marks include arrows, asterisks, numbers, wavy lines, or other written instructions. By TEI definition, if the intention is to represent the actual appearance of the document, what transcribers need to encode is not the final result of a transposition but the actual representation of the instruction for that transposition in the author’s hand. A word deleted in one place and inserted in another is therefore not a TEI type of transposition since the transposition is finalized by the author in the text without transposition instruction.

The Transposition Tagging Tool helps you tag transpositions in ways that comply with the TEI Guidelines. Transposition coding is tedious, complicated, and requires several tags, attributes, and values. This tool automatizes the process nearly completely. Again, the window comes with an example accessible by clicking the Example button. If you click it, what you get is what is illustrated above and below.

It takes six steps to record a complete transposition, as shown in the example.

1. Type or paste a text that contains one or more strings of text marked for transposition in the first field. What you need to type is the text as the author inscribed it before writing in instructions for transposition.

2. Click the button Send to Tag Field. What this does is to copy the text and paste it into the TEI Tagging field at the bottom of the window. This is useful because that is the location where the text will be tagged by the software.

3. Select in the text you typed in the first field a shorter segment containing one full transposition that involves either two strings of text that are to swap their positions, or one string of text that is to be moved elsewhere in that segment. Proceed one full transposition at a time, for each one needs to be recorded at step 6 below before you proceed with a next one.

EXAMPLE: Imagine the author instructed that elements within the phrase “the third objection” should be transposed so that the phrase reads “objection the third.”
Select the entire phrase, “the third objection”. That phrase will be highlighted in brown, and will be displayed in the box labeled “Transposition text.”

4.1. Next, within the brown highlight, select the first two words, “the third”. They will be highlighted in yellow, both in the text and in the box labeled “Transposition text.” The yellow text will be also displayed in the box labeled “String 1” if the latter was empty.

Alternatively, since it is not visually easy to highlight text in the brown highlight, you may highlight the first two words in the box labeled “Transposition text” instead. They will then be highlighted in yellow, and so will they be in the first text field.

4.2. Next, within the brown highlight, select the last word, “objection.” It will be highlighted in green, both in the text and in the box labeled “Transposition text.” The green text will be also displayed in the box labeled “String 2” if the latter was empty.

Alternatively, since it is not easy to highlight text in the brown highlight, you may again highlight the third word in the box labeled “Transposition text” instead. It will then be highlighted in green, and so will it be in the first text field.

Note that an author may NOT be swapping two strings of characters BUT moving one to a different location instead (in effect swapping it with all intervening words). In this case, instead of selecting a second string, simply CLICK, in either the first field or the field labeled “Transposition text,” the exact location where the first string is to be moved. That location will be automatically recorded.

EXAMPLE. The author indicates he wants to move the word “whole” within the phrase “the whole nodus of the question” to before the
word “question”. You first select the entire phrase, which becomes brown. Then you select the word to be moved, “whole,” which becomes yellow. And then you click between the words “the” and “question”, and the space between those two words becomes green.

The word “whole” will appear in the String 1 box, and the expression “[Relocation position recorded: after "of the"]” in the String 2 box.

5. At this point you are ready to assign, to each of the two parts of the transposition as may or may not be necessary, the attributes and values that describe the kind of metamarks used by the author to inscribe instructions regarding how to conduct the transposition. The most common attributes for transpositions are “type,” “rend,” and “place.” Select their values in their respective pull-down menus. Again, this is optional and left to your better judgment, case by case.

6. Finally, here is the easiest and most rewarding step: click the Record transposition button!

The positive consequences of clicking that button are enormous, because a slew of beneficial operations are accomplished in far less than a second.

**BENEFIT #1**: The TEI Tagging text at the bottom of the screen, which was copied from the initial unencoded text in the first field, contains the complex tagging of each transposition, including their complex anchoring system. That anchoring relies on your having entered the appropriate information in the document abbreviation boxes at the bottom left of the STEP Transcriptor window before you began using the Transposition Tagging tool:

The field includes both the anchored transposition tags (one pair per transposition since each transposition consists of two elements), and their listing under the <ListTranspose> tag (intended for the document’s description tag).
Here is that same field as viewed in the larger field appended to the right of the window. You open that field either by clicking the little triangular button above the bottom field at right, or by expanding the window, something done by dragging its bottom right corner to the right.

**BENEFIT #2:** Click the second tab above the field, **List of Tagged Pairs.** It extracts the list of embedded tagged transpositions from the TEI Tagging field and separates them, to facilitate your examination of each pair and detect possible errors more easily. The list of tagged pairs also serves as the basis for their literal description.

**BENEFIT #3:** Click the third tab above the field, **Literal Descriptions.** Lo and behold, that field offers no less than three distinct English-language renditions of the list of transpositions, to accommodate the house styles, preferences, or practices of different scholarly editions.

1. **Descriptions with lemmas showing readings before transpositions**

In this view, the lemma (the textual anchor preceding the closing square bracket) reflects the reading before the transposition occurred. It reflects the manuscript, not the publication of it.

2. **Descriptions with lemmas showing readings after transpositions**

In this view, the lemma reflects the reading after the transposition has been effectuated by the editors. It reflects the published text, not its base manuscript.

3. **Pragmatic descriptions**

In this view, the description eschews any syntactic element of transcription and simply represents the published text in the lemma and the initial manuscript reading in the gloss (the part that follows the square bracket). If the lemma or gloss exceeds a certain length, ellipsis points replace text not relevant to understanding the transposition. A simple look at the pragmatic description manifests the transposition without belaboring the point that it was a transposition.
BENEFIT #4: Click the fourth tab above the field, **Completed Transpositions**. Here is the text you brought in, but with all transpositions executed. This allows you not to have to type the transposed text at all.

<table>
<thead>
<tr>
<th>TEI Tagging</th>
<th>List of Tagged Pairs</th>
<th>Literal Descriptions</th>
<th>Completed Transpositions</th>
</tr>
</thead>
<tbody>
<tr>
<td>But objection the third is the really serious one, in it lies the nodus of the whole question and its refutation would be quite a full treatise. If the antecedent is not given in a perceptive judgment, then it must first emerge in the conclusion of an inference. At this point we are obliged to draw the distinction between the matter and the logical form. With the aid of the logic of relations it would be easy to show that the entire logical matter of a conclusion must in any mode of inference be contained, piecemeal, in the premises.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Once you are done with a transposition, move on to the next one and repeat the process. Clicking the Record Transposition button also empties the three boxes labeled “Transposition text,” “String 1,” and “String 2” so that you are ready for the next transposition in the typed text. If you are done with that piece of text and want to bring in another textual passage enclosing one or more transpositions, click the **Clear fields** button to empty the first field as well.

Note that the utility keeps track of the count of transpositions within the entire text. That count shows up in the bottom left corner of the window. It starts at 0 and then increases by even numbers (2, 4, 6, etc.) because each transposition takes a pair of tagged entries. Reset that count to 0 whenever you start an entirely new transcription by clicking the **Reset to 0** button.

If you do not want to reset the button to 0 but correct the current showing number, OPTION (Alt)-CLICK that **Reset** button. A dialog will open and ask you to type a new even number.

The **Clear All...** button clears all data in the window (except those related to the Example) and resets the transposition count to 0. The **Clear fields** button does not reset that count for the sake of work continuity.
8. How do you transfer most of those benefits to STEP Transcriptor? Once more, most simply: just click the **Copy for pasting** button.

A. Clicking this button **WHEN THE TEI TAGGING TEXT IS SHOWING AT THE BOTTOM OF THE WINDOW** brings up a dialog that provides an explanation and asks a question. The explanation is that the button copies (1) the TEI-tagged text, (2) one of the two sets of syntactical descriptions, and (3) the set of pragmatic descriptions. The question is simply which one of the two sets of syntactical descriptions do you want to export to STEP Transcriptor: those with lemmas representing the text **before** the transposition occurred, or those with lemmas representing the text **after** the transposition occurred. The answer depends on the preferences of editions.

After declaring your option, the operation will be executed, STEP Tools will bring you automatically to STEP Transcriptor, and you will be advised to “set the insertion point at the desired location in the Transcription field and paste. Then delete the section of text the pasted text replaces.” Do obey this instruction, and the result will be highly satisfying: a complex type of alteration will have been tagged correctly, and described both syntactically and pragmatically.

B. Clicking the **Copy for Pasting** button **WHEN ONE OF THE OTHER THREE FIELDS IS SHOWING AT THE BOTTOM OF THE WINDOW** (List of Tagged Pairs, Literal Descriptions, and Completed Transpositions) brings up a dialog that announces that the content of the said field has been copied, and that you may now paste it wherever needed. Such is the boundless liberty promoted by STEP Tools.

14. **Customizing TEI Tags, Attributes, and Values**

STEP Tools allows you to customize the TEI tags as you need to accommodate the different kinds of texts you need to transcribe or edit. Shown below is the utility that allows you to customize tags, attributes, and values within STEP Transcriptor. You call it by selecting the first command, **Customize TEI Tags...**, within the **Customize Tags/Menus** button.
Once more, this dialog is pretty much self-explanatory. What it shows you are the sets of tags, attributes, and values already loaded within STEP Transcriptor. Those sets are shown on the window’s left side, under four distinct tabs. The first tab shows the sets associated with the Transcription pull-down and pop-up menus. The second tab shows the sets associated with the Type/Structure pull-down menu. The third tab shows the sets associated with the Description pull-down and pop-up menus. The fourth tab shows all those sets of tags together in alphabetical order.

Note that when the mouse pointer hovers over any non self-evident tag, a light khaki rectangle appears that provides a very brief description of that tag’s use.

The illustration above shows that the <add> tag has been selected in the Transcription tag list (leftmost field). Selecting it automatically displayed all the TEI attributes associated with it and already loaded. The “place” attribute is selected in that middle field. Selecting any attribute will display the values already associated with it if any (in this case, a good many). The practical precept is therefore for you to click any tag to see its attributes, and click any attributes to see its values. If nothing shows up, that indicates that said tag has no attribute associated with it yet, or that said attribute has no value associated with it yet.

How do you edit those three lists? By using the right side of the window.

A. Editing attributes and values

The top part of that right side allows you to edit the list of attributes associated with a selected tag, and/or the list of values associated with a selected attribute. This is done simply by either typing a new attribute or a new value in their respective field (one per line), or to delete an undesired attribute or value in either field.

When you are done editing either field, click the button underneath it: Enter Revised Attributes or Enter Revised Values. The relevant fields on the left side of the window will be immediately updated.

B. Editing tags

1. If you want to delete a tag in the Transcription, Structure, or Description lists (NOT in the “All Tags” list!), simply right-click that tag in the leftmost field.
2. If you want to add a new tag, it is the bottom part of the right side of the window that is of interest. If you are not sure about the new TEI tag, begin by looking it up on the TEI website. Type its name in the box under Look up specific tag, then click the Look Up TEI Tag button.

Say you want to look up the tag “delSpan.” Type it in that box and click the Look Up TEI Tag button. You will be instantly transported to the TEI-C.org web page that explains that particular tag and explains what are its attributes and some possible values.

3. If you know the tag you want to add, then enter it in the box under Need a new tag? Type it below. Then click the Enter New TEI Tag button. And the deed will have been done.

But since “delSpan” is not self-evident, you may want to add a descriptor to it. That would be charitable or thoughtful. Type that descriptor (say, “deletion span”) in the box under Attach brief descriptor to tag, then click the Record Tag Desc. button.

Another handy button in this dialog is the one named Table of TEI Elements.

Clicking it brings you to the page “Appendix C: Elements” in the PS Guidelines for Electronic Text Encoding and Interchange of the TEI organization. There you can navigate throughout the entire table of elements, attributes, and values, and learn a great deal.
15. Customizing Pull-Down Tag Menus

As mentioned above, STEP Transcriptor allows you to customize the content of both pull-down and pop-up tag menus to some extent ("some" because there are tags you wouldn’t want to delete, such as, case in point, the <del> tag). Choose the command **Customize Pull-Down Tag Menus...** in the **Customize Tags/Menus** button. This brings up the window below.

![Customize Pull-Down Tag Menus](image)

This window gives you access to the content of the three pull-down menu at the top of central tagging area in the STEP Transcriptor window.

The left scrolling field displays the actual syntactical content of the selected menu—that is, it shows how the content has to be typed in order for the menu content to look the way it actually does when you pull it down.

In the illustration above, notice the first entry: **insert//add**, and also notice the hyphen in third line.

Now when you pull down the menu button just above it, **insert//add** becomes **insert/add**, and the hyphen becomes a faint grey separator line. Two slashes // need to be typed in order for one slash to appear in the menu because the first slash is an escape character for the second.

How do you edit the menu content?

1.a. **EITHER** move its content to the right scrolling field by clicking the grey arrow button,

1.b. **OR** move only the specific commands you want to retain by clicking and selecting them in the left field first (multiple discontinuous selection is possible), and then clicking the grey arrow.
That done, you may now add new tags or delete old tags in the scrolling field at right, not by typing into it but by using the various buttons in the center of the dialog window.

2.a. TO ADD A NEW TAG, either choose one in the Choose New TEI Tag pull-down menu or type its name in the box below it. Then select a line in the field at right BELOW which you want to insert the new tag, and then click the Insert New TEI Tag button.

Notice that when your pointer hovers over an ambiguous tag name, a small khaki box pops up that identifies the tag.

2.b. TO DELETE ONE OR MORE TAGs, simply select it or them and click the Delete Selected Tag button.

3.a. TO ADD A NEW TAG CATEGORY, that is, a word that will be followed by an arrow leading into a submenu of tags, first make sure all the tags that will become its submenu are already in place within the right field, one after the other. Then SELECT those tags continuously. Then CLICK the Insert Tag Category button. A dialog will ask you to type the name of that tag category (the name that will be inserted above the selected tags and show up before the submenu arrow). Do so and click OK. You will notice that the tag category will appear flush left in the field, and all the tags associated with it will now be indented under it. Pull down the menu at the top of the right field to examine the result.

3b. TO DELETE A TAG CATEGORY, first select the tag category AND all the indented tags under it. Then click the Delete button to the right of the Insert Tag Category button. The name of the tag category will have disappeared, and all of its tags will now be flush left (thus not deleted).

4.a. TO INSERT A SEPARATOR LINE, select the command that will be above it and click the Insert Separator Line button. A hyphen will have been inserted on a new line below the selected command.

4.b. TO DELETE A SEPARATOR LINE, select it and click the Delete Separator Line button.

• Once you are done editing the pull-down menu, click the Set Pull-Down Menu button to record all the changes and replace the content of the related STEP Transcriptor pull-down menu with the new menu content.

• To undo all of your changes and return to STEP Transcriptor’s default settings, click the Reset button.

• As elsewhere, the Table of TEI Elements button allows you to navigate the TEI-C.org website looking for tags.

16. Customizing Pop-up Tag Menus

Customizing the pop-up menus (those that show up when you right-click either the Transcription field or the Description fields) follows the same principles as above. But since those pop-up menus also provide access to attributes and values, not just tag elements, their layout is a bit more complex.
Choose the command **Customize Pop-Up Tag Menus**... in the **Customize Tags/Menus** button. This brings up a dialog window (see below) that allows you to customize two pop-up menus: the one for alteration tags, and the one for text-descriptive tags. You move from one to the other by clicking the tab bar at the top of the dialog:

Illustrated above is the window opened on the TEI Description pop-up menu. Notice the three possible levels of indention in the case of the tag category named “bibl tags.” “Bibl tags,” as a category name, is flush left and not itself a tag. It is therefore followed at a first level of indention by tag elements (<title>, <author>, <editor>, etc.). Some of those tag elements are followed, at a second level of indention, by attributes (e.g., “level” under “<title>”). In turn, attributes may be followed, at a third level of indention, by values (such as none, a, j, m, s). If you click on the menu button at the top of the field and selected the bibl tags command all the way to the values of the attributed “level,” this is how that is all rendered:

How do you edit the menu content?

1.a. **EITHER** move its content to the right scrolling field by clicking the grey arrow button,

1.b. **OR** move only the specific commands you want to retain by clicking and selecting them in the left field first (multiple discontinuous selection is possible), and then clicking the grey arrow.

That done, you may now add new tags, attributes, and values or delete old ones in the scrolling field at right, by using the various buttons in the center of the dialog window.
In order to let you edit up to four levels of menu commands (tag categories, tags, attributes, and values), four sets of menus, buttons, and boxes are provided.

1. **TO INSERT OR DELETE TAG CATEGORIES**, the procedure is identical to that described in the previous rubric, which see.

2. **TO CHOOSE AND INSERT A NEW TAG ELEMENT**, the procedure is also identical to that described in the previous rubric, which see. **TO DELETE ONE OR MORE TAGS**, select them in the field on the right of the window and click the **Delete Selected Line(s)** button. (That button also deletes selected attributes and selected values.)

3. **TO CHOOSE AND INSERT A NEW ATTRIBUTE**, either choose one in the **Choose New Attribute** pull-down menu or type its name in the box below it. Then select in the field at right a line below which you want to insert the new attribute, and click the **Insert Tag Attribute** button.

   **Example**: Say you want to add an attribute to the `<alt>` tag (= alternation). You first enter the word `alt` under in the box under **Choose New TEI Tag**.

   Then you pull down the **Choose New Attribute** menu, which is now loaded with attributes associated with the `<alt>` tag. Say you choose “weights,” which gets entered into the box.

   You select the `<alt>` tag already present in the field on the right side of the window, and click the **Insert Tag Attribute** button. The word “weights” will now appear, indented once, under the flush left tag `<alt>`.

4. **TO CHOOSE AND INSERT A NEW VALUE**, either choose one in the **Choose New Value** pull-down menu or type its name in the box below it. Then select in the field at right a line below which you want to insert the new attribute, and click the **Insert New Value** button.

   **Example**: Say you want to add a value to the ”weights” attribute under the `<alt>` tag. You make sure the word ”weights” is in the box under **Choose New Attribute**.

   Then you pull down the **Choose New Value** menu, which is now loaded with values associated with the ”weights" attribute. Those consist of several number ranges, each adding up to 1. Say you choose relative values 0.4–0.6.

   You select the “weights” attribute already present in the field on the right side of the window, and click the **Insert New Value** button. The string “0.4–0.6” will now appear, indented twice, under the indented attribute ”weights.”

5. **TO INSERT or DELETE SEPARATOR LINES**, follow the same procedure described in the previous rubric.

   - Once you are done editing the pop-up menu, click the **Set Pop-Up Menu** button to record all the changes and replace the content of the related STEP Transcriptor pop-up menu with the new menu content.

   - To undo all of your changes and return to STEP Transcriptor’s default settings, click the **Reset** button.
As elsewhere, the **Table of TEI Elements** button allows you to navigate the [TEI-C.org](http://TEI-C.org) website looking for tags.

### 17. Customizing Tag Colors

STEP Transcriptor allows you also to customize the color of tags in order to improve their readability and visual discriminability (which is not the same thing). At right is the utility (**TEI Tag Custom Colors**) that facilitates this task greatly. You call it up by selecting the second command, **Customize Tag Colors**, within the **Customize Tags/Menus** button.

This utility allows use to assign colors (1) to individual tags; (2) to any and all attributes and values: the same color needs to apply to them all; (3) to tag categories, that is, tags belonging to a same family or rubric; (4) to all other tags not specified under (1) and (3).

The general principle is simple. In many cases, STEP Transcriptor has already assigned a color to specific tags and certain families of tags. When that is the case, that color is displayed in a small box labeled **Default**. If you want to change it, you simply click the immediately facing **Custom** box. This brings in a color wheel. You select the color you want, click **OK**, and your newly chosen color will be assigned to said tag or tag family, overriding the default color if there had been any. Each time either you or (usually) the program clicks the button in the tagging area, your preferences will rule.

#### A. Assigning a Color to a Specific Tag

Click the pull-down menu labeled **Current List of Specific Tags** and see whether it already contains the tag you want to (re)colorize. If it is there, select it. If a color is already assigned to it, the **Default** box will show it. Click the **Custom** box. Select a color in the color wheel (the color wheel is provided by the OS; how to use it differs on Mac and Windows), and click **OK**. The Custom box will now reflect the chosen color. To delete it, click the **Clear** button.
If the tag you are looking for is not in the pull-down menu, then look for it in the second pull-down menu labeled **Add new tag to current list**. That menu contains all the TEI tags so far available in STEP Transcriptor. As soon as you select a tag in it, it will be added to the **Current List of Specific Tags** menu. You return to that menu, select the newly added tag, and assign it a custom color as above.

Should you want to delete a tag from the current list, use the menu button labeled **Delete tag from current list**. That menu lists the same tags as those in the current list. Only, as soon as you select a tag in it, it will be deleted from both the “current list” and the “delete tag” list.

B. **ASSIGNING A COLOR TO ALL TAGS LEFT UNSPECIFIED.**

You cannot possibly assign distinct colors to all possible tags. Some tags don’t need to stand out (like `<p>`). Routine tags and suchlike can all be assigned the same color by default. Colorizing them is still worthwhile, so that only the author’s actual text remains black for easier viewing. Choosing a color not too obtrusive, but still strong enough that it stands out on a white background, is called for. Use the top portion region of the **TEI Tag Custom Colors** dialog to set or reset that color.

C. **CHECKING COLOR ASSIGNMENTS**

The middle brownish band of the dialog shows a white field that helps you visualize the color effects produced by the selected colors. The full tag `<tag attribute="value">text</tag>` is colorized in each of its parts according to the window’s various settings. This allows you to gauge whether selected colors stand out nicely with sufficient contrast (it is surprising how many colors don’t).

D. **ASSIGNING COLORS TO ATTRIBUTES AND VALUES**

One same color should be assigned to all attributes, and one same color should be assigned to all values, for consistency’s sake (also for fundamental esthetic considerations). Apply the same method as described above.

E. **ADMINISTERING TEI TAG CATEGORIES, AND ASSIGNING THEM COLORS**

The bottom part of the color utility allows you to

(1) create (or delete) categories of tags by assigning them names and associating tag elements with each category name;

(2) assign distinct colors to each tag category—meaning that all tags associated with one same category will inherit the same color.
Again, some tag families come preloaded into STEP Transcriptor, a few of which are already assigned default colors. The utility allows you to edit them, add tags to them, remove tags from them, and change their colors. Existing tag categories are listed in the menu button labeled Current list of Tag Categories.

To add a category of tags to that menu list, or delete one from it, you only need to type the exact name of said category in the box labeled Add or delete tag category, then click either the Add button or the Delete button under it.

Assigning a color to a tag category works the same as before: select a category in the pull-down menu, look at its default color if any, and change it by clicking the Custom box and selecting a new color in the color wheel.

Editing the list of tags belonging to any category is also straightforward. Select a tag category in the pull-down menu. Tags associated with it will then be listed in the field in the bottom left corner of the color utility. You may type the name of additional tag elements directly into that editable field—one per line (hit the Return key at the end of each line). Or you may delete any particular tag by selecting its entire line and pressing the delete key on your keyboard.

When done, click the Record edited list of tags button to set the new listing.

The bottom right corner provides two capital buttons.

Clicking Reset All Colors to Default destroys all of your custom color settings and restores STEP Transcriptor’s default colors.

Most important, DO click Save Color Settings & Close to record the new custom tag color settings.

18. Syntactical vs. Pragmatic Alterations Descriptions

As alluded to before, all the hard work you do while transcribing all sorts of complex alterations comes with a nice payoff: STEP Transcriptor uses the tags and their attributes and values to generate automatically two distinct lists of alteration descriptions: syntactical and pragmatic.

This is a straightforward distinction. Syntactical descriptions focus on the alteration syntax: they indicate what was deleted, inserted, interlined, transposed, or substituted, before, after or above what else that may or may not have been altered in one way or another. Pragmatic descriptions assume that readers
care little about the syntactical details but simply want to know what were the successive readings like as an author kept deleting and inserting alternate inscriptions. Compare the two following descriptions:

<table>
<thead>
<tr>
<th>Syntactical example</th>
<th>Pragmatic example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 it] intl ab del we</td>
<td>1.5-6 it is easy to credit the statement of Diogenes Laertius that] we easily give credit to Diogenes Laertius, who says that</td>
</tr>
<tr>
<td>1.5 easy] y ov ily</td>
<td></td>
</tr>
<tr>
<td>1.5 to] intl ab del give</td>
<td></td>
</tr>
<tr>
<td>1.5 the statement of] intl ab del to</td>
<td></td>
</tr>
<tr>
<td>1.6 Laertius] bef del comma</td>
<td></td>
</tr>
<tr>
<td>1.6 that] aft del who says</td>
<td></td>
</tr>
</tbody>
</table>

The difference is striking. The syntactical form describes exactly what was deleted or interlined where, but the result is close to unreadable. The pragmatic rendition instantly separates the final reading (in the lemma before the square bracket) from the initial reading in the gloss, all in one fell swoop, on the belief that that is what readers would want ultimately to make out from the syntactical representation. It removes syntactical descriptors as far as feasible (sometimes that is not feasible, and the software won’t try) and focuses on the before (in the gloss) and after (in the lemma preceding the gloss).

STEP Transcriptor provides both kinds of lists, although admittedly is not able (yet) to combine syntactical descriptions as cleverly as in the example above. What STEP can do is to turn the syntactical list into the following more pragmatic version, where most syntactical descriptors are removed:

```
1.5 it is] we
1.5 easy] easily give
1.5 the statement of] ins
1.6 Laertius] Laertius,
1.6 that] who says
```

It then behooves the textual editor to further edit the pragmatic list as desirable. This is why STEP Transcriptor not only offers two distinct lists of alteration descriptions, but also the means to edit them under a different tab in the same screen space.

### 19. Four views for each type of list of alterations descriptions

The center region of the STEP Transcriptor window shows one area labeled **Syntactical descriptions of alterations** and another area labeled **Pragmatic descriptions of alterations**. A five-tab bar heads each.

The first tab, **Automatic Descr[iption]**, gives access to a list of alteration descriptions automatically generated by STEP Transcriptor from both the tags in the Transcription field and the information it receives from the tagging tools for Nested Alterations and for Transpositions. You may yourself generate those automatic lists, or refresh them, by clicking the **Describe alterations** button just above the label **Syntactical descriptions of alterations**. STEP Transcriptor clicks automatically that button each time you create a new alteration tag in the Transcription field.

The second tab, **XML**, provides you a view of that automatic list in XML form, which is essential because it includes the indispensable cross-linking anchors!

The third tab, labeled **>>,**, is actually a button. Click it and it does two things: it moves the content of the **Automatic Descr[iption]** field to the **Edit Descr[iption]** field, and it adds the anchors to each line. What you get is therefore a hybrid of the first two fields. The anchors are important to retain the
link with the Transcription field. The WYSIWYG aspect is retained to make it easier for you to read and edit the syntactical descriptions of alterations. It is important that you be able to edit those syntactical lists because it stands to reason that STEP Transcriptor’s interpretation of the tagged transcription may sometimes not be ideal.

Since the third tab is a button but does not govern a field itself, clicking it automatically highlights the fourth tab, Edit Descr., which then displays the transformation operated by the move in its related field.

The fourth field is again labeled XML and provides an XML rendition of the third field. Those XML renditions is what you want to export to the STEP Platform’s critical apparatus module (the place where the back-of-the-book textual apparatus is built).

Here are illustrations of the four Syntactical Descriptions fields.

And below is a view of the four Pragmatic Descriptions field. They operate according to the same principle as above. The content of the automatic pragmatic descriptions is generated either automatically by STEP Transcriptor or by you when you click the first tab, Automatic Descr[ption].
Note that all of those fields interact with the first three views of the Transcription text. This means that whether you are viewing the Transcription view, the indented view, or the Anchored view, whenever you click any line in any of the eight fields above (or Option (Alt)-click any line in either Edit Descr. field because those two are editable), the corresponding set of alteration tags will be highlighted right in those fields! If the highlighting is not exact, click the Describe alterations button to refresh the fields, and then click the appropriate tabs heading the description fields. This cross-visual feature saves a great deal of time looking for the tagged counterpart of any alteration description.

20. The Five Ways of Viewing Transcriptions, and how they interact with Alterations Descriptions

As intimated toward the beginning of this user guide, STEP Transcriptor provides five views of the content of the Transcription fields.

A. TRANSCRIPTION VIEW (the normal view)

How to start a transcription in that field has already been described in the first rubric above. A few more important features of that field need mentioning.

This field is the ONLY EDITABLE FIELD for transcriptions. Simply and negatively put, you may NOT type anything in the other four fields. The content of the other four fields is generated automatically by STEP
Transcriptor based on the Transcription field. You may not add text or tags in the indented or anchored views because the software does not update the Transcription field on the basis of changes that would have been made in any of the other views. The Transcription field is the basis and source for everything else.

Here are three hidden and one visible features, all exceedingly handy.

1. **Hidden feature #1: Connection between tags and the tagging area**

Clicking any tag element such as `<add>`, `/<add>`, `<del>`, `/<del>`, `<subst>`, `/<subst>`, etc. automatically enters that tag in the related alterations pull-down menu in the top center tagging area, as well as in the “khaki field.” The benefit is that you may click an existing tag, then insert the pointer somewhere else or select some other textual string, and tag it with that same tag element without having to choose it in a menu—just by clicking either the **Tag selection** or the **Insert tag** button, or by pressing the keyboard combination equivalent.

2. **Hidden feature #2: Highlighting any tag’s full range**

OPTION (Alt)-CLICK any tag element in the Transcription field to highlight its entire range. For instance, option-clicking the `<subst>` tag in the illustration below highlighted its full range.

```xml
said:<add></subst> of the man's personal <del>consistently</del><add>and
tr</add></del> of</del> character <substitution></del> is</del><add>is
a</add></del> very wonderful thing to <del><substitution></del> say and a
very</del><del>be able</del></del><add></del><del> be capable of being
```

3. **Hidden feature #3: The blue sliding linemark**

This feature helps you keep track of your position in the transcription, and therefore may save you much time when your eyes need to travel back and forth between the text and other areas of the interface.

You call up the blue slider by pressing together the OPTION (ALT) KEY and either the UP or the DOWN arrow key on the right side of your keyboard. Pressing OPTION-UP again moves the blue sliding linemark from the bottom to the top of the field, while OPTION-DOWN moves it from the top to the bottom of the field. You may also DRAG the linemark up or down with your mouse pointer: bring the cursor to the blue line (it will change its shape into a sliding double arrow: ←), click and drag the linemark up or down at will. To dismiss or hide that blue linemark, simply press OPTION (ALT) and either the LEFT or RIGHT arrow key.

Note that when you click anywhere in the transcription field (or the other four fields), STEP Transcriptor will automatically bring the blue linemark just below the line you clicked. This means that most of the time you will not have to drag that line yourself.
Also, double-clicking the blue line toggles a light transparent box around it on and off (it looks better on a Mac than on a PC).

4. LESS HIDDEN FEATURE #4: HIDING THE TAGS

When the forest of tags becomes visually exhausting and you need to rest your eyes, you may hide all the tags. You do so simply by clicking the Hide tags button. It is not that the tags will actually disappear. They will merely become invisible. If you highlight any area of this ghostly surface, the tags in that area will emerge, indeed in fashion most ghostly. Click the Color tags button to restore visibility.

B. INDENTED VIEW

In this view, the text shown is exactly equivalent to that of the Transcription view, except that all tags are indented so as visually exhibit how they are nesting. Each line begins with an opening tag, with the next line showing either the corresponding closing tag or the next nested opening tag.

As just said, you may not type anything in this view. It may help you locate tagging errors more easily, but once you’ve found an error, you need to make the correction within the Transcription field.

Since this field is locked, you may click directly any tag (no need for option-clicking) in order to highlight its range. Clicking any line in any of the alterations descriptions field will highlight the corresponding range in this field if this field is the one visible.
C. ANCHORED VIEW

This view is identical to the indented view except that it adds to it the many double-end-point anchors associated with most alterations (non double-end-point anchors are displayed directly in Transcription view, but not the double-point anchors in order to reduce visual clutter).

Option (Alt)-click the field itself to turn line-wrapping on or off. Unwrapped lines extend fully to the right, so that each line is actually one paragraph. This sometimes helps better visualize tag nesting.

Option (Alt)-click the Anchored tab to turn off the indentation and view the entire transcription in run-on fashion (see image below). **NOTE that this unindented, wrapped view of the fully anchored text is actually the text that gets exported to the STEP platform (or elsewhere), whenever you click the Export Transcription to STEP... button.**

Click the Anchored tab normally to restore indentation. This field has the same highlighting features as the previous one.

Unindented, wrapped view of the fully anchored transcription:
D. TEI RENDITION VIEW

In this view, the transcription is simply rendered by removing all tags and showing what is and what is not deleted. Special HTML-coded characters are rendered as well, as are other tagged elements, including paginated page breaks and numbered notes.

This view provides the basis for the text to be tagged descriptively including deleted material (the text under the TEI Rend. Descr. tab on the right side of the STEP Transcriptor window).

<table>
<thead>
<tr>
<th>Transcription</th>
<th>Indent View</th>
<th>Anchored</th>
<th>TEI Rendition</th>
<th>Descr. Base Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>[PAGE 1]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Ladies & Gentlemen, Since we last met a mature gentleman Herbert Spencer has passed away, and I suppose you have all read the characterization of him his character is by Prof. James, as — a perfect all round which neglects no side of the philosopher or the man, and which contains no word that is not true. I do not know that Spencer's inconsistency in the matter of religion is not marked a little bit too heavily; because I do not believe it seems to me that there is nobody none of us from the Pope to Huxley who is not about as inconsistent on that subject as Spencer; and from the point of view of real religion theoretical inconsistencies afford the only way we have as yet for seeing two [PAGE 2] sides of the truth: What Prof. James says What is said of the man's personal consistency and of character is a very wonderful thing to say and a very be able be capable of being said with so much truth be so true. As to that I have heard many authentic anecdotes and can report two very small facts from my own experience. I was in London in 1870 or 1871 being a young man and if possible ever more obscure if possible than I am now now am. Spencer heard of my being there [NOTE 02/01] and sent being on the board of the Athenæum Club, set me down as one of the twelve vis-persona non-members who are admitted at one time. There was not possible motive for his doing that except his desire to encourage a sincere inquirer, so that I had the opportunity of daily meeting seeing it give him and daily, as well and most of the leading men of science and literature. I thus had came to meet him daily during that season (unfortunately I do not play at all although my not playing billiards, and thorough proven so that I did not see as much of him and that prevented my seeing as much of Spencer as I wished, and desired. Besides, he absolutely objects to talking upon any subject that might excite his brain. It was the only way in which, with his constitution, he could get his book written, — the same thing fact which also explains his small reading in philosophy. But objection the third is the really serious one, in it lies the nodus of the whole question and its refutation would be quite a full treatise. If the antecedent is not given in a perceptive judgment, then it must first emerge in the conclusion of an inference. At this point we are obliged to draw the distinction between the matter and the logical form. With the aid of the logic of relations it would be easy to show that the entire logical matter of a conclusion must in any mode of inference be contained, piecemeal, in the premisses.

p. 2 note #1 My father probably mentioned my visit in a letter to him.

E. BASE TEXT FOR DESCRIPTIVE TAGGING (also for critical editing)

This fifth and last view renders the transcription also by removing all tags, but it discards everything that was deleted by the author. Special HTML-coded characters are rendered as well, as are other tagged elements, including paginated page breaks and numbered notes.

In effect, it provides the “perfected transcription” (after several rounds of proof-readings) that will serve as a starting point for critical editing and emending. It also provides a text ready for descriptive tagging as defined previously (the text under the TEI Base. Descr. tab on the right side of the STEP Transcriptor window).
Descriptive tagging, negatively put, is tagging every feature of the text not tagged during the transcription of alterations. This includes stylistic features (where highlighted matter becomes interpreted as different types of emphasis), conceptual analysis (distinction among different species of proper names, bibliographical references, quotations, geographical elements, literary devices, literary genres (theater texts, poetical texts, etc.), logical structures, historical events, lexicological features, scientific theories, etc.—the list is boundless. As argued before, this best done separately from the actual act of transcription. Much of it can be carried out either in STEP Transcriptor or in the STEP platform. Some of the benefits of this descriptive tagging may end up in editorial sections of a scholarly edition (e.g., its bibliography, or its proper names index). Other uses are of value for indexes, or for specialized online presentations of the text.

The text imported here is the base text for descriptive tagging found in the Transcription’s fifth view. It is imported here automatically (if not, simply click the Base Text → TEI Descr. button on the left side of this field).

Tagging descriptions is done in much the same way as it is done with alterations, although there is nothing as complicated to tag for descriptive purposes, since the bulk of the tagging amounts simply to surround string of words with tags that identify what they are or do, syntactically or semantically.

A fuller and extensible complement of tags is provided in the Description tags pull-down menu in the tagging area. A more nimble menu is the pop-up menu that comes up when right-clicking within the Description field. See rubric #3 above for a description of both, and see rubrics #13, 14, and 15 to learn how to add new tags, and customize the content of those menus.

Let’s provide here one example of descriptive tagging: how to tag a proper name. The first proper name that occurs in the text above is that of Herbert Spencer. How do we tag it as fully as may matter? You may want to use the tagging area menus for this purpose.

Begin with the first name, to be tagged with the tag element <forename>. Here’s the sequence of events. Choose the forename tag in the pull-down menu. This enters the string <fore-
STEP Tools

name</forename> into the tagging area’s khaki field.

Now select the first name “Herbert” in the text and click the Tag selection button.

Herbert’s tagged fate has just been sealed.

Other technique. Move on to Spencer’s surname. Select that surname in the text. Right-click to summon the pop-up menu. Slide down the menu to the tag category “name tags” and choose <surname> in its submenu. Spencer’s last name has just been surnamed.

We are not done with him yet. Go back to the tagging area, and select the persName tag within the Names category. This enters the string <persName></persName> in the khaki field. Select the whole sequence <forename>Herbert</forename><surname>Spencer</surname>. Click the Tag selection button. And now Herbert Spencer has been tagged as a personal name. Good for him.

22. Descriptive TEI Tagging: TEI Rendered Text (with deleted material)

As intimated earlier, this second series of three fields are there to provide editors with the license to tag an author’s deleted text descriptively as well. The reason is fundamental: it may matter a great deal to know what an author deleted. Sometimes an author may delete some great thinker’s name that no one ever realized that said author knew anything about. The deleted material proves otherwise. Tagging it could save the unknown fact from oblivion (i.e., from unknowability).
23. Automatic Descriptive Tagging

STEP Transcriptor offers a way to tag certain entities automatically. If the text mentions someone’s name multiple times, like Spencer’s above, we’d like to have a way to tag all occurrences of his last name at once. This where you would want to click the red Autotag… button.

Doing so calls up a simple dialog window. In the first box you enter whatever string of characters needs to be tagged. “Spencer”, in this case. In the second box you type the tag itself: surname (no need for angle brackets of course: that kind of thing is automatically supplied). Let’s skip the attribute and value in this case, but do appreciate their availability. Then click the Autotag button. All occurrences of Spencer’s last name will have been tagged <surname>Spencer</surname>. In case you think you made a mistake and now believe poor Spencer did not deserve to be surnamed so many times, just click the Remove tags button, and Spencer will be free again (= no longer behind angle brackets).

24. Data Extraction from Descriptive Tags

After tagging an entire text descriptively, you think you deserve some kind of reward, if not award. One reward is within your fingertips’ grasp: the Extract… button in the lower right side of the Transcriptor window, just underneath the red Autotag… menu button. That button allows you to extract the content of entire families of tags from the text.

Choose for instance the proper nouns category. What will you get? Look the result at right, based on a very small sample of tags.

<table>
<thead>
<tr>
<th>PROPER NOUNS</th>
<th>ROLE NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. James</td>
<td>father</td>
</tr>
<tr>
<td></td>
<td>Prof.</td>
</tr>
<tr>
<td>PERSONAL NAMES</td>
<td>PLACE NAMES</td>
</tr>
<tr>
<td>Herbert Spencer</td>
<td>London</td>
</tr>
<tr>
<td>My father</td>
<td></td>
</tr>
<tr>
<td>SURNAMES</td>
<td>SETTLEMENTS</td>
</tr>
<tr>
<td>James</td>
<td>London</td>
</tr>
<tr>
<td>Spencer</td>
<td></td>
</tr>
<tr>
<td>FORENAMES</td>
<td>ORGANIZATION NAMES</td>
</tr>
<tr>
<td>Herbert</td>
<td>Athenæum Club</td>
</tr>
</tbody>
</table>

The Archive… button in the small window at right exports the extracted material to a file while the Restore button imports it back.
25. Saving and Restoring Current Work

Every now and then in the course of using STEP Transcriptor, think of saving your work! To do so, either click the Save button at right, or press Command-S on Mac or Ctrl-S on Windows, or choose the Save command in the File menu in the menu bar. When saving in any of these ways, STEP Transcriptor copies the current content of every text-holding field to a stable container associated with each field.

Should you need, because of some mishap like a power outage, to revert the content of all fields to what they were the last time you saved, click the Restore button. Doing so will move the content of the stable container associated with each field into the related field.

26. Archiving Transcriptions Data and Importing Those Data Back

Unlike the Save button, the Archive... button actually creates a file outside of STEP Transcriptor. That file contains a structured copy of every single field in STEP Transcriptor. Archiving the current state of your work from time to time will increase the safety of your operation. And you should most certainly use the Archive... button whenever you are done with a particular transcription/description of a full text. That way, your finalized work is not lost. A STEP Transcriptor archive file is a document with a .step extension.

To import the content of an archive back into STEP Transcriptor, either use the Import... button when STEP Tools is open, or drag and drop the archive onto the icon of the STEP Tools application when it is not open. STEP Tools will recognize that .step document as an archive and distribute its contents among all the fields in STEP Transcriptor.

27. Exporting a Transcription Back to the STEP Platform—or elsewhere

Since rubric #1 discussed how to import a file into STEP Transcriptor, it is fitting that the last rubrics in this guide discuss how to export files. To export a transcription to STEP, click the Export Transcription to STEP... button. It brings up a dialog that gives you two options.

**OPTION 1: Create STEP File...** This means a document with the extension .step. That document is fundamentally a simple text file that collects the content of the Transcription as shown in the Anchored view when the Anchored tab has been option-clicked so that the XML tagged text is not indented but run-on. The first hidden word in that file is “Transcriptor,” which tells the STEP Platform that that .step file is destined to STEP’s transcription module.

**OPTION 2: Create Other File...** This option allows you to export the transcription to a non-STEP file, in plain text, rich text format, html, or xhtml.

Option 1 is the one you need when you want to return a transcription that was begun in the STEP Platform, and imported from the STEP Platform, back to the STEP Platform. As explained in rubric #1, what
gets exported from the STEP Platform is the part of a TEI XML file that is en-
sconced within the <body> </body> tags. The STEP Platform takes care of
creating TEI XML files, of providing them with TEI XML headers, of formatting
XML documents in indented form, and of validating the XML. STEP Transcri-
ptor does not do those things, focused as it is on the single task of im-
proving the quality of TEI XML transcriptions.

Shown below is a small part of STEP’s transcription module interface. It shows a portion of the header of
a TEI document in Edit view. Notice that to the right of the title TEI Document are two buttons, one la-
beled Export, and the other labeled Import. The Export button is the one used to extract the
<body></body> part of the TEI document and copy it into a .step file—which file can then be imported
into STEP Tools. When STEP Transcriptor has done its job, the .step file that gets exported is one that
can be reimported into STEP by using its own Import button.

The export/import cycle can be therefore summed up as follows:

1. Click the Export button in STEP
2. Click the Import Text for TEI Tagging button in STEP Transcriptor
3. Click the Export Transcription to STEP button in STEP Transcriptor
4. Click the Import button in STEP

When choosing Option 1, an expandable dial-
log comes up in which you type the title of
the file you want to export, and indicate
which folder it should go into.

Click the Save button in the dialog, and your .step file will
have been created. A confirmation message will appear,
testifying to the fact.

If you choose Option 2, the same operation will take place,
except that the file will be given an extension other
than .step.

28. Printing or Exporting the content of any field

STEP Transcriptor allows you to print or export the content of every other field as well.
A. PRINTING

To print the content of any field, click the Print... button on the right side of STEP Transcriptor’s window.

A Printing dialog will show up and instruct you to select the field to be printed. Pull down the menu in that dialog. It gives you 20 options shown at right.

Select the name of the field you want to print. Your OS’s print dialog will then come up, and you click Print.

B. EXPORTING

1. EXPORTING THE LISTS OF ALTERATION DESCRIPTIONS.

There are eight fields associated with the syntactical and the pragmatic lists of descriptions: initial automatic list, XML of it, edited list, and XML of it. The content of any of these fields can be exported to STEP or to some other destination.

To do so, click the Export Alteration Descriptions to STEP menu button at the top of the window. The pull-down menu provides four pairs of options. Select the particular option you need. The same File Export dialog described in the previous rubric will show up, giving you the two options of creating a .step file, or some other .txt, .rtf, or .html file. Proceed as before.
2. Exporting the texts with descriptive TEI tags.

As we have seen, STEP Transcriptor allows you to produce two distinct tagged descriptions of a text: one that focuses on a text without authorial deletions, and one that lets you impose descriptive tags on the deleted matter. Both can be exported, in their tagged form, either to STEP as a .step file or to some other destination as some other type of file.

To export these tagged texts, click the Export TEI Description to STEP... button in the top right corner of the window. A dialog will ask you to choose between the base description text or the rendition description text (that’s the one with deletions).

Click the button corresponding to your choice. The same File Export dialog shown in the two previous rubrics will show up, giving you the two options of creating a .step file, or some other .txt, .rtf, or .html file. Proceed as before.

3. Viewing and exporting any text in HTML or XHTML format

The bottom right side of STEP Transcriptor’s window harbors a field not talked about yet. It provides either an HTML rendition or an XHTML rendition of the content of any of the 19 other text fields in STEP Transcriptor’s window. The reason for the existence of this field was at first simply to help with the development of STEP Transcriptor: it was useful to see instantly what was wrong with the way diverse texts that were imported into the Transcriptor would fail to render completely correctly—especially because most imported texts are converted to HTML during the import in order to retain their textual attributes, fonts, typefaces, etc. But then we realized that this field could serve other useful purposes, especially because they exhibited the formats needed to upload those texts to the Web. And so we decided to leave that field in place and make its content exportable for whatever purpose a user would see fit.

The way it works is simple. To see the HTML rendition of the content of any field, pull down the menu and choose the name of that field. Note that the content of this field does not update itself as you make changes in the source field. You need to select the field again in the pull-down menu to see the latest changes reflected in the HTML. You may also see the XHTML version of the text content. To switch from
the HTML to the XHTML, click the XHTML button while the HTML text is showing. That HTML will be converted to XHTML instantly. To return from the XHTML to the HTML version, select the name of the field in the pull-down menu again.

To export the HTML or the XHTML text being viewed, choose the relevant command at the bottom of the pull-down menu: either Export HTML to an HTML File... or Export XHTML to an HTML File... . Note that both html and xhtml files share the SAME extension: .html. The .xhtml extension does not exist.

Both Export commands call up a dialog asking you to confirm the export. You will then be asked to give the file a name and a folder location. Click Save. A message will confirm the success of the operation.
III. STEP EMENDATOR: FEATURES OVERVIEW

1. The Prototype and its interface

STEP Emendator is currently in a high-definition prototype stage. The prototype may be accessed online at http://oc1p50.axshare.com/emendaror_home.html. The landing page is shown above, where users navigating to the Emendator Module from the STEP web platform would initially be prompted to import a .step or .xml file either from STEP or from their local machine. There are two main divisions to the screen, the left being dominated by the purple widget (which will display the text upon import), while the middle/right areas are reserved for several blue widgets that enable the editor to emend the text. All of these widgets are designed to be resizable (both manually and through a responsive CSS) to meet the ever-changing needs of the editor, but this functionality was not possible to achieve within the prototyping software we employed. This interface could be broken down further into three distinct areas (explained further below in detail).

(a) **At left.** A large purple widget takes most of that space, which is where the emendator first imports a file for emendation, and eventually highlights/edits text in a WYSIWYG interface that tags the text with all of its editorial emendations (regularization of proper names, tracking authorial preferences, normalized spelling, etc.). Once a text is imported, that field can be viewed in three different ways: the Emend View, the TEI Render, and the TEI Tagged XML.

(b) **In the center.** That center region has four parts.

• At the top left is a widget containing basic text editing tools which would allow editors to manipulate the text in the WYSIWYG field (currently this functionality is simulated with placeholder images). Editors may, in the actual Emendator, copy/paste within the text window and the emended text would be tagged with the corresponding TEI-XML tags. A teal drop-down menu provides access to advanced emendation tools, such as a variant spelling look-up and a list of proper names generated from manuscripts stored on STEP.
• To the immediate right of the Emendation Tools widget is the Sources for Emendation widget, which provides access to manuscripts stored on STEP. The dark blue “View” buttons would open their respective manuscripts in the STEP Image Browser (see next section), while the “Source” checkboxes automatically assign manuscript sources to emendations being made (to be explained in detail in a later section). This list would be vertically scrollable if there were more than four sources shown.

• In the middle is a Current Emendation widget, which guides editors through each emendation step-by-step. This widget allows editors to emend the text, add sources, select a type and reason for emendation, and suggest a textual note (which would be added later in the Annotator Module). This is shown in detail later.

• Below this is the Suggested Emendations widget, which keeps a list of all suggested emendations (made via the Current Emendations widget). Users with administrative privileges may approve or disapprove of these emendations from the view within the Emendator Module. This is shown in detail later.

(c) At far right. Not shown upon first opening the Emendator Module, the far right column of the screen is reserved for the Advanced Emendation Tools accessible via the teal drop-down menu in the blue Emendation Tools widget.

• The Variant Spelling Tool searches manuscripts for alternate spellings of a given word. Then numbers displayed next to each variant spelling show the number of occurrences of each spelling. Clicking the number would launch a popover with links to the corresponding manuscripts, viewable in the STEP Image Browser. This tool may be used to identify authorial preferences.

• The Rejected Substantives Tool searches for variant substantives from other manuscripts for a given word. Clicking the line number next to a rejected substantive would launch a popover with information about each rejected substantive.

• Both of these advanced tools are used by an editor to inform his or her judgment. They are not designed to be able to emend the text themselves, though this functionality may be incorporated later.
To begin emending a text, all you need to do is click either the “Import Local File” button or the “Import File from STEP” button. The “Import Local File” interaction should be familiar to most users (and is handled by the OS), so it is the “Import File from STEP” functionality that is here demonstrated. First, click the “Import File from STEP” button. This launches an orange search box.

Upon searching for a document name, a list of results is returned (they would normally be .step files).

Selecting the checkbox of a result enables the user to click the “Import File” button. This prototype simulates emendation of the “Lowell Lecture III,” so select its checkbox then select “Import File.”

3. Emend View and Current Emendation widget

Once a file has been imported to the Emender Module, the screen should look like below:
The “Emend View” window on the left, in conjunction with the Emendation Tools widget, enable the editor to physically manipulate the text. However, manipulating text in and of itself does not generate enough information for proper TEI-XML tagging. For this reason, the Current Emendation widget has been designed to lead users through each individual emendation as quickly and painlessly as possible. The Current Emendation widget can be launched by clicking on its blue bar, but the primary means of accessing it is by beginning to manipulate text in the window labeled “Current Transcription.”

For purposes of the prototype, a “long click” in the text field simulates an editor highlighting the phrase “Prof. James, — which” for emendation. By highlighting this phrase within the text window, the Current Emendation widget is automatically launched.

The Current Emendation Module is organized as above. Highlighting text in the Emend View places that text in the top-left field. Directly beneath this, editors may enter the emended text in a field after the
“becomes” prompt. The emended text would be reflected in the “Emended Text” field of the purple widget.

The source field is automatically filled with the initials of the editor making emends (or the director), and auto-populates with the sigla of any manuscripts added as sources for the current emend. In the prototype, only adding “MS1” as a source works.

Two selection boxes allow editors to add a type and reason for the current emend. The available choices are merely placeholders.

Note that as users progress through this process, a progress bar and contextual prompts help them along.

Finally, editors may choose to suggest a Textual Note for the current emend before clicking the “Suggest Emendation” button. Textual Notes will be added in the Annotation Module. Clicking this green button “saves” the emendation in the STEP Module so that other editors may view it, and eventually the head editor may approve or disapprove of them.
Clicking that green “Suggest Emendment” button closes the Current Emendment widget and launches the Suggested Emendations widget.

4. Suggested Emendations widget

As mentioned earlier, the Suggested Emendations widget lists and displays information about all suggested emendations for a given emended text. Users may select an entry to review, edit, or delete it. Here, users with administrative privileges would have an option to approve or disapprove of emendations for a given text.

The number at the top (“5”) corresponds to the number of suggested emendations for the current text. The search field to the top-right allows users to search for emendations based on words, phrases, or even the source, type, or reason for emendment. Clicking a “Line.character” entry on the left displays that Suggested Emendation, with its specific changes highlighted in the purple main text window. As this list grows past five entries, the left selection bar would become vertically scrollable.

5. Alternate text views (Emend View, TEI Render, TEI Tagged XML)

The purple widget provides the editor with three textual views: Emend View, TEI Render, and TEI Tagged XML.

(a) Emend View. Emend view is the primary textual view in the Emendator Module, and is expounded upon above. Essentially, the “Current Transcription” is emended into the “Emended Text” field via the text box and the Current Emendations widget.

(b) TEI Render. TEI Render shows the editor what their emended text might look like in a pragmatic, printed format. This view also provides the editor with various back matter information that is generated automatically from the emendations made in Emend View. In the prototype, this view is simply a screenshot of the TEI Render generated within the Transcriptor.

(c) TEI Tagged XML. This view is intended to show editors and advanced users what is happening behind the scenes. STEP Emendator is meant to allow editors to emend texts with little to no knowledge of XML or tagging, but this view is included for those users who want to review the underlying XML or even alter it manually. In the prototype, this view is simply text taken from the Transcriptor, but in the actual Emendator this would be a functional XML coding environment (with color-coded tagging and auto-validation, for example).
Since we last met, Herbert Spencer has gone, and you have read his
character by Prof. James, — which neglects no side of the
philosopher or the man, and which contains no word that is not
true. (PAGE 2) What is said of the man’s personal character is a
very great deal; but the side of the philosophy which is of great
importance is the side of the philosopher on the man, and which
contains no word that is not true. (PAGE 3) So I have read his
character by Prof. James, — which neglects no side of the
philosopher or the man, and which contains no word that is not
true. (PAGE 2) What is said of the man’s personal character is a
very great deal; but the side of the philosophy which is of great
importance is the side of the philosopher on the man, and which
contains no word that is not true. (PAGE 3) So I have read his
character by Prof. James, — which neglects no side of the
philosopher or the man, and which contains no word that is not
true. (PAGE 2) What is said of the man’s personal character is a
very great deal; but the side of the philosophy which is of great
importance is the side of the philosopher on the man, and which
contains no word that is not true. (PAGE 3) So I have read his
character by Prof. James, — which neglects no side of the
philosopher or the man, and which contains no word that is not
true.
The STEP Platform has its own system to manage, bring up, and manipulate digitized images of the manuscripts to be transcribed. As an external application, STEP Tools provides its own image viewer and browser for the same reason that transcribers and editors using STEP Tools ought to have a way to visualize images of the original documents they are transcribing, editing, or annotating.

The development of STEP Image Browser is not completely finished at this writing, but as far as it goes it is already functional. We briefly describe the current state of this utility below.

STEP Image Browser is accessible from STEP Transcriptor, STEP Emendator, and STEP Emendator in the same way: by selecting it in the Tools menu in the menu bar. Doing so opens up the utility shown above, but empty instead of loaded.
1. Navigating the directory to find and load images

By default, STEP Image Browser opens your Documents folder (Mac, Windows) or your Home folder (Linux). Folders in that directory will be automatically listed alphabetically in the scrolling field between the thumbnails area and the image-viewing area.

Clicking any folder in that field will open it and, if there are any images inside that folder, the image browser will instantly look for them, turn them into thumbnails, and show those thumbnails in the column on the left side of the browser. The image browser will load immediately any JPG, PNG, or GIF files. It will also, on the Mac, locate, convert to jpeg, and show image files with any of the following extensions: .tif, .jp2, .pict, .psd, .qtif, .bmp, .sgi, and .tga. Images above 1Mb tend to load a bit more slowly.

If the folder contains no images and no internal folders, the scrolling field will merely show a line with two dots.

Click either those two dots or the button with a left-pointing fist icon. The browser will instantly navigate back one folder in the directory. Each time you click those two dots or the fist button, the directory will move back in the directory by one increment, and the content of the folder thus reached will be displayed in the scrolling field. The folder’s path in the directory is displayed above the image on the right side of the window.

That content is limited to folders, but if there were any images besides folders in that holding folder, those are the images that will get uploaded in the browser and show up in the form of thumbnails. A status scrollbar at the bottom of the browser will show the progress of thumbnail loading. You don’t need to wait for it to end before clicking a thumbnail.

Hint: OPTION (Alt)-click the folder’s path on the top right side of the image browser to go to that folder directly in the directory.

2. Viewing images

To view an image, click on its thumbnail. The image associated with it will be loaded into the main viewing area. This is quick if the size of the image is under 1Mb, otherwise the waiting time may not be imperceptible. When an image is loaded, the name of the file and its size will be displayed within a kaki field under the image. The thumbnail itself will be framed in black so that you can identify which one was clicked.

The viewing area will adjust itself to the size of the image so that the latter will not be distorted.

By design, the browser window is not itself extensible in order to limit its screen estate, which needs to be shared with other STEP Tools (see section 4 below for ways to further reduce its size, though). To
compensate for this, the image browser comes with several navigational and image-manipulation features.

![Image browser interface](image)

(a) **Magnifying the image**

Clicking a thumbnail brings its corresponding image into view. No matter its real size, its initial appearance within the standard viewing space is taken to be equal to 100% (simply as a stable point of reference). There are three ways of increasing or decreasing the size of an image (from down to 20% to up to 400%).

- Use the slider: either move its cursor left or right for a continuous increase of decrease of the image, or click the slider’s slot on the left or right side of the cursor for incremental leaps of -40% or +40%.

- Click the negative (minus) magnifying glass to decrease the image size by a 40% decrement, and the positive (plus) magnifying glass to increase it by a 40% increment.

- Click the number within the percentage box (not the percent % sign). This will prompt a dialog, “Resizing Ratio,” in which you type the actual percentage you want the image size to be extended to or reduced to.

| 60 % | 100 % | 220 % |

**HINT:** Click the % sign inside the box to automatically return to the 100% view.

(b) **Moving through the magnified image**

The magnified image is usually larger than the viewing area that contains it. There are two ways of navigating an image that is sized over 100%.

- Use both the horizontal and vertical scrolling bars on the bottom and right side of the viewing area to move up or down, left or right, through the image.

- Move the pointer over the image. If the image size is over 100%, the pointer (or cursor) will turn into an open hand, and the hand icon on the left side of the negative magnifying glass will turn blue, while the regular arrow icon will lose its light-purple highlight. Press the mouse button down, and drag the image in any direction. The cursor will turn into a
closed fist, –, while you are dragging the image.

NB: Any time you resize an image, that image will re-center itself without returning to the exact place you were looking at after dragging the image.

(c) Rotating or flipping the image  (Mac or Linux only)

The pull down menu button on the right side of the percentage box allows you to change the orientation of the image. This is useful if the image is shown in the wrong orientation, or if an author wrote sideways in a manuscript and you want to read the inscription without pinching a nerve in your neck.

The menu offers three orientations: left (by -90° increment), right (by 90° increment), and 180° (=upside down). You may also flip the image if for some reason it came to you backwards: flip it either horizontally or vertically as called for.

Note that these five operations rely, programmatically speaking, on a call to a UNIX shell command (or command line) that is native to Mac, but unfortunately not to Windows. Windows offers no command lines to manipulate images: third-party packages need to be installed to offer a comparable feature. It is therefore recommended that if you need to rotate or flip an image in Windows, you do so separately in a dedicated software (a free downloadable solution is “Irfanview”; another one, a bit more limited, is “JPEG Lossless Rotator”). Once you have corrected an image, it will then be viewable in STEP Image Browser.

3. To float or not to float above everything

STEP Image Browser can be made to float above every window without moving into the background when another window is clicked or focused on. This is useful for STEP Tools users because they need to be able to look at the image while transcribing its text into STEP Transcriptor. If it disappeared behind STEP Transcriptor each time they began typing something in the Transcription field, the joy of working would be negatively affected. At other times, though, this top-level-screen monopoly may be annoying.

To obviate frustration and preserve happiness, STEP Tools makes it easy to turn this floating feature on and off. While in STEP Image Browser, click the Window menu in the menu bar, and choose the command Stop Window From Floating Above Others to turn the floating feature off and allow the browser to disappear behind your current application.

If, on the other hand, you wish to restore the browser’s transcendent monopoly, return to the Window menu and choose the command that the previous one will have changed into: Make Window Float Above All Others.

4. Reducing the size of the window

Screen real estate being a valuable and disputed commodity, one way of decreasing the image browser’s footprint is by hiding the thumbnails column either alone or along with the folder directory’s scrolling field. In other words: it is possible to reduce the browser’s size by hiding its left side.

How is this done? Observe the lower left corner of the browser window.
You notice two small square buttons with a tiny arrow inside them. The lower one is to the left of the word “Status.” The other is by the bottom right corner of the folder directory.

Clicking the button by the word “Status” will hide the thumbnails. Clicking the button by the folders field will hide both the thumbnails and the scrolling field. If you do so, the bottom left corner of the browser will look as shown at right.

To return the browser window to its full appearance, click either square button again.

Note that if the image currently displayed is more than 1 Mb, and you click those square buttons, the window’s transformation may not be instantaneous, because the image browser needs to recalculate and render the image accordingly. And so your patience may need to exercise its virtue briefly.
STEP Text Comparator is a small application intended as an add-on to STEP Emendator, but it can be used independently of it. Its main immediate purpose is to help visualize several ranges of differences between two texts. This is bound to be useful when collating texts together.

(A more remote purpose is, from a programming standpoint, to use it as a basis for the development of algorithms that compare short segments of texts (single words, phrases) with enough precision to be able to generate an exact description, in full English, of what the differences are in both directions, which would be useful for automating the description of emendations. It turns out that comparing words or phrases for tiny differences character by character is more complicated than comparing larger segments of text simply to visualize the broader locations of differences.)

For a propositional term to be a subject, it must have "informed depth," that is, it must have real characters that can be predicated of it also "with logical truth on the whole in a supposed state of information." The informed depth is measured not according to the number of "mere names" that can be attached to the subject, but to the number of distinct properties a devotee of the pragmatic maxim could sincerely distinguish as really belonging to the subject of the proposition. This implies the possibility of testing comparable objects and subjecting them to an inductive inquiry. Peirce indeed shows that induction by enlarging the breadth of predicative terms, actually increases the depth of subject terms—by boldly generalizing the attribution of a character from selected objects to their collection—while hypothesis, by enlarging the depth of subject terms, actually increases the breadth of predicative terms—by boldly enlarging their attribution to new individuals. Both types of ampliative inferences thus generate information.

The mediaeval interpreter fulfills two distinct functions: first, to identify the potential predicate by correlating it with formally related representations, determining that the current situation is actually akin to them, and stating that, to future interpreters by blocking the copulative union of subject and predicate, and the other is to recognize that a representational claim is being offered for validation and correction. Couched in terms of Peirce’s mature semiotic theory, it means that, first, the Interpreter is being determined by the sign to represent the object in the same intrinsic fashion that the sign itself claims to be doing that is, the Interpreter is being determined by the sign to determine other interpreters relative to the object; and second, the Interpreter must also represent, not merely the object of the sign, but the very relation of the sign to its object—thus turn that relation into its own object, and offer it to another interpreter. For this to be possible, one needs to remember a crucially important outcome of the argument of Peirce’s 1867 “New List of Categories.” As he was describing the...

### 1. Base Text and Variant Text

STEP Text Comparator compares any two versions of a text in either direction. If the text on the left side is made the base text, the text on the right side is made the variant text. Clicking the double-arrow button switches that order: it turns the left text into the variant text, and the right text into the base text.

You can verify in two ways which side is the base text or the variant text. Either look at the words below “Base Text” and “Variant Text” in the middle of the window. Those words will either read...
“LEFT FIELD TEXT” or “RIGHT FIELD TEXT,” clearly indicating which is which. Or hover the mouse pointer on either field, and a little yellow box will pop up indicating that field as holding the VARIANT TEXT or the BASE TEXT. Clicking the double-arrow switches them.

2. Importing texts

Importing texts into STEP Comparator is easy. Click the Import… button on the center right side. You will be asked two questions successively.

(1) Which text are you importing: the base text or the variant text?
(2) What is the file type of that text: plain text, rich text (RTF), HTML, Microsoft Word, or Open Office?

Having answered that, you will be asked to locate the file in question in the computer directory. Do so, click Open, and the text will show up in the left field (base text) or the right field (variant text).

3. Three ranges of comparison

What distinguishes STEP Text Comparator from other text comparison tools is that it provides three distinct ranges of comparison. From most to least granular, those ranges are by word span, by sentence segments, and by full sentences.

(a) Comparison by word span relies on comparing successive sequences of a given number of words across the text, paragraph by paragraph. The span ranges from a minimum of 2 words to a maximum of 8. The more useful spans are generally 3 or 4. But increasing the spans does allow the range of certain textual modifications to be visualized more clearly. All it takes is to click the slider button up or down to change the span by one-unit increments. STEP Text Comparator instantly updates the comparison.

(b) Comparison by sentence segments is based on longer sequences of words (usually: those that are shorter than three words are merged with the preceding or succeeding one depending on its own position). Those sequences are extracted from between punctuation marks (comma, period, colon, semicolon, ?, !, and em-dash). That kind of comparison is useful to grasp higher-level modifications beyond the granular changes in a blink of an eye.

(c) Comparison by full sentences is somewhat less useful except when it allows users to distinguish areas of texts that sustained more editing than other areas. In the case of heavily edited texts, comparison by sentences will produce an extensively colored text. The few blank sentences that remain will therefore make the rare identical ones stand out. The illustration below shows that kind of extensiveness, made worse by the fact that the author wrote very long sentences.

To remember which comparison just took place, a green dot is displayed to the left of whichever Compare button was last clicked.
4. Colored comparison

When any segment of whatever selected length differs from its counterpart in any way, both segments get highlighted in the same color. The color scheme, based on 4 alternating colors, allows users to easily see which highlighted ranges of words on one side correspond with which highlighted words on the other side.

Lighter background colors are used to connect paragraphs with one another while brighter highlights are used to connect shorter segments of texts.

All comparisons begin by locating each paragraph of the base text within the variant text. If a paragraph moved to a different position in the variant text, the comparator identifies it, assigns it the same background color on either side, and takes that location difference into account before starting a more granular comparison. If two facing paragraphs do not share the same background color, users are then made aware that the paragraph to be looked for in the variant text is further down (or up) in that text, and they therefore need to scroll the second field up or down accordingly to find that paragraph before comparing the two visually.

To dismiss or clear all colors, click the Remove highlights button.

5. Displaying comparison results

Whenever a comparison takes place, the result of that comparison is displayed in the fields in the bottom part of the window: comparison by word spans are shown in the bottom left field, and comparison by full sentences or sentence segments are shown in the right field. Whichever field is displaying the result of the current comparison will show an off-white background while the other field’s background will have turned grey. A small arrow with an orange background separates the base reading (on the left side of the arrow) from the variant reading (on the right side of the arrow).

Results of word-span comparison (3-word basis):
6. **STEP Text Comparator administration**

1. As in other STEP tools, STEP Text Comparator provides a *Work mode* and an *Example mode*. Click the **Example** button (the radio button in it becomes blue) to fill the top two fields with two versions of a preloaded text. Then click the various other buttons to observe the result of different comparisons, both visually and in the comparison lists provided at the bottom of the window.

To leave the Example mode and return to Work mode, click the **Example** button again: its radio button will turn white and the interface will either get emptied or return to whatever texts were already there in Work mode.

2. **Exporting the results of comparisons**

Use the Export button to export the results of the comparison to a file, which can be plain-text, rich text format, html, or xhtml. If both comparison result fields have text in them, you will be asked whether you want to export the left-side results, the right-side results, or the two together.
3. Saving your work

Click the Save button whenever you want to preserve the current state of a comparison before trying something else. If you want to return to that previous state, then click the Restore button, which will recover that state and replace the current content of the fields with it.

4. Emptying all fields

Click the Clear… button to empty all four fields and return the window to its original blank slate in Work mode. Clicking this button automatically returns you to Work mode, for it has no effect in Example mode.

5. The Font menu

There is currently only one command in this menu, Text Font and Size… Choosing it brings up a dialog that allows you to change at once the font, the character size, and the text height (= line spacing) of ALL TEXT FIELDS in STEP Text Comparator’s window. Select your choices, and click the Apply button. If satisfied with the resulting look, click Close, otherwise change the settings again.