White Paper Report

Report ID: 109706

Application Number: HD-51772-13

Project Director: Luis Gomez (lo2gomez@gmail.com)

Institution: Mangalam Research Center for Buddhist Languages

Reporting Period: 5/1/2013-1/31/2015

Report Due: 4/30/2015

Date Submitted: 4/30/2015

Type of report: White Paper **Grant number:** HD-51772-13

Title of the Project: The Buddhist Translators Workbench (BTW), a project of Mangalam

Research Center for Buddhist Languages

Project Director: Luis Oscar Gomez (lo2gomez@gmail.com) **Institution:** Mangalam Research Center for Buddhist Languages

Report submission date: 4/30/2015

WHITE PAPER to accompany FINAL REPORT START-UP LEVEL II GRANT in THE DIGITAL HUMANITIES





Buddhist Translators Workbench

Authors: Luis Oscar Gómez, Project Director; Ligeia Lugli, Senior Research Associate; Jack

Petranker, Project Coordinator

Contact: jackp@mangalamresearch.org

Project Description

The Buddhist Translators Workbench (BTW), http://btw.mangalamresearch.org, is an ongoing research project centered on the idea of a tool for translators and scholars based on contemporary standards of lexicology. It has two immediate goals. First, historically and in terms of the project's focus during Startup Phase II, the research, theoretical modeling and digital implementation of BTW aims to generate data and research to assist translators of Buddhist texts (at this point, especially translators engaged in the task rendering the classical Sanskrit Buddhist idiom). This aspect of the project reflects the goals of classical philology, but supersedes traditional philological tools by bringing to bear contemporary lexicological and translation studies upon the classical task of intercultural text transfer.

Second, BTW models translation and lexicology beyond its application to the translation of Sanskrit and Buddhist texts, BTW's innovative approach has the potential to change the task of translation in fundamental ways, potentially extending its usefulness to Buddhist literature in other languages, and to research in areas of language, literature and culture outside the realm of Buddhist cultures. The structure of BTW's template can be applied outside the field of Buddhist Sanskrit, and its data visualization features promise to be of use in conceiving and investigating semantic webs of meaning in other fields of the humanities.

Using contemporary theory and best practices in lexicology and translation theory, BTW makes use of advances in the digital analysis of semantic relations and semantic fields, in data-linking capabilities, and in data visualization representing the contextual use of language in ways that illuminate the task of translation. At the same time, BTW draws on the traditional resources available to translators, including the philological study of Buddhist texts, in a digital format that facilitates access and analysis of the textual data base, linking different parts of the database amongst themselves and to the semantic range of English words and the semantic fields of English. As explained below, these tools can be used both pedagogically and lexicologically.

Origins of BTW

In 2010, a group of scholars met at Mangalam Research Center for Buddhist Languages (MRC) to explore ways to improve on existing tools and techniques of translation. The scholars agreed that translation tools available for translating classical Buddhist text could be substantially improved. They also recognized that a set of standards for best practices and didactic models for translation was lacking. Research began on appropriate methods for addressing these concerns that would draw on the new capacities made available by digital tools.

Inspired both by Western philology and the wide spectrum of traditional approaches to translation in Asia and in the modern Academy, BTW began with an exploration of existing tools for translation. These included traditional compilations of translation equivalents, such as the ninth-century Mahāvyutpatti (Tibetan, Bye brag tu rtogs par byed pa chen po), and related lexicographic works such as the Sgra sbyor bam po gnvis pa (a text regarded as a sort of commentary on the Mahāvyutpatti, but, more importantly, revealing the lexicological reasoning of traditional Tibetan translators of Buddhist texts); and including as well the great dictionaries of Western Sanskrit and Pali studies, starting with Otto von Böhtlingk and Rudolf Roth's monumental <u>Sanskrit-Wörterbuch</u> (1855-1875). Early ideas for our project stayed close to such models; in fact for a short time, BTW considered producing an updated critical English version of the Mahāvyutpatti or an update of Franklin Edgerton's pioneering Buddhist Hybrid Sanskrit Dictionary (1953). Additionally, BTW staff considered various approaches to integrating existing dictionaries, wordlists, and digitized texts into a language-agnostic search tool that would incorporate textual parallels in Sanskrit, Pāli and Gāndhārī and traditional translations of Indian Buddhist texts into Chinese and Tibetan, as well as contemporary translations from a parallel corpus of English, German and French renderings of Buddhist terminology. All such projects were eventually rejected as being too large in scope and as

insufficiently innovative to take advantage of the digital revolution in the humanities.

In the end, MRC decided on taking BTW in a new direction. Instead of giving translators digital access to existing resources (texts and lexica) or adding more resources in traditional formats to allow them to continue in their accustomed approaches to translation, the BTW team aimed to point translation efforts in a direction that would make better use of advances in lexicology, translation studies and digital humanities.

The core difficulty that the BTW team identified in current translation practice was the problematic habit of seeking translation equivalents for isolated words and terms by aiming at a one-to-one match between the source and target languages. The team also began to question over-reliance on intuitive, speculative searches for equivalents, or on etymological calques (attempts to duplicate in the target language the etymology of the term in the source language). Of course, such time-honored approaches have a role to play and retain their value. However, we saw the potential for applying more contemporary models to the translation of Buddhist texts. To understand the significance of this shift, it is helpful to review briefly the state of translation studies and practice.

BTW Within the Evolution of Translation as a Discipline

Translation and philology are among the most ancient and important intellectual enterprises behind the spread of Buddhism, and remain to this day the most important vehicles for the preservation, transmission and reception of Buddhist traditions and ideas in the West. But the historical importance of translation is not limited to the history of Buddhism or to its reception in the countries of Asia and the modern West. The central role of translation can be traced in some of the earliest records of intercultural encounter, from Sumer to China. They include the great enterprises of translating Greek into Latin and Arabic, the early translations of the Bible, and the subsequent role of cross-linguistic communication during the Colonial age, continuing into the Post-colonial age and the present period of globalization. During this long history, and especially in recent decades, there have been major changes in the role translation plays, our understanding of how it works, and our more general sensitivity to how language transmits and constructs meaning.

Other changes also affect the translation enterprise. The expectations of readers have changed radically, and historical models of authority and meaning do not easily accord with the changed circumstances of the 21st century. In particular, translation no longer occurs under the sponsorship of a centralized authority—a monarch or ecclesiastical hierarch—freeing the contemporary scholar from the controls that in the past limited the range of choices available to individual translators.

The traditional assumption that words in religious texts are only terms or codes for ahistorical concepts, still common among some translators of classical Sanskrit Buddhist texts, has also been called into question, replaced by a focus on the cultural context and historical dynamics of texts. Some have feared that a shift away from an ahistorical approach might undermine the religious significance of the texts being studied, yet this fear seems particularly inappropriate in the context of translating Buddhist texts, which often acknowledge the creative and constructive power of language, not only at the philosophical level, but also in terms of exegetical and translation practice in traditional Asian contexts. It is worth noting that Tibetan and Chinese translators and commentators encountered similar questions and grappled with issues similar to the ones we encounter today, and that they responded by developing a variety of approaches and methodologies (some of which are still used in the field of Buddhist Studies).

All these factors and changing circumstances must be taken into account when contemporary students of Buddhist literature set out to emulate the accomplishments of the great Buddhist translators of the past. Our understanding of the methods and purposes of translation has changed significantly since the middle of the 20th century, yet the practice of translators fails to take such changes into account.

Taking a New Direction

Responding to a need to bring the study and translation of classical Sanskrit texts into the 21st century, the BTW team soon abandoned any idea of producing a new lexicon that would simply improve on existing tools for translation. Many rounds of conceptualizing and testing various models followed, and eventually a new model emerged. We believe we are now positioned to introduce a significant shift in Buddhist studies and in the philological study of Buddhist texts. The key is to turn away from deriving meaning from the intuitive and etymological analysis of words and concepts (deduced meaning) to a contextual understanding of the creation of sense within the web of discourse (integrated meaning). This fundamental move makes it much more likely that translators can succeed in their fundamental task: to reconcile accuracy (the goal of faithfulness to the source language and loyalty to the source culture) with the need to stay within natural, idiomatic forms of the target language and the modes of understanding at work in contemporary thought.

Toward the close of the Level I Start-up Grant in the Digital Humanities awarded by the National Endowment for the Humanities, and continuing into the early phases of the Level II grant, BTW created an innovative template for bilingual digital lexicography that takes full advantage of the digital nature of BTW. The starting point is a basic template in which both the user interface and data input identify a headword (the canonical or citation form of a semantically related family of words). The headword (technically called the *lemma*, plural *lemmata*) can be linked to other headwords. BTW allows the user to locate each lemma in a wide range of contexts, using comprehensive citations that illustrate its different uses. This approach, described in detail below, makes BTW a tool with the potential for a much wider application for the humanities. It offers a unique way of testing, operationalizing and demonstrating important principles of bilingual lexicography, historical semantics, and translation theory.

An important element in the BTW template is an interactive contrastive section that encourages translators to explore the lemma's semantic "neighbors." [Figure 1]



Figure 1: Contrastive section of a BTW entry.

The contrastive section represents a huge improvement on existing lexicographic resources for Buddhist translators. It encourages Sanskritists to move away from the lists of equivalents and the scholastic definitions traditionally used as touchstones in the translation of Buddhist texts, and to instead conceive of the Buddhist lexicon as part of a network of signification. Rather than looking up a single term and its possible equivalents, users can use the contrastive section to start investigating the lexical clusters of semantically and etymologically related words.

By its very structure and organization, then, BTW reminds the translator that translation is not simply about word-matching or constructing etymological calques. Instead the translator must always keep in mind a word or phrase's polysemy: the wide range of meanings expressed by a single lemma as it occurs within different semantic environments. BTW also allows the user to observe and explore the word's collocations: the interaction of every lemma with "the company it keeps" (J. R. Firth, 1957). BTW thus acknowledges the complex web of meanings that is language, a consideration that becomes critical when one attempts to compare the webs of two or more distinct languages. Working with such webs forms one of the main challenges of translation as applied linguistic science and translation theory.

BTW represents the linguistic web of meaning of specific contexts in the database by integrating into a basic template a record of several key factors: 1) a lemma's polysemy (the semantic spectrum, or cluster of meanings expressed by a given word); 2) its synonymic network (the various semantic relations of words with similar or nearly equivalent meanings; 3) its antonymic network (words expressing opposite or contrasting meanings; 4) its cognate and etymological relations, and 5) other potentially illuminating lexical relations. Most importantly, as explained further below, BTW offers extensive guidance on the lemma's semantic field (the family of concepts under which a particular lemma falls).

The template used to organize the entries follows contemporary principles in linguistic theory and practice, and it also tallies well with contemporary approaches in translation theory. The way the information in the entry is organized is complemented by BTW's capacity to expand a translator's choice by showing in text and infographics the polysemic structure of a given word and offering extensive guidance on the lemma's semantic field.

Building on a Lemma's Semantic Field: the Historical Thesaurus of English

A major innovation in BTW is the way it integrates into its lexicographic template the conceptual structure of the *Historical Thesaurus of English* (HTE): http://historicalthesaurus.arts.gla.ac.uk/), maintained and curated by the English Language Department of the University of Glasgow (The print version, published in 2009 as the *Historical Thesaurus of the Oxford English Dictionary*, has now been largely superseded by the electronic version.) The HTE is a database of all the lemmas in the second edition of *The Oxford English Dictionary* (OED), arranged by semantic field and date of occurrence. As the most complete record of the semantic relations of the English language, the HTE provides a unique resource for the exploration of English renderings for Sanskrit. BTW is the first resource to use the Historical Thesaurus for inter- and intra-lingual semantic comparisons; the implementation of full-scale integration between BTW and HTE will have significant implications in the field of applied linguistics. The editors of the HTE have supported BTW's efforts to take full advantage of this capacity.

BTW makes use of the HTE in the following way. Each occurrence of a Sanskrit word in the BTW corpus is assigned to one or more of the 236,400 semantic categories of the HTE. This is possible because each category is labeled with a unique identifying number that locates it in a fine-grained conceptual taxonomy. BTW is thus potentially able to compare the semantic range of Sanskrit lemmata with that of any English word. By drawing on this pre-existing conceptual structure, BTW is able to chart all occurrences of Sanskrit words in our corpus into a structured semantic map. This allows the translator to explore the choices at the heart of the negotiation of meanings necessary for effective translation between languages with potential differences in semantic and conceptual configurations.

In its current, proof-of-concept version, BTW offers bilingual comparison for only a selected number of English words, which have been manually inserted into the database, a serious limitation in the context of translation work. The BTW team is now working toward full-scale integration with the HTE. The first step, already completed, is the development of a rudimentary system of semantic tracking that allows BTW team members to assign a semantic value (or range of values) to each occurrence of a Sanskrit word in our corpus. In the implementation phase of BTW, we will develop software for multilingual semantic mapping and tracking, developing a framework for the crossover between Sanskrit and English mappings. We plan to achieve this through the implementation of the following new features:

1. More complete integration with the HTE

BTW will soon be able to query the *Historical Thesaurus of English* from within BTW through an Application Program Interface (API). Users will be able to switch seamlessly from looking up the senses of Sanskrit words to searching for English "equivalents" that match the relevant semantic categories. The integration will also enable BTW to display the *name* of the semantic categories (presently only their numbers are visible.) For example, the semantic category that now appears as "03.08" will appear as "faith".

2. Bilingual search by word-sense

Once the HTE integration is fully implemented, users will be able to search by the sense of any lemma in BTW. By searching words by their senses, searching for the lemma's semantic categories and the concepts included in those categories, and by retrieving all the Sanskrit words linked to a specified meaning, the user will be able to access the words that express them (onomasiological search) with the same ease that the template currently leads the user from word to concepts (semasiological search). Eventually, this feature will be able to access derivatives, cognates and related lemmata (using *synonymy*, antonymy, holonymy or meronymy, as described above).

This search will be bidirectional. Translators will be able to retrieve all the Sanskrit lemmata and citations linked to a chosen semantic category, and, conversely, all the English words associated with the semantic spectrum of a Sanskrit lemma. This will make it easy to explore how a semantic category is expressed in particular words in our corpus (how a particular concept is *lexicalized*), as well as to investigate the possible rationale for different lexical choices in various texts.

Conversely, by querying the *Historical Thesaurus* via BTW, users will also be able to retrieve all the English words that match the semantic spectrum of the tracked Sanskrit word. Our software will indicate the percentage of the semantic overlap between the Sanskrit and its rendition, thus guiding the increasing number of translators who are non-native speakers of English in their lexical choices. This capability will help counter the tendency for translators to adopt the cognitive equivalents found in the most popular lexicographic resources as ready-made renditions for use in actual translations, despite the fact that such equivalents are neither suitable for, nor meant to be used in, such a way.

3. Data Visualization

To facilitate use of the semantic data contained in BTW, we are planning to develop a number of infographic tools. For example, BTW will graphically chart the semantic spectrum of a Sanskrit lemma

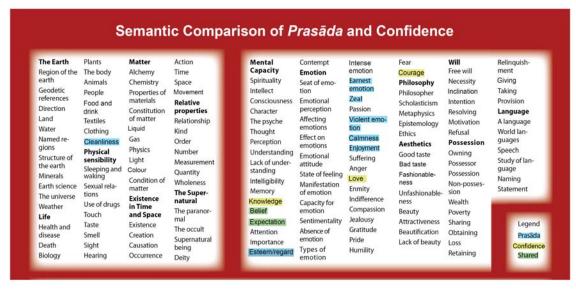


Figure 2

spectrum of a Sanskrit lemma onto the conceptual structure of the HTE and superimpose the graphic created in this way onto the equivalent graphic of any chosen English rendition or near-synonyms in Sanskrit [Figure 2]

It will also be possible to generate charts that compare the semantic spectra of near-synonyms and cognates within a single text, or in a certain genre [Figure 3]

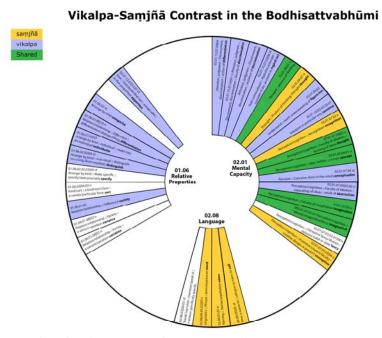


Figure 3: Vikalpa-Samjñā in the Bodhisattvabhūmi.

For translators and lexicologists interested in getting a broader picture of a lemma's semantic profile, or wishing to chart the lemma's position in the relevant semantic space relative to other Sanskrit words, BTW will generate semantic maps based on the entirety of its database. [Figure 4]

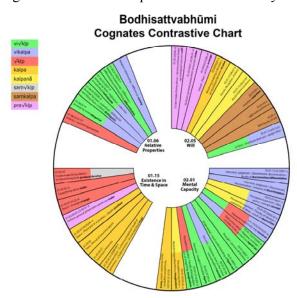


Figure 4: Contrastive chart of the semantic value of cognates in a single text

This aspect of the project will be a pioneering contribution to the application of data-visualization techniques to translation and historical semantics.

4. Tracking Meanings (the Semantic Tracker)

To further implement the workbench aspect of BTW, we plan to develop a suite of tools designed to help translators interpret and translate their own source texts through methods similar to those implemented in BTW itself. A specially adapted version of the BTW editor, known as the Semantic Tracker, will be made available to users, letting them select semantic categories from the HTE and assign them to chosen word citations. After tracking the word in the citations they have selected, users will be able to generate their own infographics that contrast the semantic spectrum of the word with that of a possible English equivalent, or with that of other tracked Sanskrit lemmata. Translation teams will be able to share this tracked data, facilitating the discussion and negotiation expected in contemporary interpretation and rendition practices.

BTW is aimed at translators of Buddhist Sanskrit texts, but its features, including the Semantic Tracker, can in principle be applied to any language and literature. To maximize our impact across the humanities, we are planning to test the viability of using the conceptual structure of the HTE as the common ground in the comparison of two linguistic universes (a method known as the tertium comparationis in crosslingual comparison). There are significant potential benefits for the field of ethno-linguistics. Of course, this ability to expand the application of BTW to the study of other languages and the comparison of cultural and linguistic webs of meaning implies that in the future BTW can expand to include a larger corpus of Sanskrit texts, as well as other canonical Buddhist languages.

5. BTW as a Tool and Model for Translators

As already noted, BTW was originally conceived as a tool to give greater access to the rich universe of meanings in Buddhist texts. For practical reasons, its scope so far has been limited to a relatively narrow corpus of Buddhist Sanskrit texts. Still, even this limited corpus has been chosen to reflect the various levels of language found in Sanskrit, a language with important literary and technical uses. One of the main challenges for the translator is finding a way to integrate these levels of language (e.g., natural, cultivated, consecrated, and technical). BTW is an especially powerful means to carry out this integration. It can serve to remind experienced translators of the web of meaning they must examine, while leading inexperienced translators to exploring various webs of meaning, giving equal attention to source and target languages and the possibility or impossibility of mapping one onto the other. By serving as a bidirectional tool with both onomasiological and semasiological features, BTW facilitates the cognitive process of translation by allowing quick access to contextual usage, etymology, synonymy and antonymy, and other semantic relations. Eventually BTW should help model similar research with other Buddhist languages.

BTW also assists users in their search for semantic ranges and contrasts, in the exploration of the effects of convergence and divergence on translation choice, and in diagraming semantic prototypes. It makes it easier to visualize the relationship between source and target languages offering a solid grounding in the way the two languages can or cannot map on each other. As the database expands, BTW should become an indispensable tool that assists and illuminates the tasks of translators, lexicologists and scholars of Buddhism, with long-term benefit to the non-scholarly public eager to have more accessible translations of Buddhist texts.

BTW has already been used as a pedagogical tool to highlight the complexity of the cognitive process of translation. Its infographics have been used to demonstrate the range of translation choice that can be justified scientifically, and have made it possible to test some of these choices in contexts from different corpora. Co-director Luis Gómez has used the proof-of-concept version to demonstrate to graduate students working with other Buddhist texts a wider range of best practices in semantic mapping and translation.

Co-Director Ligeia Lugli has traveled lectured to a wide range of academic audiences to speak about BTW and illustrate how she is already applying it in her research. Her presentations have been well received at major centers of learning such as the University of Hamburg, University of Oxford, King's College, London, and the University of Venice Ca' Foscari (see Appendix 1).

The Buddhist Translator's Workbench can be accessed at http://btw.mangalamresearch.org. A video demonstrating the main features of BTW can be accessed at the same location. The BTW Users Manual is found below at Appendix 2.

Appendix 1: List of Presentations

- 3/8/2013 'BTW: Challenges and Opportunities for Translation-Oriented Buddhist Lexicography in the Digital Era'. Paper presented at the conference 'Advances in Digital Humanities for Buddhist Studies', hosted by the Mangalam Research Center for Buddhist Languages, Berkeley.
- 9/5/2014 'Getting over Interlingual Equivalence: Semantic and Lexical Fields for Bilingual Sanskrit Lexicography'. Paper presented at Lady Margaret Hall, University of Oxford.
- 9/5/2014 'Thinking Like a Translator'. Paper presented at Lady Margaret Hall, University of Oxford.
- 3/20/2015 'A Meaningful Web: Semantic Mapping for Translation and Conceptual History through the Buddhist Translators Workbench'. Paper presented at King's College, London.
- 4/20/2015 'Data-visualization for the Study of Sanskrit Lexical Semantics'. Paper presented at the University of Venice Ca' Foscari.
- 6/2015 'Beyond Equivalence: Semantic Mapping for Intercultural Bilingual Lexicography'. Paper to be presented at 9th International Conference of the Asian Association of Lexicography, Hong Kong Polytechnic.
- 6/2015 'The Buddhist Translators' Workbench and its Applications for the Study of Buddhism'.
 Paper to be presented at 16th World Sanskrit Conference, Silpakorn University, Bangkok.

Appendix 2



Buddhist Translators Workbench

User Manual

Mangalam Research Center for Buddhist Languages

Contents

Quick Introduction to BTW	
Entry Structure	
Overview	2
Sense Discrimination.	
English Equivalents	2
Sense Descriptions	
Citations	
Contrastive Sections.	
Antonyms	
Cognates	
Conceptual Proximates	
Historico-semantical data	
Future Developments	
Thesaurus Integration	4
Onomasiological Search	
Data-visualization	4
Semantic Tracker.	
BTW Examples.	6–14

Quick Introduction to BTW

The Buddhist Translators' Workbench (BTW) is a lexical tool for translators of Sanskrit Buddhist texts into English. At this stage, BTW consists of a small repository of lexical entries that serves as 'proof of concept' for a new model of bilingual lexicography designed to assist the translation of ancient Buddhist terminology. Our entries focus on words whose meaning is not easy to discern in the source language and is difficult to translate in English.

BTW treats each lemma as part of a semantic cluster of cognates and quasi-synonymic expressions. Users are invited to move away from the lists of equivalents and scholastic definitions traditionally used as touchstones in the translation of Buddhist texts and to conceive of the Buddhist lexicon as part of a network of significations. BTW encourages translators to conceptualize Buddhist terms as part of meaningful communicative fragments and to favor integral meaning over deduced meanings or mechanical word-for-word renditions. To achieve this goal, BTW integrates the features of good monolingual semasiological dictionaries with an innovative suite of bilingual onomasiological functions based on the conceptual structure of the Historical Thesaurus of English (http://historicalthesaurus.arts.gla.ac.uk/). To view our sample entries, please select 'Lexicography' in the Home menu and choose 'search'.

Entry Structure

BTW's entries comprise three major sections: (1) an overview of the lemma, (2) a sense discrimination unit that provides a structured analysis of its senses; and (3) a historical semantic paragraph containing etymological notes.

Overview

This section offers an overview of the semantic, syntactical and collocational profile of the lemma. It presents its denotative range and broadly discusses the possible semantic shifts that led to the polysemy attested in the BTW corpus. To facilitate comparison with possible English renditions, this paragraph also includes a brief introduction to the semantic categories linked to the lemma. Translators are encouraged to use this information to search the *Historical Thesaurus of English* for English words indexed to the relevant categories. In addition to strictly semantic data, the overview discusses the semantic prosody and connotational value of the lemma, as well as any notable syntactic frame in which it might appear. Finally, the overview mentions any notable collocational pattern that might affect the meaning of the lemma or influence its use over near-synonyms in certain phrases and contexts. It must be noted that, due to the small size of corpus used, collocational patterns are limited to easily identifiable strings, mostly of formulaic nature, and do not result from statistical analysis of the lemma's co-text.

Sense discrimination

This section lists the senses and uses of the lemma that can be identified in our corpus, and provides a variety of ways to explore them. In a typical entry, the following information is provided for each sense:

- a. **English Equivalents**: For each sense of the lemma, BTW lists the most relevant cognitive equivalents in English. The semantic categories to which the HT assigns these equivalents can be viewed by clicking on the "semantic fields" tab below the English words.
- b. **Sense description:** BTW provides a short description of each sense. This is split in to two or more sub-senses when semantic nuances or distinctive syntactical and collocational patterns call for fine-grained distinctions within the main sense.
- c. **Citations:** each sense or subsense is exemplified by Sanskrit citations. BTW provides translations of the main citations for ease of perusal. In both the citations and their translations the lemma appears in green. Readers who wish to see more citations will find more Sanskrit citations (without ttranslation) by clicking on the "more citations" tab.

A citation is usually accompanied by a list of the semantic categories that pertain to the lemma in that citation. Passages where the sense of the lemma is underspecified, or cannot otherwise be assigned to any semantic field with a reasonable degree of certainty, are not accompanied by semantic categories.

- d. **Contrastive section:** to illustrate the uses of the lemma in relation to other words, BTW provides a selection of citations featuring the lemma together with semantically or etymologically related words.
 - The **antonyms** section contains citations in which the lemma is contrasted with lexical items of opposite or quasi-opposite meaning (e.g., prasāda-aprasāda, but also prasāda-pratigha).
 - The **cognates** section includes citations illustrating how the lemma compares with words derived from the same root and semantically close to it (prasāda, prasanna, abhipra√sad).
 - The **conceptual proximates** section comprises citations that highlight how the lemma compares to its near-synonyms or, more generally, to words that are linked to the lemma by tight semantic or collocational relations (e.g. śraddhā, prasāda, adhimukti, avakalpanā).

Translations and lists of semantic categories accompany all citations in the contrastive sections. In the citations, antonyms are marked in purple, cognates in orange and conceptual proximates in red. Readers can access the entries dedicated to the cognates and conceptual proximates by clicking on the headword on top of the relevant citation. BTW is a work in progress, and, while it seeks to provide entries for all the cognates and conceptual proximate listed, some entries may not be available just yet.

Historico-semantical data

This unit contains a brief account of the etymology of the lemma. Whenever possible, it connects the semantic shifts that the lemma (or its root) underwent over time with the senses discussed in the entry. The etymological information provided in the section is based upon published literature in the field, and does not rest on primary research on the part of the BTW team.

Our main sources are:

- Buck C.D. 1949. A dictionary of selected synonym in the principal Indo-European Languages. Chicago: University of Chicago.
- Mayrhofer M. 1956. *Kurzgefasstes Etymologisches WB des Altindischen*. Heidelberg: Carl Winter.
- Pokorny J. 1959. *Indogermanisches etymologisches Wörterbuch*. Bern: Francke.
- Rix H. 2001. *Lexikon der indogermanischen Verben*. Wiesbaden: Ludwig Reichert Verlag.
- Reference to other publications is provided in the relevant entries.

Future Developments

BTW will continue to expand. In addition to enriching our database with new entries, we are working on a number of new features. These include integration with the Historical Thesaurus of English, onomasiological search, data-visualization tools, and a semantic tracker application.

Thesaurus integration

BTW will soon be able to query the Historical Thesaurus of English through an API. This will facilitate simultaneous perusal of BTW and the Historical Thesaurus of English. Translators will be able to switch seamlessly between looking up Sanskrit words in BTW and searching for semantically similar English equivalents in the Historical Thesaurus. The integration will also enable BTW to display the name of the semantic categories instead of their number (e.g. 'faith' instead of '03.08'), so that the lists of semantic categories in our entries will be easier to read and use.

Onomasiological search

Once the Thesaurus integration is implemented, BTW will allow to search by semantic categories (onomasiological search). Translators will be able to retrieve and compare all the lemmata and citations linked to a chosen semantic category. This will make it easy to explore how a semantic category is lexicalized in our corpus, as well as to investigate the possible rationale for different lexical choices in various Sanskrit texts.

Data-visualization

To facilitate perusal of the semantic data contained in BTW, we are planning to develop a number of infographic tools:

- BTW will chart the semantic spectrum of a lemma on the conceptual structure of the Historical Thesaurus and compare it with any chosen English rendition or with near-synonyms in Sanskrit.
- It will also be possible to generate charts that compare the semantic spectra of near-synonyms and cognates in a single text, or in a certain genre.
- Conversely, BTW will allow translators to contrast the uses of a lemma in different texts.
- For translators interested in a broader picture of a lemma's semantic profile and of the lemma's position in the semantic space relative to other Sanskrit words, BTW will generate semantic maps based on the entirety of its database.

For translators interested in a broader picture of a lemma's semantic profile, or wishing to chart the lemma's position in the semantic space relative to other Sanskrit words, BTW will generate semantic maps based on the entirety of its database.

Semantic tracker

The workbench aspect of BTW includes a suite of tools designed to help translators both interpret and translate their source texts. BTW will allow them to track the semantic value of any Sanskrit word in any text, and assist their choice of a suitable English rendition. To this end, an adapted version of the current BTW editor will be made available to translators. The adapted editor will help users to select semantic categories from the Historical Thesaurus of English and to assign them to a chosen word-citation. After tracking the word in all the desired citations, translators will be able to generate infographics that contrast the semantic spectrum of the word with that of a possible English equivalent, or with that of other tracked Sanskrit lemmata. It will be possible to share the tracked data within translation teams to facilitate agreement on interpretation and rendition. User-contributed semantic charts will also be available to the BTW community of users, with the warning that their content has not been peer-reviewed.

BTW will also search the Historical Thesaurus of English and retrieve English words that match the semantic spectrum of the tracked Sanskrit word. The software will indicate the percentage of the semantic overlap between the Sanskrit and its rendition, thus guiding the increasing number of non-native English translators in their lexical choices.

BTW is aimed at translators of Buddhist Sanskrit texts, but the semantic tracker can theoretically be applied to any language and literature. With a view to maximize our impact across the Humanities, we are planning to test the viability of using the conceptual structure of the Historical Thesaurus of English as tertium comparationis for comparing the semantic spectrum of words across different languages and cultures.

We are prepared to equip BTW with additional tools and features based on the feedback and suggestions we receive from our colleagues in the fields of Translation, Lexicography and Buddhist Studies. We are currently presenting BTW in as many academic venues as possible to ensure we create a useful and theoretically-sound resource that will contribute to the advancement of the Humanities in the digital age.

SENSE DISCRIMINATION

A.

conceive, distinguish

▼ semantic fields

conceive

01.02.02.03.16.05; 02.01.07.04; 02.01.07.04|03

distinguish

01.09|02; 01.11.01.05|05; 01.16.01.06|01; 01.16.02.02|04; 01.16.02.02|05; 02.02.07.05; 02.02.07.05|01; 02.02.09.05.02; 03.09.04.02

1. to single out, to process variety by differentiating, identifying, specifying or choosing

> semantic fields

Abhidharmakośabhāṣyam, (Pradhan, 1975) 467: iha caivaṃ vikalpyate "anātmanyātmeti saṃjñāviparyāsaścittaviparyāso dṛṣṭiviparyāsa" iti / anātmanyātmeti viparyāso na tvātmani

and so here [, in the sūtra,] it is specified that seeing a self where there is no self is a wrong notion, wrong thought and wrong view.

> semantic fields

Mūlamadhyamakakārikā, (Ye, 2011) 44: anya eva punar gantā gater yadi vikalpyate | gamanam syād rte gantur gantā syād gamanād rte ||20||

If, instead, we differentiate the goer from the act going, we would have the act of going without the goer and the goer without the act of going.

> semantic fields

Saundarananda, (Johnston, 1928) 104: tasmāt sarveşu bhūteşu maitrīm kārunyam eva ca / na vyāpādam vihimsām vā vikalpayitum arhasi // Saund_15.17 //

Hence, you should choose [to cultivate] loving kindness and compassion towards all beings, not malice and violence.

more citations

OVERVIEW

SENSE DISCRIMINATION

A. conceive, distinguish

- to single out, to process variety by differentiating, identifying, specifying or choosing
- 2. to conceive, form in the mind. Often collocated with and not clearly distinguishable from Jklp
- B. offer

1. to offer robes, only in religious context

HISTORICO-SEMANTICAL DATA

etymology



▼ antonyms

antonym 1: nirvikalpa antonym 2: sahaja antonym 1: nirvikalpa

> semantic fields

Tathāgatācintyaguhya, (Lugli, forthcoming) 5r: satatasamāhito hi śāntamate tathāgataḥ na tathāgata ucchvasati vā praśvasati vā vitarkayati vā vicārayati vā na cāsatsu vitarkkavicāreṣu vā[6]ṅ niścarati tac ca tathāgato na vitarkkayati na vicārayati na kalpayati | na vikalpayati na bhāṣayati nodāharati na pravyāharati [...] tatra ca tathāgato nirvikalpa upekṣakaḥ |

In fact, Śāntamati, the Tathāgata is equipoised in perpetual contemplation. The Tathāgata does not inhale, nor does he exhale; he does neither think nor analyse, and in absence of thought and analysis no speech is produced. And the Tathāgata does not think, analyse, form ideas, make conceptual distinctions, speak, utter, or verbalize. [...] Again, the Tathāgata makes no distinctions, he is indifferent.

cognate 2: kalpanā

semantic fields

Bhavasaṃkrānti, (Bhikṣuṇī Vīnitā, 2010) 442: asadbhūtā hi amī dharmāḥ kalpanataḥ samutthitāḥ | sāpy atra kalpanā nāsti yayā śūnyaṃ vikalpyate ||

These factors are unreal, they originate from ideas, and even the idea through which what is empty is conceptually construed does not exits.

▼ conceptual proximates

conceptual proximate 1: samjñin conceptual proximate 2: pra√pañc conceptual proximate 1: samjñin

semantic fields

Bodhisattvabhūmi, (Wogihara, 1930) 241-42: yatpunaḥ dharmamātrasamjñī dharmamātre sattvopacāram āśayataḥ saṃpaśyaṃs tām eva maitrīṃ bhāvayati / iyamasya dharmālambanā maitrī veditavyā / yat punar dharmān apy avikalpayaṃs tām eva maitrīṃ bhāvayati /

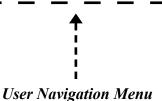
The benevolence brought about while meditating on the dharmas is when the bodhisattva conceives only the dharmas, and reflects on the dharmas with the intent of serving sentient beings. The benevolence without any meditative support is when he generates benevolence without forming any notion, not even that of dharmas.

OVERVIEW SENSE DISCRIMINATION A. conceive, distinguish 1. to single out, to process variety by differentiating, identifying, specifying or choosing 2. to conceive, form in the mind. Often collocated with and not clearly distinguishable from √klp B. offer 1. to offer robes, only in

 to offer robes, only ir religious context

HISTORICO-SEMANTICAL DATA

etymology



RETURN TO GUIDE

HTOED Distribution of the Semantic Range of "Prasada"

Contempt

Emotion

tion

Seat of emo-

Intense

emotion

Earnest

emotion

Passion

Violent emo-

Calmness

Enjoyment

Suffering

Anger

Love

Enmity

Indifference

Compassion

Gratitude

Humility

Pride

Zeal

tion

The Earth Region of the earth Geodetic references Direction Land Water Named regions Structure of the earth Minerals Earth science The universe Weather Life Health and disease Death

Biology

Society

Plants Matter The body Alchemy **Animals** Chemistry Properties of People Food and materials Constitution drink of matter Textiles Liquid Clothing Gas Cleanliness **Physics** Physical sensibility Light Sleeping and Colour Condition of Sexual relamatter tions Existence Use of drugs in Time

Action Time Space Movement Relative properties Relationship Kind Order Number Measurement **Ouantity** Wholeness The Supernatural The paranorand Space mal Existence The occult Creation Supernatural Causation beina Occurrence Deity

Mental Capacity Spirituality Intellect Consciousness Character The psyche Thought Perception Understanding Lack of understanding Intelligibility Memory Knowledge Belief Expectation Attention Importance

Esteem/regard

Emotional perception Affecting emotions Effect on emotions **Emotional** attitude State of feeling Manifestation of emotion Capacity for emotion Jealousy Sentimentality Absence of Types of emotion

Fear Courage Philosophy Philosopher Scholasticism Metaphysics Epistemology **Ethics Aesthetics** Good taste Bad taste Fashionableness Unfashionableness Beauty Attractiveness Beautification Lack of beauty

Will

Free will

Necessity

Inclination

Intention

Resolving

Motivation

Possession

Refusal

Owning

Possessor

Possession

sion

Wealth

Poverty

Sharing

Loss

Obtaining

Retaining

Non-posses-

Relinquishment Giving Taking Provision Language A language World languages Speech Study of language Naming Statement Malediction

Relationship Study of society Social customs & values Communication Social attitudes Social class Discord **Dwelling**

Inhabing a

porarily

type of place

Inhabiting tem-

Providing with dwelling place Removing from dwelling place Furnishing with inhabitants Inhabitant Inhabited place Armed Hostility War Armed encounter Victory in arm

Touch

Taste

Smell

Sight

Hearing

Defeat Attack Defence Military operation Training Military organization Military life Military power Military forces Armed band Warring party Fightier

Military equipment Hostilities Peace Authority Power Command Control Strictness Lack of strictness Rule Office Exercise of

authority Subjection to authority Lack of subjection Lack of authority Punishment Law Morality Duty **Propriety** Rightness

Virtue

Moral evil

Education Upbringing Teaching Learning Member of university Educational administration Place of education Theories of education

Faith Instance of devotion Sect Church Worship Religious Artefacts Communication Expression Manifestation Representation Indication

Information Means of transport Record Railway travel Writing Air/space travel Printing Occupation Reading Work Book A position Journalism Function Broadcasting Following an Corresponoccupation dence Business Telecommuni-Industry cation Study of work Travel Transport

Condition of not working Worker Workplace Equipment for work Materials Trade Leisure Amusement Social event The arts Sport Dance

Semantic Comparison of Prasada and Confidence

The Earth Matter Action Mental Contempt Will Relinguish-Intense Fear Capacity ment Region of the The body emotion Free will Alchemy Time **Emotion** Courage earth Spirituality Earnest Giving Animals Chemistry Necessity Space Seat of emo-Philosophy emotion Geodetic Intellect Taking Inclination tion People Properties of Movement Philosopher references Zeal materials Consciousness **Emotional** Provision Intention Food and Relative Scholasticism Direction Passion drink Constitution properties Character perception Resolving Language Metaphysics Land of matter Affecting Violent emo-**Textiles** Relationship The psyche Motivation A language Epistemology Liquid emotions Water Clothing Kind World lan-Thought Refusal **Ethics** Effect on Calmness Named re-Gas guages Cleanliness Order Perception **Possession Aesthetics** emotions gions **Enjoyment Physics** Speech **Physical** Number Understanding Owning Good taste **Emotional** Structure of Suffering sensibility Light Study of lan-Measurement Lack of under-Possessor Bad taste attitude the earth Anger Sleeping and Colour standing guage Quantity State of feeling Fashionable-Possession Minerals waking Love Naming Condition of Intelligibility Wholeness ness Manifestation Non-posses-Sexual rela-Earth science matter **Enmity** Statement The Super-Memory sion of emotion Unfashionabletions The universe Existence Indifference natural Knowledge Wealth Capacity for Use of drugs Weather in Time Compassion The paranor-Belief emotion Beauty Poverty Touch and Space mal Jealousy Sentimentality Attractiveness Expectation Sharing Taste Existence Legend Health and The occult Gratitude Attention Absence of Beautification Obtaining disease Smell Creation Prasāda Supernatural emotion Pride Importance Lack of beauty Loss Death Sight Causation Confidence being Types of Humility Esteem/regard Retaining Shared Biology Hearing Occurrence Deity emotion Society Providing with Defeat Military authority **Education** Faith Information Means of Condition of Relationship dwelling place equipment transport not working Attack Subjection to Upbringing Instance of Record Removing from Hostilities authority devotion Railway travel Worker Study of society Defence Teaching Writing dwelling place Social customs Military Peace Lack of subjec-Sect Air/space travel Workplace Learning Printing Furnishing with & values operation Authority Church Occupation Equipment Member of Reading inhabitants Lack of authority Communication Work for work Training Power university Worship Book Inhabitant Punishment Materials Social attitudes A position Military Religious Command Educational Journalism Inhabited place Social class organization Law administration Artefacts **Function** Trade Control Broadcasting

Place of

education

Theories of

education

Communica-

Manifestation

Representation

Expression

Indication

Correspon-

Telecommuni-

dence

cation

Travel

Transport

Morality

Propriety

Rightness

Moral evil

Virtue

Duty

Armed

Armed

encounter

Victory in arm

Hostility

Discord

porarily

Dwelling

Inhabing a

type of place

Inhabiting tem-

Military life

Military power

Military forces

Armed band

Warring party

Fightier

Strictness

ness

Rule

Office

Exercise of

Lack of strict-

RETURN TO GUIDE

Leisure

Amusement

Social event

The arts

Sport

Dance

Following an

Study of work

occupation

Business

Industry

Semantic Comparison of Prasāda and Śraddhā

The Earth Will **Plants** Matter Action Mental Contempt Fear Relinquish-Intense Capacity ment Region of the The body Alchemy Time emotion Free will **Emotion** Courage Spirituality Earnest Giving Animals Chemistry Philosophy Necessity Space Seat of emoemotion Geodetic Intellect **Taking** People Properties of Movement tion Inclination Philosopher references Zeal Consciousness **Emotional** Provision Food and Relative Scholasticism Intention Direction Passion perception Constitution properties Character Language Resolvina Metaphysics Violent emo-Land of matter Affecting **Textiles** Relationship The psyche Motivation A language **Epistemology** emotions Water Liquid tion Clothina Kind Thought World lan-Refusal **Ethics** Effect on Calmness Named re-Gas guages Cleanliness Order Perception **Possession Aesthetics** emotions aions **Enjoyment Physics** Speech **Physical** Number Understanding Owning Good taste **Emotional** Structure of Suffering sensibility Light Study of lan-Measurement Lack of under-Bad taste Possessor attitude the earth Sleeping and Anger guage Colour standing Quantity State of feeling Fashionable-Possession Minerals Naming Condition of Love Intelligibility Wholeness Manifestation ness Non-posses-Earth science Sexual relamatter **Enmity** Statement The Super-Memory sion of emotion Unfashionable-The universe Existence Indifference natural Knowledge ness Wealth Capacity for Use of drugs Weather in Time emotion Compassion The paranor-**Belief** Beauty Poverty Touch and Space Life mal Jealousy Sentimentality Expectation Attractiveness Sharing Legend Taste Existence Health and The occult Gratitude Absence of Attention Beautification Obtaining Prasāda disease Smell Creation Supernatural emotion Pride Importance Lack of beauty Loss Death Sight Śraddhā Causation being Types of Humility Esteem/regard Retaining Biology Shared Hearing Occurrence Deity emotion Society Providing with Defeat Military authority **Education** Faith Information Means of Condition of dwelling place equipment transport not working Relationship Subjection to Instance of Record Attack Upbringing Hostilities Study of society Removing from authority devotion Railway travel Worker Defence Writing Teaching dwelling place Social customs Peace Lack of subjec-Sect Air/space travel Workplace Military Learning Printing Furnishing with tion & values Authority Church Occupation Equipment operation Member of Reading inhabitants Lack of authority for work Communication Work Training Worship Power university Book Inhabitant **Punishment** Social attitudes A position Materials Military Command Educational Religious Journalism

administration

Place of

education

Theories of

education

Artefacts

tion

Communica-

Manifestation

Representation

Expression

Indication

Law

Duty

Morality

Propriety

Rightness

Moral evil

Virtue

Inhabited place

Armed

War

Armed

encounter

Victory in arm

Hostility

organization

Military power

Military forces

Armed band

Warring party

Fightier

Military life

Control

ness

Rule

Office

Exercise of

Strictness

Lack of strict-

Social class

Discord

porarily

Dwelling

Inhabing a

type of place

Inhabiting tem-

RETURN TO GUIDE

Trade

Leisure

The arts

Sport

Dance

Amusement

Social event

Function

Following an

Study of work

occupation

Business

Industry

Broadcasting

Telecommuni-

Correspon-

dence

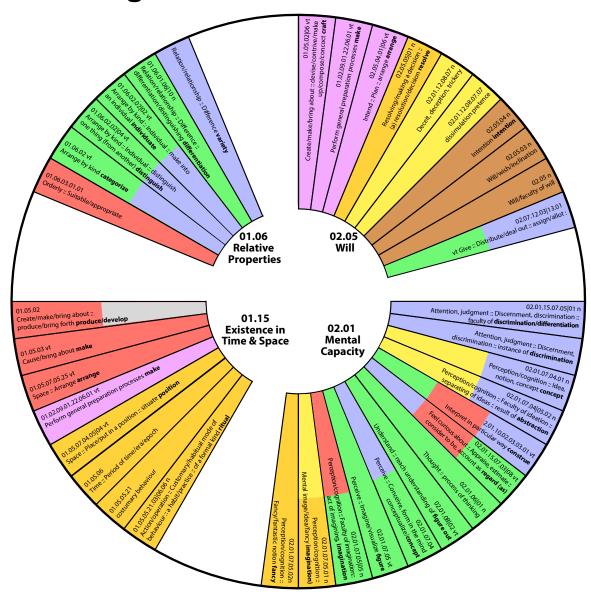
cation

Travel

Transport

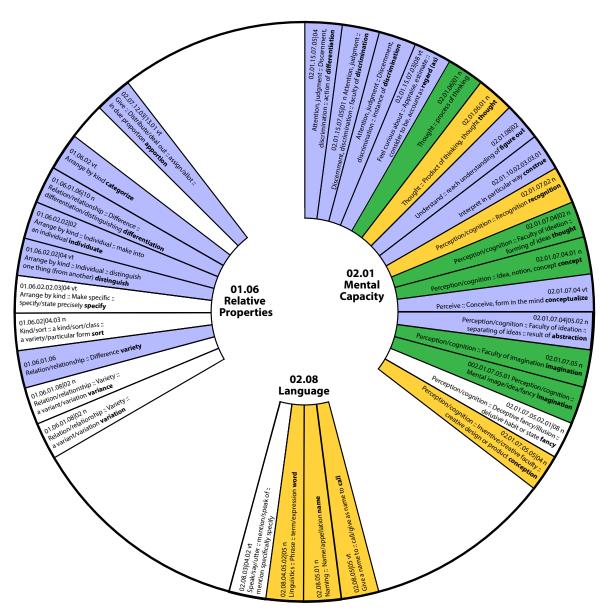
Bodhisattvabhūmi Cognates Contrastive Chart

vi√kļp
vikalpa
√kļp
kalpa
kalpanā
saṃ√kļp
saṃkalpa
pra√kļp



Vikalpa-Samjñā Contrast in the Bodhisattvabhūmi

saṃjñā vikalpa Shared



Use of Vikalpa in Abhidharmakośa & Bodhisattvabhūmi

