

A closer look at HXWD.org and how the TLS is implemented there

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A closer look at HXWD.org and how the TLS is implemented there

Introduction

The HXWD interface

The road to HXWD

HXWD.org behind the scenes

More interactions with HXWD

Background

- ▶ Task
 - ▶ Porting the TLS from Filemaker to a new format that allows collaborative editing
 - ▶ Improve the quality of the source texts
 - ▶ Stay within the available budget and timeframe
- ▶ (...) Finally, I decided to take up the challenge ...
- ▶ My simple plan:
 - ▶ Attach TLS to the Kanseki Repository
 - ▶ After two failed attempts, I had to give up.
- ▶ HXWD.org is the third attempt

Bird's eye view of the TLS

- ▶ (1) Textual layer: the source texts
- ▶ (2) Interpretational layer:
 - ▶ Ontology of
 - ▶ concepts (or synonym groups)
 - ▶ syntactic functions and semantic features
 - ▶ rhetoric devices
 - ▶ ... and eventually: character taxonomies
 - ▶ Words
 - ▶ Phonological reconstructions
 - ▶ Bibliography
 - ▶ ...

TLS in HXWD

- ▶ (since tls.org was already taken by Tokyo Little Satellite...)
- ▶ The new application for the TLS was implemented at hxwd.org (漢學文典)
- ▶ In the bird's eye view, this became:
- ▶ (3) The web application

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- ▶ don't overwhelm the user
- ▶ exploration reveals functionality

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- ▶ consistent use of UI elements

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- ▶ simple and elegant style
- ▶ simple
- ▶ and even simpler

Technical details

- ▶ **XML** based standards for text and interpretation
 - ▶ TEI wherever feasible
- ▶ **eXist-db** as back-end engine (recently upgraded to 5.3.0)
 - ▶ app development using eXist-db's template processing
- ▶ **XQuery 3.0** as server development language
- ▶ **Bootstrap 4** for the front-end interface elements
- ▶ **Javascript** (**Jquery** and other libraries) for interface programming

User groups

- ▶ Different views for different user groups:
 - ▶ **guest** (not logged in users)
 - ▶ **test** (a generic account with limited view and no editing rights)
 - ▶ **tls-user** (basic editing: translation, attribution)
 - ▶ currently, most users are here
 - ▶ **tls-editor** (more elaborate/destructive edits)
 - ▶ **tls-admin** (additional administrative rights)
 - ▶ **dba** (database administrator)
- ▶ (a proper user management system still needs to be implemented)

Web interface Demo

- ▶ Text search
 - ▶ other searches, options
- ▶ Concept browsing
- ▶ Character taxonomies

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- ▶ Character taxonomies
- ▶ Sorry, the demo has been moved to the end of this presentation
- ▶ But we will have some screen shots now

First chapter of the Analects with translation

漢學文典

TLS

Browse ▾

論語

目錄 ▾



Source: CHANT

Bookmarks ▾

內部 ▾

Search

1 《學而篇第一》

line 1 / 0%

Translation by C. Harbsmeier ▾

Translation by TLS Project ▾

1 《學而篇第一》

1.1子曰：

「學而時習之，
不亦說乎？

有朋自遠方來，
不亦樂乎？

人不知而不慍，
不亦君子乎？」

1.2有子曰：

「其為人也孝弟，而好犯上
者，

鮮矣；

不好犯上，而好作亂者，

未之有也。

君子務本，
本立而道生。

孝弟也者，

The Master said,

"Having studied something to exercise it in practice, at the proper times,
isn't that satisfying?

To have a colleague come from a distant region
isn't that delightful?

When others do not appreciate one not to feel offended
isn't that behaving in a gentlemanly fashion?"

Yǒuzi said,

"That anyone whose personality is both filial and fraternal and yet should
be prone to offend the authorities,

that is quite rare.

For someone not prone to offending superiors yet to be prone to creating
political rebellions,

that never occurs.

The gentleman concentrates his efforts on what is basic.

Once what is basic is established, then the Way will [naturally] emerge.

As for filial piety and fraternal love (in general),

Text, translation, annotations

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line 1 / 0%

1 《學而篇第一》

1.1 子曰：

The Master said,

子 (zǐ)

TEACHER

n[post-N] our master; person in authority [Note that the [post-N] can never in fact be made explicit without breaking the rules of the grammar! CH]

👍👎

「學而時習之，

"Having studied something to exercise it in practice, at the proper times,

Rhet:

學 (xué)

而 (ér)

時 (shí)

時 (shí)

之 (zhī)

不亦說乎？

isn't that satisfying?

TRICOLON-2+1+CRESCENDO

STUDY

AND

TIMELY

OFTEN

PRONOUN

vt[oN] act devote oneself to study; be devoted to study; engage in intellectual work; work to improve oneself morally/intellectually

👍👎

padV1.postV2 sequence e.g. 拜而受之 "bow and accept it" and then, and thereupon; (often coordinates two verbal predicates with the same subject)

👍👎

nadV appropriate at the appropriate time; when the need arises Note 非時

👍👎

nadV from time to time> sometimes; often; periodically; several times; at regular intervals; all the time

npro.postVt nonreferential an object, things; a place; something [cognate object; indefinite dummy object pronouns without reference: things, people; someone 以約失之者 "Those who, through keeping to the main thing, get things wrong"]

👍👎

Concepts related to 學 xué

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1.3子曰：

「巧言令色，

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The gentleman concentrates his efforts on what is basic.

Once what is basic is established, then the Way will [naturally] emerge.

As for filial piety and fraternal love (in general), these must count as the basis for Goodness, mustn't they?"

The Master said,

"Those who make their speech crafty and their appearance artificially distinguished

are rarely indeed Good."

Existing SW for 學

At: KR1h0004_tls_001-1a.4

Line: 「學而時習之，

Use one of the following syntactic words (SW), create a **New SW**, add an **existing Concept** to the word or create a **New Concept**.

學 (xué) **COMMAND** **New SW** **SYN** 1學 (xué) **DOCTRINE** **New SW** **SYN** 1學 (xué) **EMULATE** **New SW** 1學 (xué) **IMITATE** **New SW** **SYN** 1學 (xué) **KNOW** **New SW** **SYN** 1學 (xué) **LEARN** **New SW** **SYN** 4學 (xué) **RESEMBLE** **New Word**學 (xué) **SCHOLAR** **New SW** 1學 (xué) **SCHOOL** **New SW** **SYN** 2學 (xué) **STUDENT** **New Word**學 (xué) **STUDY** **New SW** **SYN** 20學 (xué) **WISE** **New Word**

Contrasts of the concept STUDY

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學 (xué) **SCHOLAR** New SW 1學 (xué) **SCHOOL** New SW **SYN** 2學 (xué) **STUDENT** New Word學 (xué) **STUDY** New SW **SYN** 20

1. The dominant word is xué 學 (ant. jiào 教 "train teach") which refers primarily to studying or training under another person, and secondarily to the learning by heart texts. Very often, the word retains a tinge of imitation.

2. Shī 師 and cóng 從 refer to deciding to study under someone and treating him as one's teacher.

3. Kǎo 考 refers to an investigation of a subject in a "scientific" spirit.

4. Jiū 究 and yán 研 refers to an in-depth study of a subject, typically involving a fair amount of reflection.

5. Zhì 治 and gōng 攻 refer to the specialised study, typically of a certain text.

6. Xí 習 refers to rehearsal of what one has learnt, through repetition of text and/or through enactment in practice.

學 (xué) **WISE** New Word

Syntactic words defined for STUDY/學 xué

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學 (xué) **STUDY** New SW SYN 20

- **nab** act: the attempt to learn about things (typically from a teacher) study; the pursuit of intellectual/moral self-development; learning Save Use **SWL: 41**

- **nab.post-N** : the study of the subject N Save Use **SWL: 1**
- **nab.post-N** : the study of the studying person N Save Use

SWL: 1

- **vadN** : learned, dedicated to the pursuit of learning 博學之士 Save Use **SWL: 4**
- **vi** : be a person of education, be a person who has engaged in proper study; be a person who has studied properly Save Use

SWL: 2

- **vt(+V[0])** conative: try to learn to perform a contextually determinate action Save Use **SWL: 1**
- **vt(oN)** conative: devote oneself to learning N; devote oneself to the practice of N Save Use **SWL: 1**

- **vt(oN)** perfective: study successfully the contextually determinate skill N Save Use **SWL: 1**

- **vt(oN)** : study with; become a student of a contextually determinate person Save Use **SWL: 2**

- **vt(+V[0])** conative: try to learn to VERB Save Use **SWL: 7**

Text references for STUDY/學 xué nab (excerpt)

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禮記

43

荀子 1

荀子 1

荀子 1

荀子 1

荀子 1

荀子 1

荀子 1

荀子 1

荀子 2

43.1大學之
道學不可以
已。學惡乎始？
學至乎沒而
後止也，故學數有
終，
故學至乎
《禮》而止
矣。小人之學
也：學莫便乎近
其人。學莫便乎近
其人。

故學也者，

1. What the Great Learning teaches,

"In studying one must not stop." ♡XWhere should study begin?
Study first ends with one's death. ✕Thus the art of study has a final
point, ♡Thus, when study gets to the point
of ritual, then it stops. ♡XAs for the small man's studying: ♡XIn study nothing is more effective
than being close to the right person. ♡XIn study nothing is more effective
than be close to the right person. ♡XTherefore one who is in the process
of learning ♡X

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Porting details (1): low hanging fruits

- ▶ Criteria for prioritation of **texts**
 - ▶ Complete text
 - ▶ Translation available
 - ▶ Reliable source text available
 - ▶ e.g. either Kanripo or CHANT
- ▶ Core features
 - ▶ Concepts, Syntactic functions, Semantic features
- ▶ Rhetorical devices (added, but not yet fully functional)

Porting details (2): todos and donots

- ▶ TODO:
 - ▶ Phonetic representation ("Guangyun" file)
 - ▶ Bibliography
- ▶ Other stuff
 - ▶ Word composition
 - ▶ ...

Porting procedure

- ▶ Content of Filemaker database written to ad-hoc XML representation
 - ▶ Final export by Jens Østergaard Petersen on July 29, 2016
- ▶ Data modeling and transformation
 - ▶ For texts, translations and annotations:
 - ▶ intermediate combined version in Kanripo format (ManDoku format, hereafter MD)
 - ▶ comparison and manual proofreading of TLS text and new source text
 - ▶ conversion to separate format (Chinese text and translation)
 - ▶ development of and conversion to HXWD annotation format (attributions)
 - ▶ Concepts, Syntactical functions and semantic features (later also rhetorical devices)
 - ▶ Customized and highly formalized files, close reflecting the display screens in Filemaker
- ▶ Until Feb 2017: Conversion of the whole database to MD format
- ▶ From Mar 2017: Re-modeling into XML, mostly based on TEI (Text Encoding Initiative) recommendations
- ▶ From Oct 2018: Development based on eXist-db
- ▶ 2019-01-05: Register of HXWD.org domain and test version of online version

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TLS source files are on GitHub

The screenshot shows a GitHub search results page for the query 'tls-'. The page header includes the URL 'https://github.com/tls-kr?q=tls-&type=&language=&sort=' and the profile of 'Thesaurus Linguae Sericae (TLS) new format' from Kyoto, Japan. The search results are sorted by 'last updated' and show 10 results. The top results are:

- tls-app**: Web Application for TLS. JavaScript. Updated 6 days ago.
- tls-data** (Private): XML version of the TLS database. XQuery. Updated 14 days ago.
- tls-texts** (Private): XML version of the texts. XQuery. Updated on 7 Dec 2020.
- tls-chant** (Private): Additional text files for TLS. Updated on 4 Apr 2020.
- tls-translations** (Private): Translations of the TLS texts. Updated on 11 Mar 2020.

The right sidebar shows 'Top languages' (XQuery, TeX, HTML, JavaScript) and 'People' (13 contributors).

TLS Repositories

- ▶ Public repositories
 - ▶ **tls-app**: Application source code
 - ▶ **tls-texts**: Chinese source texts ("Core texts")
 - ▶ these are texts that were part of the original TLS or have been curated in the new format
 - ▶ **tls-data**: Interpretational layer (excluding proprietary translations)
- ▶ Private repositories
 - ▶ **tls-translations**: proprietary translations
 - ▶ **tls-chant**: Texts provided by the CHinese ANcient Texts project in Hongkong ("More texts")
- ▶ In the database, **tls-translations** is part of the **tls-data** app; **tls-chant** is part of **tls-texts**
- ▶ There is also a user area for the registered users, this will not be pushed to GitHub



Views of the database

- ▶ The public view of the database is generated by the code in `tls-app`
 - ▶ it provides a customized, focussed view, usually combining data items from many different sections of the database
 - ▶ All user interactions, including editing, translating, attributing are channelled here
- ▶ eXist-db provides also other interfaces to the database:
 - ▶ Dashboard / eXide: Browser based edit/view of database content
 - ▶ XML-RPC: used by oXygen XML editor to interface with eXist-db
 - ▶ RESTXQ: execute XQuery through a REST interface

Attributions for Xunzi seen in eXide

The screenshot shows the eXide web interface with a file explorer on the left and an XML editor in the center. The XML code is as follows:

```

1 - <TEI xmlns="http://www.tei-c.org/ns/1.0" xmlns="KR3a0002-ann">
2 -   <teiHeader>
3 -     <fileDesc>
4 -       <titleStmnt>
5 -         <title>Annotations for 荀子</title>
6 -       </titleStmnt>
7 -       <publicationStmnt>
8 -         <p>published electronically as part of the TLS project at https://hxwd.org</p>
9 -       </publicationStmnt>
10 -      <sourceDesc>
11 -        <p>Created by members of the TLS project</p>
12 -      </sourceDesc>
13 -    </fileDesc>
14 -    <profileDesc>
15 -      <creation>Initially created: <date>2019-11-01T16:39:32.892+09:00</date> by zadrapa</creation>
16 -    </profileDesc>
17 -  </teiHeader>
18 -  <text>
19 -    <body>
20 -      <div>
21 -        <head>Annotations</head>
22 -        <p xml:id="KR3a0002-start">
23 -          <seg xml:id="KR3a0002_tls_001-1a.3">
24 -            <line>荀子曰：</line>
25 -            <tls:ann xmlns:tls="http://hxwd.org/ns/1.0" concept="GENTLEMAN" xml:id="uid-b41516f8-4fa2-45c8-9c85-b9fed44c3c">
26 -              <link target="#KR3a0002_tls_001-1a.3 #uid-cb72cdad-533a-4eb8-b6df-66aa77608f5"/>
27 -              <tls:text>
28 -                <tls:srcline title="荀子" target="#KR3a0002_tls_001-1a.3" pos="1">荀子曰：</tls:srcline>
29 -                <tls:line title="荀子 (en)" src="Knoblock and Riegel">The gentelman says:</tls:line>
30 -              </tls:text>
31 -              <form corresp="#uid-eb6d8697-3735-4cf8-b59b-ea31c5eb461 #uid-07663ff4-7717-4a8f-a2d7-0c53aea2ca19" orig="">
32 -                <orth>荀子</orth>
33 -                <pron xml:lang="zh-Latn-x-pinyin">jūn zǐ</pron>
34 -              </form>
35 -              <sense corresp="#uid-cb72cdad-533a-4eb8-b6df-66aa77608f5">
36 -                <gramGrp>
37 -                  <pos>=f:pos>
38 -                  <tls:syn-func corresp="#uid-a8e89bab-49e1-4426-b230-0ec7887fd8b4">NP</tls:syn-func>
39 -                  <tls:sen-feat corresp="#uid-f8182437-4c38-4cc9-a6f8-b4833cdea2ba">nonreferential</tls:sen-feat>
40 -                  <usg type="warring-states-currency">4</usg>
41 -                </gramGrp>
42 -                <def>the person of elevated social status 與野人相對</def>
43 -              </sense>
44 -              <tls:metadata resp="#zadrapa" created="2019-11-01T16:39:32.892+09:00">
45 -                <respStmnt>
46 -                  <resp>added</resp>
47 -                  <name>zadrapa</name>
48 -                </respStmnt>
49 -              </tls:metadata>

```

Beginning of Lunyu 1, TEI XML format

```

1 <TEI xmlns="http://www.tei-c.org/ns/1.0" xml:id="KR1h0004">
2   <teiHeader>
3     <fileDesc>
4       <titleStmt>
5         <title>論語</title>
6       </titleStmt>
7       <editionStmt>
8         <edition>
9           <idno type="kanripo">KR1h0004</idno>
10        </edition>
11      </editionStmt>
12      <publicationStmt>
13        <p>Published electronically</p>
14      </publicationStmt>
15      <sourceDesc>
16        <p>Generated from the TLS textfiles in Kanripo format on 2019-03-20</p>
17      </sourceDesc>
18    </fileDesc>
19    </teiHeader>
20    <text>
21      <body>
22        <div>
23          <head>
24            <seg xml:id="KR1h0004_tls_001-1a.3-h">1 《學而篇第一》</seg>
25          </head>
26          <p>
27            <p>
28              <seg xml:id="KR1h0004_tls_001-1a.3">1.1子曰: <lb/>
29              </seg>
30              <seg xml:id="KR1h0004_tls_001-1a.4">「學而時習之, <lb/>
31              </seg>
32              <seg xml:id="KR1h0004_tls_001-1a.5">不亦說乎? <lb/>
33              </seg>
34              <seg xml:id="KR1h0004_tls_001-1a.6">有朋自遠方來, <lb/>
35              </seg>
36              <seg xml:id="KR1h0004_tls_001-1a.7">不亦樂乎? <lb/>
37            </p>
38          </p>

```

Network of information items

- ▶ XML data allows for a great degree of freedom in information modeling
- ▶ different parts of the TLS can be modeled differently
 - ▶ as appropriate for the items at hand:
 - ▶ texts as hierarchy of text objects
 - ▶ concept descriptions as structured collection of information items (which can themselves be hierarchical, and linked to other items)
 - ▶ attributions as nexus points (a link between a text location and a syntactic word SW)
- ▶ these elements are connected through **ID** and **IDREF**
 - ▶ similar to cross references in printed books: "see page 27" is an IDREF, the page with the number 27 is a referable location (ID)
 - ▶ in HXWD, this is implemented as **@xml:id** and mostly **@corresp** (or **@target**)

HXWD.org implements a stateless client/server architecture

- ▶ Client requests a page from server
- ▶ Server assembles the page, sends it to the client **and forgets about it**
- ▶ Client requests the "attribution floater" for 莊周
 - ▶ this is done via XHR: the page is not updated, but only modified
- ▶ Client clicks on "Use" to attribute
 - ▶ a XHR is sent to the server, the server saves the attribution
 - ▶ if the action succeeds, the interface displays a short acknowledgement
 - ▶ at this point, the page on display **differs** from the state in the server
 - ▶ to bring this in sync, the client issues another XHR to get the latest state from the server.

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- ▶ We will look at an example in the next slides

Looking at 莊周 attributions

Source: CHANT Bookmarks 内部 莊周 in texts 莊周 chris

Translation by C. Harbsmeier

One must disregard one's lifetime, disregard what is "just and proper", and sally forth into the boundless."

Penumbra asked Shadow:
"One moment you are walking, and the next moment you are standing still; one moment you are sitting down and the next moment you rise up. Why are you so inconstant?"

The Shadow said:
"Could it be that I depend on something to be as I am, (you Stupid!) And does not what I rely on has in turn something it depend on? Am I depending on snake's scales, or on cicada wings? How would I be aware of why I am as I am? How would I be aware of why I am not as I am not?"

Some time ago Zhuang Zhou dreamt he became a butterfly, a butterfly fluttering pleased with my busy I knew nothing of all All of a sudden I was and then as messily But I had no idea why or whether a butterfly Between Zhou and I, there definitely is a But this is called the

THE IMPORTANT F
One's life has its bo but the realm of wh

Previous

Existing SW for 莊周
At: KR5c0126_tls_002-19a.2
Line: 昔者莊周夢為胡蝶，
one of the following syntactic words (SW), create a **New SW**, add an **existing Concept** to the word or create a **New Concept**
莊周 (zhuàng zhōu) **MALES OF SONG** **New SW** 1

Shadow said,
"Do I have to wait for something before I can be like this?
Does what I wait for also have to wait for something before it can be like this?
Am I waiting for the scales of a snake or the wings of a cicada?
How do I know why it is so?
How do I know why it isn't so?" 23
Once Chuang Chou dreamt he was a butterfly.

Developer Tools — TLS - KR5c0126 : 莊周 — https://hxwd.org/textview.htm?location=KR5c0126_tls_002-19a.2

Inspector Console Debugger Network Style Editor Performance Memory Storage Accessibility

Filter URLs

All	HTML	CSS	JS	XHR	Fonts	Images	Media	WS	Other
S...	Met	Domain	File	Initiator	Type	Transferred	Size		
200	G...	hxwd.org	get_sw.xql?word=莊周&context=/textview.html	textview...	html	1,49 KB	3,27 KB		

2 齊物論第二 line 588 / 90%

忘年忘輪，攝於無竟，故寓諸無竟。因南問景曰：「籟子行，今子止；籟子坐，今子起；何其無特操與？」景曰：「吾有特而然者邪？吾所恃又有待而然者邪？吾待蛇蚺蜩翼邪？吾識所以然！惡識所以不然！」昔者莊周夢為胡蝶，栩栩然胡蝶也，自筆適志而不知周也。俄然覺，則蘧蘧然周也。不知周之夢為胡蝶與，胡蝶之夢為周與？周與胡蝶，則必有分矣。此之謂物化。

3 養生主第三
吾生也有涯，而知也无涯。
First

Searching for text locations

Source: CHANT Bookmarks 内部

2 齊物論第二 (hw 506 | 50%)

忘年忘義，披於無異，故寓諸無異。同爾問景曰：「曩子行，今子止；曩子坐，今子起；何其無特操與？」景曰：「吾有待然而然者邪？吾所待又有待而然者邪？吾待蛇蚺蜺翼邪？惡道所以然！惡道所以不然！」昔者莊周夢為胡蝶，栩栩然胡蝶也，自喻適志與！不知周也。俄然覺，則蓬蓬然周也。不知周之夢為胡蝶與，胡蝶之夢為周與？周與胡蝶，則必有分矣。此之謂物化。

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Existing SW for 莊周

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Line: 昔者莊周夢為胡蝶。

Use one of the following syntactic words (SW), create a New SW, add an existing Concept to the word or create a New Concept

莊周 (zhuang zhou) MALES OF SONG New SW 1

- NPpr + Standard Name: Zhuang Zhou (Floruit ca. 365-290) Unger no. 114 Personal Name: Zī Xiū 子休

莊子 2 昔者莊周夢為胡蝶。

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200	G...	hxwd.org	show_att.xq?uid=uuid-d22a660d-cd01-44b4-8025-ffc519180a38	textview...	html	771 B	992 B		

Pros and cons of the client/server approach

- ▶ Pro
 - ▶ User interfaces can be designed to make specific tasks very convenient
- ▶ Con
 - ▶ Every interaction has to be specifically designed, most of the times in several steps
 - ▶ Only interactions foreseen and planned for can occur
- ▶ Other issues:
 - ▶ network issues can hamper the communication, with unpredictable results
 - ▶ if in doubt, **reload** the page to be sure to get the latest state from the server
 - ▶ do not use the **back** button of the browser:
 - ▶ the back button displays a **locally cached version** of the page received from the server earlier, **without** any modification that occurred later through user interaction!

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- ▶ It is far from ideal, but on the Web anything else is **difficult**

A closer look at HXWD.org and how the TLS is implemented there

Introduction

The HXWD interface

The road to HXWD

HXWD.org behind the scenes

More interactions with HXWD

Create a new translation/comment area

- ▶ All regular users can start a new translation or comment file
 - ▶ (these are the files that populate the columns in the middle and right area of the screen)
 - ▶ to activate the dialog, click on the translation header and select "New translation/comments"
- ▶ translation files are specific to the text they accompany
- ▶ The following slide shows the input screen
 - ▶ Be careful when using it: Everybody can create files
 - ▶ but only the admin can delete them
- ▶ Translation files marked as "Keep it to me only" will be saved to your user area and not be visible to other users
- ▶ The actual translation can than be entered line by line. Moving to the next line with `<tab>` saves the line to the server

Add a new translation dialog

Start a new translation or comment file for 莊子

X

Information about the translation / work

Type of work: Translation Comments

Translation language:

English

Creator (if it is not you:-):



For comments, are they related to a translation?

None

Visibility

We hope and expect that the work will be available to all TLS users. However, we realize there are reasons to keep it private, even if temporarily. You can change this later.

Show to everybody

Show to registered users

Keep it to me only

Bibliographic information

If you are entering a previously published translation, please give the bibliographic details here, at least title, publishing place and year.

Title:

Publisher, place and year

No copyright

Licensed

Not Licensed

Status unclear

Save the translation, then you can select this translation for input after reloading the page.

Close

Save



Stars, logs etc.

- ▶ Texts of specific interest can be rated with **stars**
 - ▶ This will add them to the "Starred texts" tab for easy access and allows to prioritize them in searches
- ▶ Interactions that change data are usually marked with userid and modification date
 - ▶ in some cases earlier versions of a changed state (for example a translation line) is kept in a log file
- ▶ Visits to text locations in the textview screen are logged. This allows you to return to the most recent place in a text easily, e.g. from the "Starred texts" tab
- ▶ Fixed locations of interest can be bookmarked (from the attribution floater)

Sometimes the server freezes :-)

- ▶ Some interactions cause a lot of internal changes to keep the data consistent
- ▶ In such cases, the server might stop to respond to new requests
- ▶ Other unknown and untraceable circumstances can also lead to freezes
- ▶ At noon and midnight JST the server makes a **full backup**
 - ▶ to ensure consistency of the backed up data, this also requires all interactions to stop
 - ▶ this will usually take 3-5 minutes

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 - ▶ to ensure consistency of the backed up data, this also requires all interactions to stop
 - ▶ this will usually take 3-5 minutes
- ▶ Most of the time, the server will unfreeze itself in due time

Underdeveloped areas

- ▶ A lot work needs to be done, specifically
 - ▶ Marking and annotating of text segments
 - ▶ Integrating Zen Knowledgebase (zenkb)
 - ▶ Metadata for texts (esp. CHANT texts)
 - ▶ Adding/Linking of additional texts
 - ▶ User management
 - ▶ ...

Web interface Demo

▶ (now, finally)

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- ▶ (now, finally)
- ▶ Concept browsing
- ▶ Text search
 - ▶ other searches, options
- ▶ Character taxonomies

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