



Juxtaposing Chinese and Western Representational Principles: New Design Methods for Information Graphics in the Field of Intercultural Communication

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Abstract: This article examines knowledge graphics from the Chinese and Western cultures, which, in the course of globalization, are being increasingly loosened from their original cultural references. If it is assumed that at most pictographs, but not complex graphics, are universally understandable, "visual translations" must be developed for knowledge graphics if we are to transfer them into another cultural reference system. Using the example of a widespread graphic form—the tree diagram—the research presented here will explain specific representational principles and the cultural concepts on which they are based. Here, on the visible surface, formal correlations can indeed be observed. However, if we ask what conceptual structures the graphics are based on, we encounter two fundamentally different representational systems. The article focuses on the question of which design methods are capable of making the diverse relationships between these representational systems comprehensible.

Keywords: cultural reference system, knowledge graphics, visual translation,

1. Introduction: Translating Culture

How can "spaces of translation" (Bhabha, 1994, p. 25) be designed using a network of relationships between Chinese and Western representational principles? Spaces of translation are *open spaces*; they require that cultural differences be continually discussed anew. How does the viewer involve him or herself in this open process of discovery? The proposed design methods in the presented research respond to the growing cultural differences found in contemporary forms of communication. The aim is to practice a



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sovereign interaction with visual diversity and to thereby counteract the tendency of globalization to level differences.

In the design context, the term "translation" is applied in multiple ways when it comes to highlighting a content-related, formal, or medial shift from an "original" (see Baur, 2010; Dressen, 2009). In cultural studies, the term "cultural translation" (Buden & Nowotny, 2008, p. 14) is used, referring to two "contradictory paradigms of postmodern theory . . . : multiculturalism and deconstruction" (Buden & Nowotny, 2008, p. 14).

The multicultural perspective is based on the concept of the "uniqueness and originality of cultural formations" (Buden & Nowotny, 2008, p. 14), which, accordingly, are defined in terms of their culture rather than social or political commonalities. It sees the translation as an "inter-cultural translation." The deconstructive perspective contradicts the concept of multiculturalism in the idea that "every identity has its origin in some sort of a prescribed essence"; it assumes that "identity is culturally constructed from the very outset" (Buden & Nowotny, 2008, p. 14). Homi Bhabha, one of the leading exponents of deconstruction, proposes instead the "concept of a so-called third space", "a space for hybridity," and thereby vehemently challenges the notion of "unified, original, and authentic identities" (Buden & Nowotny, 2008, pp. 20, 21). The basic idea behind the concept of hybridity is to comprehend difference as a constant renegotiation of boundaries. The spaces that emerge in such processes are "spaces of translation." Which design methods allow such spaces of translation to be visualized? How can they remain open for a permanent renegotiation of differences?

Visual representations are always linked to specific aspects of a cultural reference system and therefore cannot be understood as "universal" (Goodman, 1997, p. 45). These aspects include the construction and functionality of the graphics as well as fundamental culturespecific conceptions, such as the continuity and homogeneity of Western diagrams, which is expressed, for instance, in a continuous chronological grid. In the present research context, "translating visually" means making the original graphics' cultural concepts (that are not directly readable) visible in new drawings. In addition, 1) essential aspects of the traditional Chinese reference system were supplemented in the new drawing (see e.g., Figure 1). 2) To further highlight the essential aspects of the reference system, small-format schemata were developed and inserted above each of the individual illustrations. 3) Individual contemporary Chinese graphics were "translated back" into the traditional Chinese reference system, whereby contemporary stylistic means (e.g., color scheme) were retained. 4) Textual content was added to a selection of images from the 三才圖會 Sancai Tuhui, such that the specific orientation (rotation) and localization of the characters was adopted. 5) A few examples were left in their original form and supported in particular the juxtaposition of aspects from the Chinese and Western reference systems.

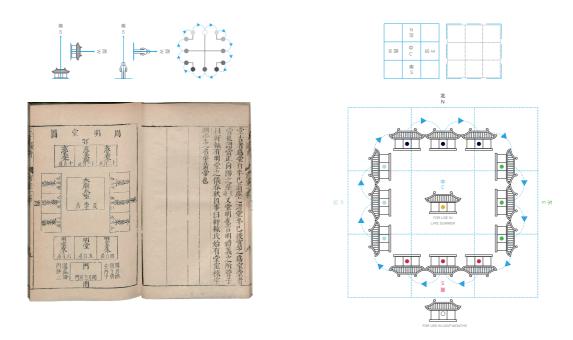


Figure 1 This is an example of the visual translation of the depiction of the 明堂 Mingtang (Hall of Clarity). The newly drawn info graphic shows parts of the reference system, namely, the five cardinal directions and the cyclical motion [of the emperor] among the twelve palaces, or months.

The redesign of the graphics was necessary to be able to compare Chinese and Western representation principles and to recognize and understand the substantial difference of their conceptual structure.

Most of the traditional Chinese representations examined here derive from the encyclopedia 三才圖會 Sancai Tuhui ("Collected Illustrations of the Three Realms"), a twelve-thousand-page trove of knowledge from the Ming dynasty (1368–1644). Other publications were also consulted, such as the 圖書編 Tushu Bian ("Compendium of Diagrams," 1623). For the juxtaposition with the traditional Chinese diagrams we chose a selection of the most diverse contemporary Chinese and Western diagrams offering both thematic and formal points for comparison.

2. Map of Correspondences

A "map of correspondences" was developed for juxtaposing the traditional Chinese and the contemporary Western reference systems. Here, we focused on the following core question: How can traditional Chinese representational principles be related to contemporary Western ones so that the definition of individual aspects of the reference frame as well as the dynamics of their interconnections are expressed?

The vertical columns on the right half of the map of correspondences feature traditional Chinese representational principles from the Ming dynasty. The vertical columns on the left half show representations from the contemporary Western reference system (see Figure 2).

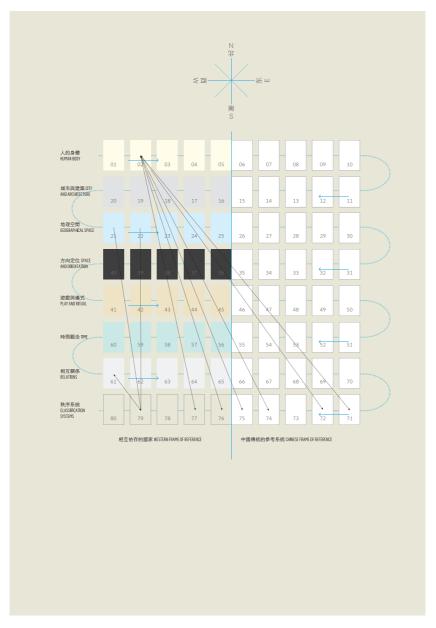


Figure 2 Map of correspondences

Eight subjects are consecutively identified in the horizontal rows of the map of correspondences: 1. human body, 2. city and architecture, 3. geographical space, 4. space and orientation, 5. play and ritual, 6. time, 7. relations, and 8. classification systems. These topics are derived from the subject areas addressed in the 三才圖會 *Sancai Tuhui*. The order of their appearance was changed, however, such that the map now starts with the subject "man."

Through their organization in a map, the subject areas and tendencies can be registered at a glance; references and interconnections between the various levels are expressed more clearly and new spaces for interaction emerge. In the text flow of the published research, this map is "processed" in a linear fashion such that the horizontal rows are read alternately left to right and then right to left. This way, the reader does not fall so easily into a fixed, overriding standpoint, nor always begin on the left (as in the West) or on the right (as in China).

To emphasize particular aspects of the cultural reference systems, a schematic version of them was created for each representation. In small format, these schemata are placed above the individual illustrations and thus serve as a visual guide for the references between the aspects of the respective reference frames.

The traditional and contemporary examples are also clearly differentiated in terms of design aspects. For the traditional Chinese examples, the colours black and blue (for highlighting) are used, along with the traditional Chinese five colours. For the contemporary examples, a broader color spectrum and a coloured background are used.

In all areas of the map, various design forms are employed: (annotated) reproductions, visual translations, pictographic elements, and model-like representations. Different varieties of interconnecting text and image were developed in which individual, word-like components of the graphic are integrated into the image description, or text and image are completely interwoven, as in a "charticle." The interaction between image and writing is further increased due to the affinity between the pictorial quality of the graphic elements and that of the Chinese characters.

3. Thematic Constellations (Relationship Networks, Force Fields, Clouds)

The openness of "spaces of translation" can be visualized by the fact that comparisons can be realized as "networks of references" rather than as either fixed pairs (e.g. here, China/the West) or as a closed system. This openness also results from the polyvalence of the images, because an image seldom shows just one single aspect: "The image has no difficulty in bringing several, even contradictory attributions into play simultaneously: a sheer absurdity

for the statement—I see the man as Giorgio, as a painter, as a living person, as painted or petrified sculpture. The various aspects, the divergent seeing 'as,' converges in the gazing at the person" (Boehm, 2003, p. 196). Even though this extreme versatility refers in particular to images of art, and knowledge graphics tend to strive for greater unambiguousness, the majority of depictions in this research can be examined and described from different angles. This applies, for instance, to the diverse content exhibited by the knowledge graphic and to the representational principles it makes use of. But it also applies to the conceptual structures underlying the representational principles and to the various aspects of the visual translation in the graphics.

The knowledge graphic presents these different aspects simultaneously. In the description of the image, however, oftentimes only one single aspect is addressed in concrete terms. The graphic also appears only once, although, due to its polyvalence, it ought to be included in several places. In a fixed, systematic arrangement, this sort of multiple classification would not be allowed (see Michel, 1999, n.p.).

Dynamic organizational principles, like those depicted in the map of correspondences, allow for the formation of loose (open) constellations that can be repeatedly repositioned, depending on the aspect in focus. This way, the other aspects not expressly being described remain latently linked with the representation and can be reactivated through renewed observation. The schemata shown above the graphics invite the viewer to produce further references (other constellations).

4. Tree Graphics

The functional principle of the thematic constellation will be illustrated using seven diagrams based on a "tree-like structure" (Cancik-Kirschbaum & Mahr, 2005, p. 98). The tree diagram is one of the most widespread graphic forms in the history of almost any culture, as illustrated in Manuel Lima's study *The book of trees: Visualizing branches of knowledge* (2014). Lima shows that tree graphics have been used for over eight hundred years in the most diverse areas of knowledge: "Due to its expressive quality and natural branching scheme, trees have also become important communication tools, illustrating a variety of topics such as family ties, moral values, systems of law, domains of science, biological species, hard disk drives, database schemas, and online discussions" (Lima, 2014). In the research presented here, tree diagrams appear as variations of a representational type that is present in both the Chinese and Western cultures but has different visual appearances. The diagrams appear as vertical and radial trees, and as a rectangular tree map. These initially describe the fundamental formal aspects, namely, the composition of the graphics indicating the reading direction: vertical, from bottom to top; radially, from the center outward; or even diagonally, from upper left to lower right.

General considerations are shown in the function underlying all the variations of the diagram. The variations are fundamentally based on the principle of division, or branching,

by which a simple state is transposed into a complex one. Since this process is as elementary as counting, tree diagrams are found in all cultures.

Nonetheless—and now we turn our attention to the cultural reference systems—the same tree-like structure visualizes completely different cultural concepts. Traditional Chinese diagrams visualize qualitative correlations between elementary, opposing forces. These include, for instance, those between 陰 *Yin* and 陽 *Yang*, heaven and earth, light and dark, and good and bad. They are allocation ratios from which general structures can be read.

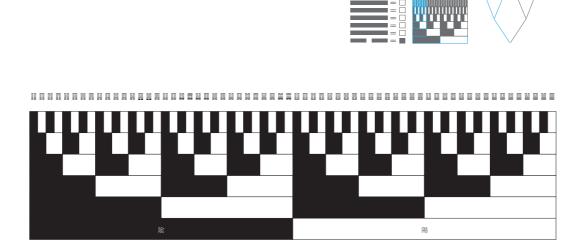


Figure 3 伏羲六十四卦次序 Fú Xī liù shí sì guà cì xù "Sequence of the 64 Hexagrams According to Fu Xi." The small-format schemata above each diagram highlight the essential aspects of the reference system and allow to compare the diagrams with each other.

This can be demonstrated at the diagram: "Sequence of the 64 Hexagrams According to Fu Xi." (Figure 3) This redrawing of an illustration from the 三才圖會 Sancai Tuhui shows the formation of the sixty-four hexagrams. In classical Chinese thought, the sixty-four hexagrams are understood as an abstract pattern of all the interconnections in this world. In the 易經 Yijing (Book of Changes, ca. 11th century BC), the sixty-four hexagrams are explained using concrete situations. The division into black and white shows the interplay between 陰Yin and 陽 Yang in its perpetual splitting from a whole into many parts. In ancient China, the

diagram was understood as a basic pattern of the world. All natural designs were seen from the perspective of this tree structure, including the formation of the world from a primordial chaos. Accordingly, the entirety is always kept in mind when considering the individual components. The redrawing shows a total of six horizontal bars; below them, a space is left empty, indicating the formation of the duality from the 太極 tàijí (Supreme Ultimate) and the 無極 wújí (Infinite). In the first bar begins the division into 陰Yin and 陽 Yang. In Chinese, these are referred to as the 兩儀 liǎng yí (two principles). In the ongoing partitioning, the eight trigrams are formed in the bottom three rows. Further division results in the sixty-four hexagrams in the sixth row. While the black-white bars are rendered horizontally, the hexagrams are read in vertical columns. Characters inserted above each column indicate the corresponding hexagram. Accordingly, the hexagram 乾 qián (the Creative) appears above the first column from the right; in each bar below it we can decipher a white area. This corresponds to six yang lines:

. The second hexagram from the right is 夬 guài (the Breakthrough); it features one black and five white fields, corresponding to a hexagram with one 陰 Yin and five 陽 Yang lines: \(\begin{align*}
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\exists \text{ columns is visually rather unclear. The advantage of this manner of representation is that it retains the complexity and openness of the whole.

While traditional Chinese diagrams visualize qualitative correlations between elementary, opposing forces, contemporary Western diagrams refer to empirical data. These are derived from objective measurements. Their representation in diagrams is presented as being proportional to reality. The most of contemporary Western diagrams are "proportionate," which means that one value follows from another through multiplication with a constant, real factor. To visualize relationships proportionally, distinctions were made in height and thickness, as well as in brightness (via brightness levels), form, and color (via varied shades).

This can be demonstrated at a Treemap (Figure 4). A tree map makes it possible to visualize hierarchical structures. Above all, it enables the visualization of size ratios, since the areas of its rectangles are proportional to the size of the data units. Shown here is the "Tree map of products exported by China in 2009," developed by the Harvard-MIT Observatory of Economic Complexity. The tree map was originally developed for representing the partitioning of a hard drive. In terms of its subdivisions, the two-dimensional structure is related to the Chinese diagram of the "Sequence of the 64 Hexagrams According to Fu Xi" (see Figure 3). Whereas the partitioning in the Chinese diagram is consistent, it is inconsistent in the tree map. The process of using partitioning to transpose a simple state into a complex state is as elementary as counting. Hence, tree diagrams are found in both Eastern and in Western culture.

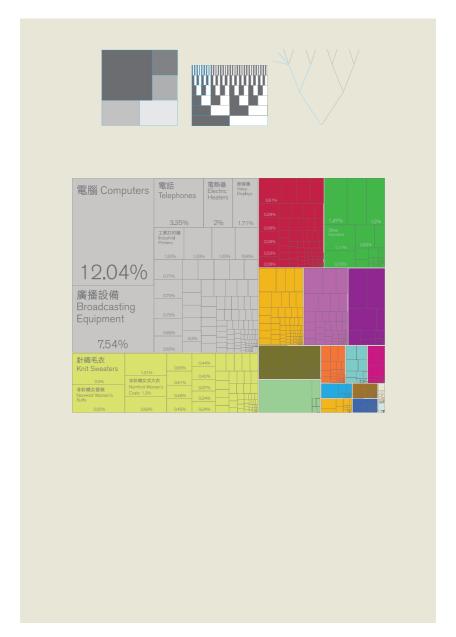


Figure 4 Treemap.

In the next two examples the tree structure stands out even more clearly. From a formal point of view these two diagrams look quite similar.

The "Scheme of the Formation of the Eight Trigrams" (Figure 5, left) can be compared to the diagram Figure 3, both show the growth of the elementary forces. This diagram shows the division of what was originally one entity (陰*Yin* and 陽 *Yang*) into polar opposites and their ongoing diversification through further partitioning. It corresponds to the first three bottom rows of the diagram "Sequence of the 64 Hexagrams According to Fu Xi" (Figure 3). Tree-like diagrams are based on an image of growth and are correspondingly organized and read from bottom to top.

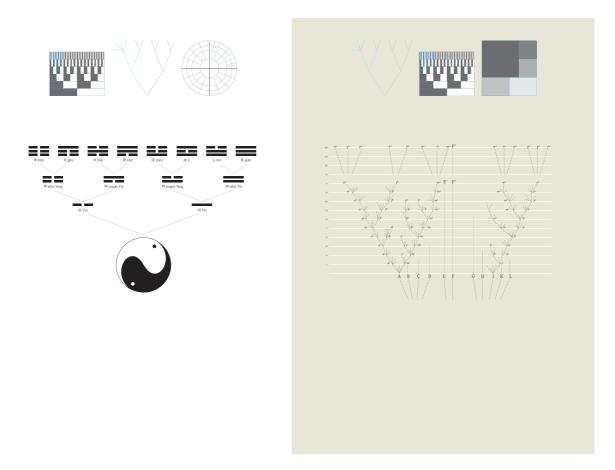


Figure 5 left: 八卦衍生圖 Bā guà yǎnshēng tú "Scheme of the Formation of the Eight Trigrams"; right: "Darwin's Hypothetical Diagram of Evolution."

This can be seen as well at the "Darwin's Hypothetical Diagram of Evolution." (Figure 5, right) In his work on evolutionary biology, Darwin developed the radical theory that all forms of life descend from common ancestors. "The sketch is to be read from bottom to top. Everything in this graphic is abstract and hypothetical: The beginning of creation is openended; humans appear at a much later point in time. . . . The sketch is abstract and universal and does not refer to specific classes of organisms; the final phase is thus just as undefined as the beginning. What a biologist once criticized for only being a 'formalistic line of thought,' is from today's standpoint its advantage: it appears as a brilliant sketch of a hypothesis that turned out to be more durable than the suggestive image of the genealogical tree." (Pörsken, 1998, p. 328). With this diagram, Darwin succeeded—more effectively than with concepts and formulas—in recording and conveying the complex relationships of his evolutionary theory.

Whereas Darwin positions the concrete process of evolution in an undefined prehistory, the Chinese diagram starts with the concept of a 太極 tàijí "Supreme Ultimate", beginning even more hypothetically before the original of the world. At the same time it makes the universalist claim that it is valid for all the world's circumstances.

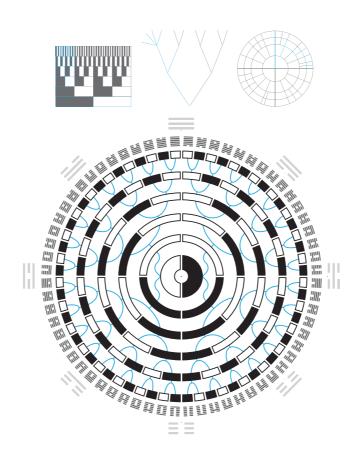


Figure 6 先天六十四卦圓圖 xiāntiān liùshísì guà yuán tú "Circular Rendering of the 64 Hexagrams in precelestial Arrangement."

Ming dynasty diagrams regard the world in a philosophical, speculative manner rather than in an empirical one. Darwin's scheme can be seen as an in-between position that wishes to proceed empirically but in fact presents everything as "abstract and hypothetical" (Pörksen, 1998, p. 328).

The tree diagram appears not only as vertical but also as a circular tree. This can be seen by the "Circular Rendering of the 64 Hexagrams in precelestial Arrangement" (Figure 6). The image presented here is an interpretation of an illustration from the Compendium of Diagrams (1623). The representation is related to the diagram 伏羲六十四卦次序 Fú Xī liù shí sì guà cì xù "Sequence of the 64 Hexagrams According to Fu Xi". The elements depicted

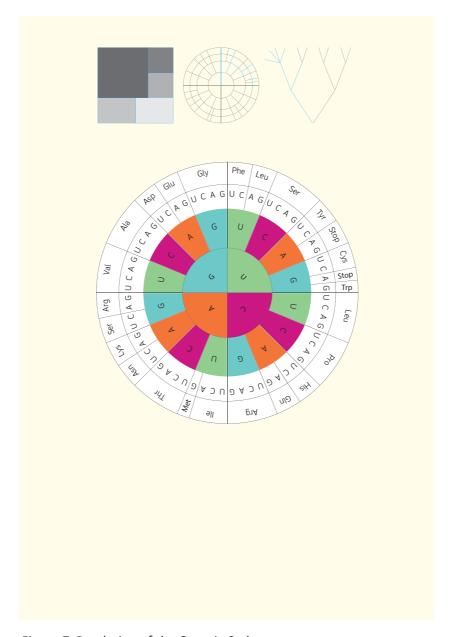


Figure 7 Rendering of the Genetic Code

linearly in the plane in that diagram are transposed here in circular form. Both diagrams illustrate the structure of the hexagrams using the principle of ongoing partitioning. In traditional China the circle is associated with the 天 $ti\bar{a}n$ (heaven; i.e., time, spirit). The instances of white (陽 Yang) and black (陰 Yin) are read from the center outward and, on their outer edges, are additionally represented in the form of hexagrams with continuous lines (-, 陽 Yang) and broken lines (-, 陰 Yin). The redesign of this diagram is supplemented with fine blue connecting lines, which show the increasingly detailed branching.

The "Rendering of the Genetic Code" (Figure 7) is a circular tree diagram from the Western world. The representation shows how twenty amino acids are distributed among sixty-four

codons. The names of the amino acids are indicated on the outermost edge. As such, the green sector (U), for instance, read clockwise, contains the base triplets UUU, UUC, UUA, and UUG. All living beings use essentially the same genetic code. The sixty-four codons in the genetic code of DNA exhibit a structural analogy with the sixty-four hexagrams of the 易經 Yijing (Book of Changes). Since the 1960s, attempts have been made to link these two "basic patterns of life" (see, e.g. Schönberger, 2000). Here, the DNA components of the four organic bases A: adenine, T: thymine, C: cytosine, and G: guanine are correlated with the four cardinal numbers of the Yijing: 6: old Yin (太陰 tài yīn), 7: young Yang (少陽 shào yáng), 8: young Yin (少陰 shào yīn), 9: old Yang (太陽 tài yáng). Various approaches to the concrete correlation exist.

In the Compendium of Diagrams we found another "Circular Rendering of the 64 Hexagrams." (see Figure 8) Here, again, the black fields represent 陰 Yin, depicted in the hexagrams as broken lines (--) and the white fields represent 陽 Yang, rendered in the hexagrams as continuous lines (-). The division into black and white results from an ongoing diversification from the center outward: the innermost circle features a bisection in black and white, the second circle a four-part division, the third circle an eight-part division, and so on. Together, the three inner circular paths in the eight-part division yield the 八卦 $b\bar{a}\ gu\dot{a}$ (8 trigrams). The eight trigrams, as subsequently in the 六十四卦 $li\dot{u}\ shi\ si\ gu\dot{a}$ (64 hexagrams), are therefore read in circle segments. In our redesign we supplemented the 陰 $Yin\$ and 陽 $Yang\$ in order to show its relation to the periodical growth and decline of the elementary forces.

All the variations of the tree diagram are fundamentally based on the principle of division, or branching, by which a simple state is transposed into a complex one. A principle permits its visual translation in various forms of visual expression, dimensions or media. This type of translation can be compared with "intralingual translation" while in contrast "cultural translation" refers to "interlingual translation." According to Roman Jakobson "Intralingual translation or rewording is an interpretation of verbal signs by means of other signs of the same language" (Jakobson, 1959, 233). Intralingual translation can be found in many visual contexts of traditional Chinese diagrams, for example in conjunction with 陰 Yin and 陽 Yang. Although today it is mainly known in a single form, its not a fixed emblem but a principle or concept. All these different 陰 Yin and 陽 Yang-diagrams demonstrate the idea of an oscillating fluctuating balance between elementary, opposing forces.

This variation of a diagram from the Compendium of diagrams (Figure 9) demonstrates the correlation between the formation of the 64 Hexagrams and the concept of time, which we have visualized by the phases of the moon. The phases correspond to the light and shadow in the sections of white (陽 Yang) and black (陰 Yin) in the main trigram. The 十二月卦氣圖 shíèr yuè guà qì tú "Depiction of the Energy of the 12 Months" (Figure 10) shows the relation of陰Yin and 陽 Yang and time (12 months) very clearly.

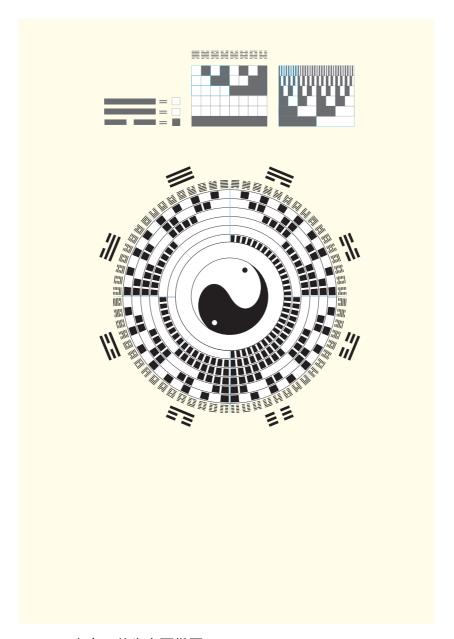


Figure 8六十四卦生自兩儀圖 liùshísì guà shēng zì liǎng yí tú "Circular Rendering of the 64 Hexagrams."

The following two diagrams are more types of different 陰 *Yin* and 陽 *Yang*-diagrams that we have found in the Compendium of diagrams: 太極河圖 *tàijí Hétú* "Hetu-diagram with Yin and Yang-symbol" (Figure 11) and the famous 易有太極 *yì yǒu tàijí* "In the Transformations Lies the Great Primordial Beginning" (太極圖 *tàijí tú* Taiji-Diagram) (Figure 12).

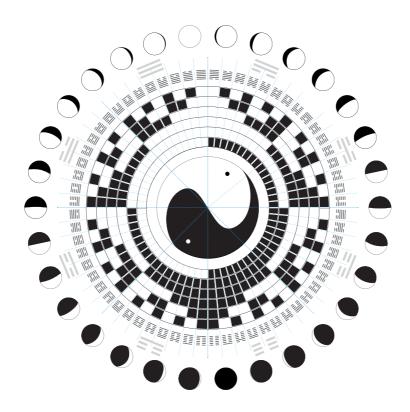


Figure 9 Variation of a diagram from the Compendium of diagrams

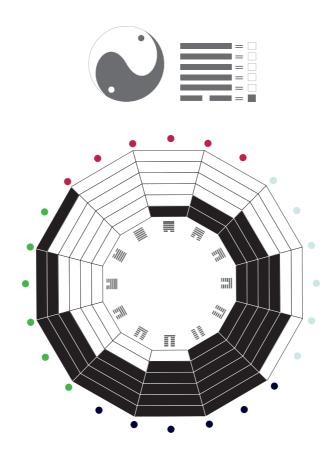
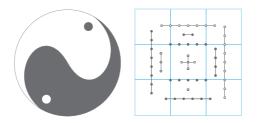


Figure 10 The 十二月卦氣圖 shíèr yuè guà qì tú "Depiction of the Energy of the 12 Months" shows the relation of 陰 Yin and 陽 Yang and time (12 months) very clearly.



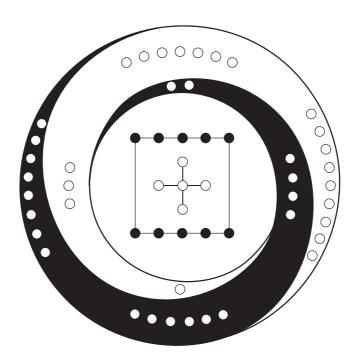


Figure 11 太極河圖 tàijí Hétú "Hetu-diagram with Yin and Yang-symbol"



Figure 12 易有太極 yì yǒu tàijí "In the Transformations Lies the Great Primordial Beginning."

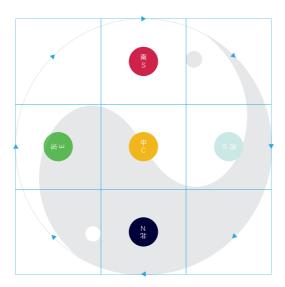


Figure 13 This scheme visualizes the central aspects of the traditional Chinese reference system.

This scheme (Figure 13) visualizes the central aspects of the traditional Chinese reference system. It basically consists of a combination of the square ("earth," space, material) and the circle ("sky," time, the intangible). The division of the square into nine sections ("nine palaces") forms the basic schema for the observation of space and therefore refers to both the division of the "world" and basically to any kind of space. In addition it recurs in the organization of the four cardinal points around the center, with the south above and the north below. According to Chinese custom, the southern perspective is the "correct," favourable perspective, so it is meant for the emperor, king, or anyone of higher rank (e.g., the head of a family). Time is always connected with spatial aspects, as well as with color. The five seasons: summer, autumn, winter, spring and mid-summer—are set in relation to the five cardinal points: south, west, north, east and center and to five colours.

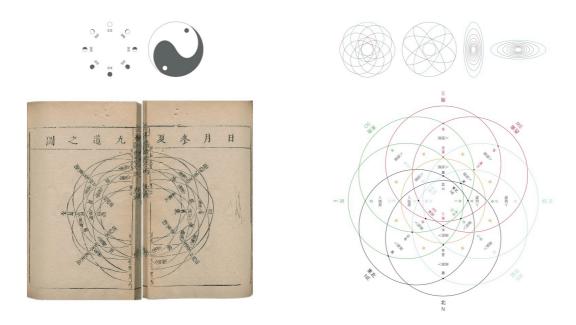


Figure 14 Redesign of the 日月冬夏九道之圖 rì yuè dōng xià jiǔ dào zhī tú "Scheme of the Nine Paths of the Sun and the Moon in Winter and Summer."

We had to simplifie the differentiations in order to show an incredibly strong concept of relation behind the diagrams. In traditional China nearly all areas of knowledge and life are connected by a system of correspondences. This system embraces a synopsis of qualities, and assigns the most diverse categories, such as seasons, cardinal directions, bodily organs, sensations, flavors and colours, to an established canon of equivalents.

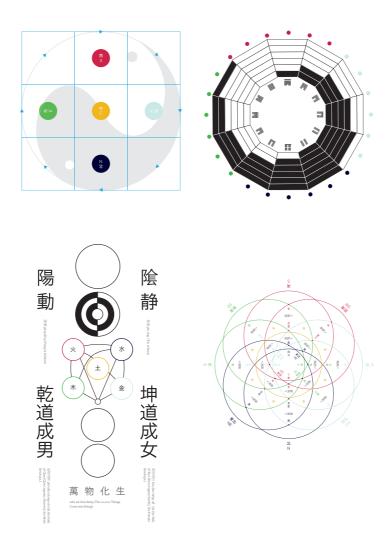


Figure 15 In order to make all the redesigned diagrams comparable, we used the five traditional colours in a unified manner, like a color code.

That means that red not only represents south, but also summer and fire; white (in the actual redesign light blue) represents west, autumn and metal; black represents north, winter and water; green represents east, spring and wood and finally yellow represents the center, the midsummer and the element earth. This can be demonstrated by an important diagram of the Chinese traditional medicine where the human body, with its organs and energy pathways, is set in correlation to cardinal points (space) and twenty-four annual divisions (time) (Figure 16).

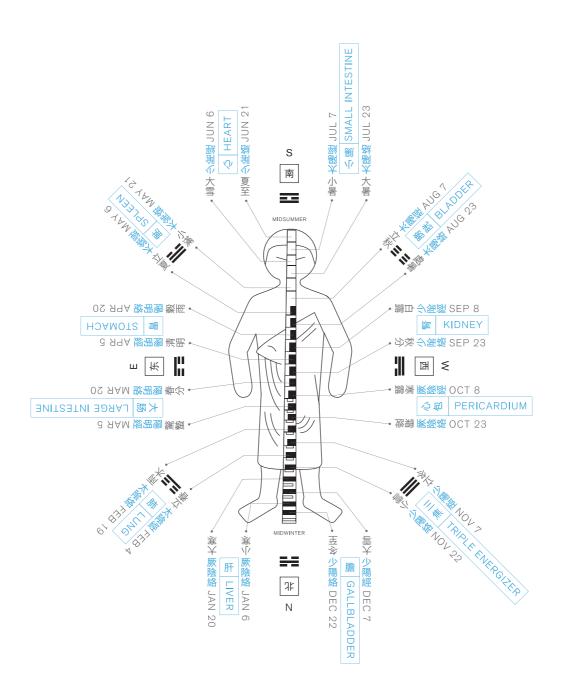


Figure 16 The rendering of 人面耐寒之圖 rénmiàn nàihán zhī tú "Representation of the Cold Resistance of Human Faces".

5. Concluding Thoughts

In the research presented here, the central meaning of translation is uncovering the conceptual structures that lie hidden beneath a visible surface. Here, the cultural reference systems that are not directly observable are set in relation to visible phenomena. As the anthropologist Clifford Geertz writes:

The concept of culture I espouse, . . . is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning. It is explication I am after, construing social expressions on their surface enigmatical. (Geertz, 1973, p. 5)

As a society, we continually create this cultural web or reference system and at the same time are entangled in it. "We do not [think] in prescribed patterns . . . , but these patterns [are] a result of a development . . . that we define ourselves . . ." (Breidbach, 2008, p. 16). In terms of knowledge graphics, this means that we produce both the images and the conditions constituting image production and reception. When two cultures meet in a "space of translation and negotiation," these constitutive conditions, that is, representational systems, must also be negotiable, otherwise an encounter cannot take place. Since "spaces of translation" are first constituted in the process of this negotiation (Bhabha), they can only be based on open—that is, unfixed—organizational structures.

The map of correspondences shows such dynamic organizational relationships; its depictions can always be explored anew in terms of the most varied connections and differences. It offers a wealth of mutual references between the two cultures that set the reader's gaze into motion again and again.

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7. References

Image sources (visual references for our redesigns)

- [1] 周明堂圖 *Zhōu míng táng tú* "Hall of Clarity" Wang Qi 王圻 三才圖會 Sancai Tuhui, 宮室 Gongshi (Architecture) vol. 1, p. 8.
- [3] 伏羲六十四卦次序 *Fú Xī liù shí sì guà cì xù* "Sequence of the 64 Hexagrams According to Fu Xi." Wang Qi 王圻 三才圖會 *Sancai Tuhui*, 文史 *Wenshi* (Literature and History), vol. 1, pp. 9-10.
- [4] Treemap. *The atlas of economic complexity*. Harvard University, Center for International Development, http://tinyurl.com/zc6uzoy (Accessed 3 November, 2015).
- [5] Left: 八卦衍生圖 Bā guà yǎnshēng tú "Scheme of the Formation of the Eight Trigrams." 章潢 Zhang Huang (1623) 圖書編 Tushu Bian "Compendium of Diagrams", vol. 2, p. 95.
- [5] Right: Darwin, C. (1988). On the origin of species by means of natural selection (1859). New York: New York University Press.
- [6] 先天六十四卦圓圖 *xiāntiān liùshísì guà yuán tú* "Circular Rendering of the 64 Hexagrams in precelestial Arrangement." 章潢 Zhang Huang (1623). 圖書編 *Tushu bian* (Compendium of Diagrams), vol. 4, p. 14.
- [7] "Rendering of the Genetic Code." http://tinyurl.com/jpmlouw (Accessed 3 November, 2015).
- [8] 六十四卦生自兩儀圖 *liùshísì guà shēng zì liǎng yí tú* "Circular Rendering of the 64 Hexagrams." 章漢 Zhang Huang (1623). 圖書編 Tushu bian (Compendium of Diagrams), vol. 4, p. 14.
- [10] 十二月卦氣圖 *shièr yuè guà qì tú* "Depiction of the Energy of the 12 Months. Li Kun 李坤, Guo Yu 郭彧 (eds.) (1989). *Zhou Yi tushu zonghui* 周易圖書總匯. Shanghai: Huadong Shifan.
- [11] 太極河圖 *tàijí Hétú* "Hetu-diagram with Yin and Yang-symbol." 圖書編 *Tushu bian* (Compendium of Diagrams), vol. 4, p. 12.
- [12] 易有太極 yì yǒu tàijí "In the Transformations Lies the Great Primordial Beginning." Wang Qi 王圻 三才圖會 Sancai Tuhui, 文史 Wenshi (Literature and History), vol. 1, p.16.
- [14] 日月冬夏九道之圖 *rì yuè dōng xià jiǔ dào zhī tú* "Scheme of the Nine Paths of the Sun and the Moon in Winter and Summer." 三才圖會 *Sancai Tuhui*, 天文 *Tianwen* (Astronomy) vol. 4, p. 11.
- [16] The rendering of 人面耐寒之圖 *rénmiàn nàihán zhī tú* "Representation of the Cold Resistance of Human Faces". 三才圖會 *Sancai Tuhui*, 身體四卷 Shenti (Body) vol. 5, p.3.

- Baur, R. (2010). *Anticipating, Questioning, Inscribing, Distinguishing, Irritating, Orienting, Translating.*Baden: Lars Müller.
- Bhabha, H. K. (1994). The location of culture. London: Routledge.
- Boehm, G. (2003). Der stumme Logos: Elemente einer Bildwissenschaft, in *Wissenschaftskolleg zu Berlin Jahrbuch 2001 / 2002*. Berlin: Wissenschaftskolleg zu Berlin / Institute for Advanced Study Berlin, pp. 188-208.
- Breidbach, O. (2008). *Neue Wissensordnungen: Wie aus Informationen und Nachrichten kulturelles Wissen entsteht.* Frankfurt am Main: Suhrkamp.
- Buden, B., & Nowotny, S. (eds.) (2008). Übersetzung: das Versprechen eines Begriffs. Vienna: Turia + Kant
- Cancik-Kirschbaum, E., & Mahr, B. (eds.) (2005). Anordnung und ästhetisches Profil: Die Herausbildung einer universellen Kulturtechnik in der Frühgeschichte der Schrift. In: *Bildwelten des Wissens*. Kunsthistorisches Jahrbuch für Bildkritik 3(1), *Diagramme und bildtextile Ordnungen* Berlin, pp. 97-114.
- Dressen, M. et al. (2009). Conversations about Making Books. i.e. Leipzig. Leipzig: Spector Books.
- Geertz, C. (1973). The interpretation of cultures: Selected essays. New York: Basic Books.
- Goodman, Nelson. *Languages of Art: An Approach to a Theory of Symbols*. London: Oxford University Press, 1968.
- Jakobson, R. (1959). On Linguistic Aspects of Translation. In R. A. Brower (ed.). *On Translation*. Cambridge, MA, Harvard University Press, pp. 232-239. Reprinted in Lawrence Venuti (ed.) (2000). *The Translation Studies Reader*. London and New York, Routledge, pp. 113-118.
- Lima, M. (2014). *The book of trees: Visualizing branches of knowledge*. New York: Princeton Architectural Press, http://tinyurl.com/j9obeq6 (Accessed 3 November, 2015).
- Michel, P. (1999). *Allgemeinwissen und Gesellschaft: Vor- und Nachteile der systematischen und alphabetischen Ordnung,* http://tinyurl.com/je2cxjb (Accessed 4 November, 2015).
- Pörksen, U. (1998). Blickprägung und Tatsache: Veranschaulichungsstufen der Naturwissenschaften—von der hypothetischen Skizze bis zum öffentlichen Idol. In L. Danneberg & J. Niederhauser (eds.). Darstellungsformen der Wissenschaften im Kontrast: Aspekte der Methodik, Theorie und Empirie. Tübingen: Gunter Narr, pp. 321-347.
- Schönberger, M. (1977). Verborgener Schlüssel zum Leben. Frankfurt a. M.: Fischer Taschenbuch.

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