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Poetry as a cross-cultural analysis and sensitizing tool in design

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Abstract The overall trend toward globalization in design, greatly enhanced by digital technologies, has raised issues and challenges on how to preserve the cultural differences and values of different societies. There is a tendency to lose touch with local cultural values when designing artefacts for global use, and social nuances and traditions risk to be flattened or stereotyped in the pursuit of developing new technologies and products for the global society. Attempts to reduce the tension between the global and the local in design can be seen in the development of standards and guidelines for cross-cultural design, that are mostly focused on (online) user interface design. However, when moving from preferences, metaphors, appearance, and navigation toward cultural models of interaction and physical design, new methodologies and tools for cross-cultural design are needed. This paper describes a poetry-inspired design method for cross-cultural sharing within the design process. The approach uses poetry to sensitize the designer to the subtleties and diversity of a (new or known) culture so that the design can be given new aesthetic and cultural significance. The methodology is exemplified by actual design cases developed within the course "Cultural Sensitivity" of the Master's Degree Program in Industrial Design at Eindhoven University of Technology, where poetry was used for uncovering underlying or implicit assumptions, intercultural differences and similarities, as well as for general sensitization of young designers.

Keywords Poetry · Engineering tools · Design method · Cultural values · Interaction design · Cross-cultural design

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1 Introduction

Emerging technologies, in particular those designed for communication, sharing and social interaction have profoundly affected people's daily lives and habits. They promise to meet our need of communication and sharing, but at the same time, transform the way we communicate and make sense of local cultural values. The fact that many commercial products and services are designed for a global audience raises issues on how to cope with cultural differences at the local level (Marcus 1993; Marcus and Gould 2000). This topic has been addressed in human–computer interface design, interaction design, experience design and industrial design: disciplines which are traditionally focused on comprehending and meeting people's needs, desires and aspirations in the use of technologies and artefacts. Studies in cultural design; however, are often limited to identifying aesthetic stereotypes such as culturally preferred forms and colours. And thus, attempts to solve the tension between globalization and local cultures in technology design mostly focus on the definitions of guidelines and standards, coping with cultural differences

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in terms of preferences (e.g., use of colours), spatial orientation (e.g., Latin-based screen design starts from the top-left-hand corner, while Chinese language can start from top-right-hand to bottom-left-hand or follow the Latin-based style), and values (e.g., use of symbols and metaphors) that are definitely different from one culture to another (Choi et al. 2005; Chau et al. 2002). The purpose of these studies is to promote internationally recognized standards that highlight best practices for the development of multinational and multicultural services and products (Nielsen 1990).

We believe that new tools for cross-cultural design should be adopted beyond standards and guidelines, and that standards and guidelines are not sufficient to preserve culture at the local level.

In this paper we present our poetry-inspired approach to cross-cultural design. It provides an alternative way of appreciating cultural diversity, grounded on values portrayed by poetry. The approach generated a method that can be used by designers to stimulate sensitivity toward sense-making and to endow new aesthetic significance into the design. We believe that designers need to develop a systematic sensitivity toward the diversity of the social and experiential aspects that people encounter throughout their lives, i.e., their explicit and implicit interests, beliefs, behaviours and experiences.

The presented method is articulated in six phases, which develop along incremental cycles from abstract to concrete. Indeed the process starts with making a bodily experience of the poem by reading, reciting and listening (concrete step) through a deep analysis of contents, language and meaning (abstract step). In this way, the deeper layers of the poems are explored, qualities extracted and translated into design properties and a final experiential prototype. The method can be seen as a co-design activity in which preferably a native speaker or expert of the foreign language and culture are called to act as cultural mediators to uncover cultural differences through the poem, and stimulate a subjective viewpoint.

In the following, we provide an overview of related studies on cross-culture technology design, and a state of the art on the use of poetry in design, to position our own approach and highlight its originality. The core of the paper is the presentation of our poetry-inspired design method, which is exemplified through projects developed within the course "Cultural Sensitivity" of the Master's Degree Program in Industrial Design at Eindhoven University of Technology.

2 Cultural issues in community technology design

In the literature on community technology design, two major schools of thought can be outlined. The first school argues for a need to define taxonomies, categories and standards for cross-cultural design (Marcus and Gould 2000; Hofstede 1991; Hofstede 1980). In his seminal work, Geert Hofstede identified six cultural dimensions representing independent preferences that distinguish countries from each other.

Marcus and Gould (2000) analysed cultural effects on interface design by looking at how Hofstede's cultural dimensions could be represented in web design (Hofstede 1991). Even if they concluded that cultural trends and tendencies exist and, therefore, standards are necessary for cross-cultural technology design, the latter should not be used to generalise principles and create stereotypes. It is important to recognise patterns of values and perfuse the interface design with them. Marcus and Gould welcome the adoption of cross-cultural theory as an interface design tool, and recommend widening current design practices including new methodologies and tools for cross-cultural design.

Robbins and Stylianou (2003) drew similar conclusions after carrying out a study on cultural influence in corporate web design. They analysed content and architecture of 15 corporate web sites out of the 500 largest global corporations and concluded that content significantly differ across cultures, while minor differences can be found regarding design. This study shows that attempts to standardise the visual and interaction design components of web sites across cultures run the risk to confuse the user with unclear, unfamiliar or culturally distant information access.

The second school of thought argues that what is needed in cross-cultural technology design is not necessarily a set of rigid and fixed categories and standards, but rather an acknowledgment of the fluid nature of culture, calling for more sensitivity and empathy between designers and users/communities (Irani et al. 2010; Merritt and Stolterman, 2012). Irani et al. (2010) refer to postcolonial studies to offer designers ways of understanding use and design practice to respond to global connectivity and movement. They argue that different social, cultural, infrastructural, and economic situations require designers to substantially adapt the methods and practices they use. Marsden et al. (2008) state that taxonomic models of culture, where members of cultural groups are characterized by traits and averages, are of limited help in design because they describe average tendencies, but provide little insight into any particular person's cultural experience.

The need to encourage sensitivity and empathy between designers and users in technology design has been also acknowledged by researchers who promoted design approaches like Participatory Design (Ehn and Kyng 1987), Co-design (Sanders and Stappers 2008) and Empathic Design (Leonard and Rayport 1997). However, as Merritt and Stolterman (2012) noticed, cultural issues

are seldom explicitly addressed in participatory approaches to design.

On the specific product design level, Huang and Deng (2008) performed a field study of tea drinking, as a traditional social activity in Taiwan with the purpose of revealing the many cultural features of this ritual. They underlined that it is of paramount importance to develop thoughtfulness and deep understanding of these features to enrich design solutions.

Our approach to cross-cultural technology design falls within this second school of thought, which promotes sensitivity toward cultural issues. To do so, we propose a method to stimulate cultural sensitivity by taking a subjective viewpoint through the lens of poetry. In doing so we intend to engage designers as well as users in a sense-making process open to a personal interpretation. Our approach should be regarded as a way of encoding a design research practice to highlight cultural subtleties and qualities that deserve to be manifested in community technology design.

3 State of the art on the use of poetry in design

Poetry is an access door to experience cultural elements and to embed them in the design of meaningful cultural interactions. Poets and artists possess the ability of thoughtfulness and observation, through which they transform existing images into a novel language of meaning and emotions. Tu (2010, p. 28) suggests that poetry is a world of beauty in imagination by which a poet uses words to create authentic experiences. Poets play with language to get to the magic of life and the human experience. Their poems allow us to see how people think and act in all sorts of environments, what they feel and how they behave. They are a source of knowledge and inspiration about life.

Recently, some researchers and design practitioners have started to reflect on the relationship between poetry and design and the actual use of poetry in design. Beatty and Ball (2011) interviewed poets about their creative practices and conducted a thematic analysis comparing these practices to key findings concerning the nature of design expertise. The results of the study revealed similarities between poetry and design, related to the use of "sources of inspiration"; the involvement of "primary generators" or initial concepts to constrain the space of possibilities (Darke 1979), and the interplay between the problem and its potential solution, which "co-evolve". Some of the poets interviewed argued that much of the difficulty surrounding the process of poetry composition, derives from the inherently ill-defined nature of the task. Rittel and Webber (1973) named ill-defined problems as "wicked problems", to mean something that is not docile, amenable or meek to handle. Wicked problems require a

highly iterative and incremental revision process. This makes design and poetry highly conjectural in nature, exploratory and incremental.

Kolko (2013) recognises a unique role of poetry in sensing, seeing, and feeling the world. "A poetic interaction is one that resonates immediately, but yet continues to inform later—it is one that causes reflection and that relies heavily on a state of emotional awareness. Additionally, a poetic interaction is one that is nearly always subtle yet mindful" (Kolko 2013, p. 76).

For Kolko (2013), a product that affords poetic interaction has three main features: attention to sensory details and high degree of visual and material refinement; honesty, that is integrity to the business vision, to materials and to people; mindfulness, in the sense that poetic interaction demands attention in the same way in which poetry requires effort in reading and creating the lyrics. The main contribution of Kolko is to have given an initial abstract definition of poetic interaction even if not exemplified by actual designs derived from poetry.

Moli et al. (2014) adopted a more operational approach by developing a model that illustrates the process for extracting cultural elements from poetry and converting them into a design. They illustrate their methodology articulated in actual implementation steps. The overall process is inspired by a number of features of Chinese poetry and is mainly focused on visual design and the representation of 3D products.

A different standpoint was taken by Lin et al. (2011), who defined poetic interaction design as the one conveying an image with an ambiguous expression. This causes flashbacks in the person, which originate from his/her experiences. For Lin et al. (2011), uncertainty and ambiguity are the key to conveying a poetic image in interaction, and the possibility to transfer a poetic image depends on the participants' inherent ability to perceive and imagine. Therefore, poetic interaction implies the ability of the designer to create an implicit expression that invites users to interpret it with common sense or with their own experiences. This stimulates sense-making, reflection and participation.

Recently Cuykendall et al. (2016) used poetry to make sense of movement. They developed POEME, a poetry engine that links the quality of movement to poetic verses. The installation can be regarded as an attempt to explore kinaesthetic experiences through the language of poetry, therefore, linking the individual kinaesthetic expressivity to expressive patterns extracted from poems from different cultures.

The above-mentioned literature reveals that research on poetic interaction is generating increasing attention, yet it is still in its infancy. As illustrated, some practitioners recognise the potential of using poetry as a next step beyond aesthetics of interaction toward cultural aspects of interaction. Some of them reflect on the use of poetry in

design from a theoretical viewpoint, some others strive to define operational guides to convey cultural elements into design. All seek a rationale of poetry, and often ignore the irrational, mindful, essence of poetry: the wordless, melodic energy, the way the lines or sounds linger on, way after the pages have been turned or the narration has ceased. It is this sensitizing essence that prevents us to rationalize and forces us to mindfully experience.

Our approach, which we will articulate and illustrate in the following sections, uses poetry both as an analytical and experiential tool (to experience and analyse cultural elements), and as a design tool (to embed them in the design of concrete mundane products and their meaningful interactions).

4 A poetry-inspired approach for cross-cultural design

The poetry-inspired approach for cross-cultural design presented in this paper is the outcome of an incremental research-through-design process adopted to define, fine tune and evaluate the method described in Sect. 5 below. Research-through-design (Zimmerman et al. 2007) is a designerly way of doing research, where prototypes, iterations, and future visions, are integral parts of the research method. This kind of research is knowledge-directed. It produces new knowledge through testing and concretely acting in the context of application. Besides our own research in the field (Marti 2014; Marti et al. 2013), the approach has been adopted as inspiration and input for synthesis in related student design-projects, developed during the Master's Degree Program in Industrial Design, Eindhoven University of Technology. The course was co-lectured by Patrizia Marti and Ward van der Houwen to international students with a background in design.

The learning objectives of the course were:

- To stimulate sensitivity to the own culture from a cultural and sociological perspective.
- To become aware of the diversity of local cultural values, beliefs and perceptions.
- To explore and translate cultural finesses into design.
- To experiment with poetry to reflect on cultural values and use them to drive the design process.

For the final assessment the student could choose to design or re-design a product of everyday use that incorporates cultural values and aesthetic qualities extracted from poems.

To concretely explore cultural issues, the students were divided in teams composed of members from different countries, languages and cultures. In few cases,

when this heterogeneity could not be granted, external experts were invited to join the team and act as cultural mediators to deeply analyse and understand the language and meaning of the selected poems.

The students' learning activity held "Making" in its core. The students were encouraged, through cycles of reflection-on-action, to develop their personal understanding of poetry, to transform it into design probes, and to present the final designed artefacts to classmates, inviting them to be kinaesthetically engaged and to reflection.

The vision of the module was closely connected to reflective practice (Schön 1983) and craftsmanship, where knowledge is acquired through the exercise of craft-inspired learning practices throughout design and fabrication processes (Sennett 2008).

5 The method

Our poetry-inspired method to design originated from a passion of the authors of this paper for poetry. Ward van der Houwen is an engineer and a poet, whilst Patrizia Marti is a design researcher and a passionate reader of poetry. What is the link between poetry and design?

Poetry (from the greek ποίησις, poiesis) means "creation". It is a form of art that creates, by the combination of words according to specific metrics, a composition in which meaning binds to the sound of phonemes. It has, therefore, in itself certain qualities of music combined to those of spoken and written language that convey concepts and moods in an evocative, emotional and powerful manner.

Poetry is an expression of local culture. In preliterate societies, poetry was employed as a means of recording oral history, storytelling (epic poetry), but also liturgy and other forms of expression or knowledge that modern societies handle in prose.

The meaning conveyed by a poem is not completely disclosed, but is rather open to interpretation. Therefore, to appreciate a poem, it is important to take different perspectives and viewpoints, and develop cultural sensitivity.

Because of its nature of emphasising emotions and feelings rather than using language purely for its content, poetry is notoriously difficult to translate from one language into another. The shades and nuances of meaning can be difficult to interpret and cause different readers to experience a poetic verse differently. It is reasonable to state that while there are acceptable interpretations, there can never be a definitive interpretation of a poem.

As said above, the poetry-inspired design method for cross-cultural design described in this paper was developed

along 4 years of iterative cycles of research-through-design. The idea of using poetry in design was first inspired by its aesthetic qualities, but later matured as a method for promoting sensitivity in designers toward cross-cultural issues.

Since the assignment of the course was to end up with the design (or re-design) of a concrete, useful product, we formulated a requirement for the poem to describe or involve a "mundane" object. However, the students did not necessarily have to design a product strongly related to the poem. They rather had to extract values from the poem and represent them in their designed product.

The length, number, and complexity of the poem(s) analysed during the process was free, but we found out that either more than a single poem, too complex or long a poem (longer than half a page) made the students lose focus and the experience too overwhelming: a single, short poem featuring a single object proved more than enough to supply the students with a rich cultural experience.

The method made its first steps when the authors designed the Master course "Cultural Sensitivity". While the first edition of the course was mainly used to confront the students with the language of poetry and use it as a generic inspiration for aesthetic interaction design (Djajadiningrat et al. 2000), the later editions were focused on identifying methodological steps to systematise the approach.

We found throughout 4 years of giving this course in five different editions, that an effective method developed as an incremental process which loosely comprises six phases: experience, confrontation, acquaintance, extraction, integration and reflection (Fig. 1). As explained below, each phase has its own focus and evolves incrementally from abstract analysis to concrete experience of the values extracted from the selected poems, toward the cross-cultural (re)design of a mundane product/service.

A characteristic of this approach is its focus on the experiential side of design, and a deep appreciation of the cultural values subtly conveyed by poetry.

6 Experience

In the experience phase the non-rational, non-literal, aspect of poetry is experienced. This is where we listen to poetry. Although this seems like a triviality—how else would we experience poetry?—in reality we found, it is not. Most people, maybe westerners and engineers in particular, will try to literally understand poetry as opposed to experiencing it. The way around this, to force the rational side into submission in favour of emotional experience, is to listen to poetry in a completely foreign language. In this case listening is preferred over reading. The melody, rhythm, and intricate parts of the composition of the poem survive, as the foreign written language lacks the cues to the reader on sounds, pronunciation, emphasis and weight.

Each edition of the course opened with a master class "reading and writing poetry" from the famous Dutch poet Jan Glas, who writes poems in Gronings or Plattdeutsch dialect: a lingua franca to all participants characterized by a typical accent and vocabulary spoken in the northern strip of Europe stretching from The Netherlands to Poland, which differs strongly from other Low Saxon dialects. He was invited to kick off the module and to perform his own poems. Glas explained that his approach to poetry is mainly a conversion of a feeling or a mental image into words, which in turn leaves the reader room for interpretation and expression. He uses words with nuanced meanings to allow the reader's imagination to run wild. His form highlights the active role of the reader in experiencing and making sense of the poem.

6.1 Confrontation

In the confrontation phase, students are confronted with the obstacles and implicit fallacies of language through interpretation and translation. To this end our students were invited to translate the poems in their own language. Non-Dutch students translated an English version of the poem into their own languages while Dutch students translated from the original Groningen dialect into Dutch or their dialect. This itself is more an activity of interpretation than
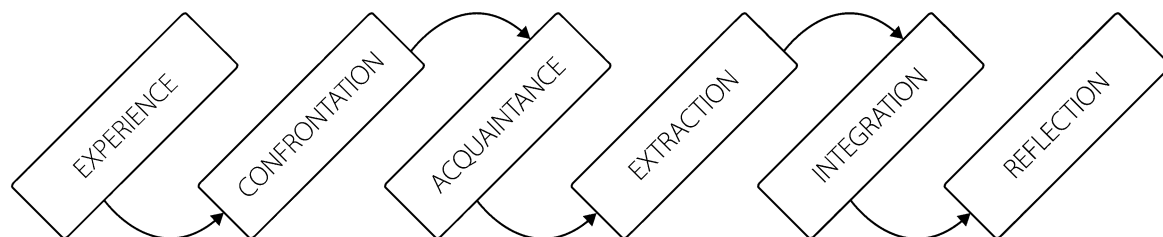

Fig. 1 Poetry-inspired design process

a simple translation process since a stance has to be taken: to maintain the "feeling" of the poem, certain decisions as to wording have to be made that might stray from the literal translation, but do more justice to the overall melody, message or feel. This is also where the discrepancies between cultures act out: in some cultures and language, certain things are "just not said like that" (one of the students) or do not carry a severity the original had. In this case an interpretation of the poem is required and the actual act of translation is on the cultural level.

This phase ended in students selecting a poem and translating it into their own respective languages. This translation of the poem is later repeated in tangible design: thus translation is the first step of a double transformation process: from one language into another (the student's mother tongue) and then later from that into design. It is a craft activity where the translator has to develop the skills not only to "transport" words from one language to another one, but also to be carried away in a deep meaningful relationship with the text.

This poetry translation was performed two times in this module. The first time on Glas's poems with the purpose to familiarise with different styles of translating, and the second time on poems that the students selected on their own as the most promising with respect to the topic of the module.

The main source used by the students to select poems was http://poetryinternationalweb.net/, a literary organisation that delivers quality poetry worldwide, often with videos of their recitation.

6.2 Acquaintance

In the acquaintance phase, students have to get acquainted with the poem and to internalise it. This is done via the act of recitation, with the aim of incrementally developing their sensitivity and sense-making, forcing different rhythms and emphasis. Co-lecturer Ward van der Houwen, himself an experienced poetry writer and performer, coached this process: staging the performance, acting out the poem, but mostly just giving the poem dedication and attention; space and time.

6.3 Extraction

In the extraction phase, students try to capture the collected observation about values, meanings and themes into any way that captures those: mood-boards, schematics, maps, and collages. In our module the students presented video mood-boards constructed from visual experiments trying to capture themes from the poem.

Mood-boards are very effective presentation tools used by designers to convey a "flavour" or a "mood" the

designer wishes to pursue with a design. They usually consist of collages of images, keywords, phrases or physical objects, but can also be represented using videos (Endrissat et al. 2015).

The results of the extraction phase were the basis for designing probes and ultimately the final prototype.

6.4 Integration

In the integration phase, the prototype design takes place using the information gathered from the mood-boards and design probes. Through iterative phases several designs mature until a favourite design can be selected. Throughout this process recitation of the original poem or poems is used to keep the design on track: to make sure an original essence of the poem is preserved, but also to keep the designing mind sensitised for subtlety.

The exploration with design probes was used to build a working prototype.

6.5 Reflection

The design process ended with shared reflections about the approach and the obtained outcomes. Students discussed their experience of using poetry as inspiration and sensitizing tool both at personal and group level and developed a written report containing their evaluation of the approach and a self-assessment of the design work. They shared what they learned about a different culture and the role poetry played in revealing cross-cultural subtleties and values.

7 Projects

In what follows we present two projects resulting from a 1-week edition of the course "Cultural Sensitivity".

The assignment of the module was two-fold:

- To fabricate a product that incorporates values extracted from poems from different cultures. The final prototype being a functional artefact, not just an aesthetic artefact: an actual useable product.
- To translate the subtleties of the poetic language in a product design that exploits cultural diversity and encourages intercultural interactions. The students could choose between designing or re-designing an artefact.

The first project example is a confrontation between the experience of preparing and drinking tea in the Indonesian and Dutch culture. For Indonesian people preparing and drinking tea is both an intimate and social activity. In the Dutch culture drinking tea is a rather mundane (yet privately comforting) activity with less sensitivity on

preparation and social sharing. The aim of this design is to bring imagination, which in a sense is almost at par with reality in the Indonesian culture, to the Western culture in this more mundane activity.

In a second project the students explored the experience of eating in both Western and Eastern culture. They designed a series of edible chopsticks, combining the taste of the chopsticks to those of different dishes, simultaneously celebrating, transferring and merging the experience of eating within those two cultures.

7.1 Teh Lampu

"Teh Lampu" is the title of the project developed by four students from the Netherlands who invited a friend from Indonesia to recite and analyse the meaning of an Indonesian poem they chose to inspire their design. An Indonesian friend acted as cultural mediator to analyse and interpret the poem and to help understand the experience of drinking tea in the Indonesian culture. This person was also invited to join co-creation sessions aimed during concept design.

7.1.1 The process

7.1.1.1 Experience The Experience phase started after the introductory poetry workshop by Jan Glas, a lecture on the relation between culture and design by Patrizia Marti and a workshop "theatre performance" by Ward van der Houwen. The team initially selected three Indonesian poems. Indonesian was chosen because, as the students explained, it was an unknown language to them, yet not too inaccessible to be translated by non-native speakers. The students found the Indonesian poetry and language interesting in its simplicity and relativity in meaning. An Indonesian friend was invited to join the group as external expert. She recited the poem so that the students could experience sound, rhythm and language from a native speaker. The students also used listening to different recitations of the poems both from a recitation from the poetry international website as from each other.

7.1.1.2 Confrontation In the confrontation phase, students tackled the obstacles and implicit fallacies of language through interpretation and translation. They uncovered remarkable differences in the meaning of words, which lead to insights in the Indonesian language and culture. From different translations, and recitations, they soon discovered some peculiarities of Indonesian culture as opposed to Dutch culture. They concluded that in Indonesia people are more focused on the imaginary world. Furthermore they found from the context of the poem, that in Indonesia there is a completely different stance toward the

distinction between the imagined (stories) and reality. They also discovered that a strong aspect of the "Bola Lampu" poem, and the other poems, is the social aspect narrated in the poem.

7.1.1.3 Acquaintance In the acquaintance phase, students tried different recitation versions and acted out the content of the poem. To gain a deep understanding of the poem, more and more parts of the poem were repeatedly translated.

7.1.1.4 Extraction Apart from the meaning of the poem, cultural values and material qualities from the poem were distilled. Students identified common themes in the poems: source, action and illusion. They did several visual experiments with camera lens, lamp and window, from which they constructed a video mood-board, focusing on source, action and illusion as common themes of the poems[1] (Fig. 2).

The students were asked to show this video halfway through the module. With increasing understanding and experiencing of the poems, it was found that there was a lot to a single poem and thus only one poem was selected to continue the journey: the poem "Bola Lampu" from Separdi Djoko Damono (1974) from Indonesia (Poems 1, 2).

7.1.1.5 Integration While brainstorming about how they could incorporate a social activity into a product, the students came across tea drinking, which is also an activity mentioned in another poem they analysed.

On several occasions students presented design probes, and asked the assignees Marti and van der Houwen and other students to interact with design probes to get feedback.

From these design probes, through a selection process, a design matured into several prototypes of a teacup working with some sort of shadow play.

The final designed product consisted of a matt tea glass and a stir stick that lights up, as soon as the stir stick comes in contact with water. The shadow play on the glass creates room for imagination and expression. The form, the material and the interplay of light and shade afford a particular handgrip: you might want to hide the effect toward a private enjoyment or you can open the hands to share the effect with other people like within a tea ritual.

The eventual design included a white opaque glass and an elegant wooden stir stick with a white illuminating tip. In the traditional Indonesian preparation of tea, the dried tea leafs are put on the bottom of glass, after which the hot

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[1] A video describing the design process is available at:: https://www.youtube.com/watch?v=E6MYr7Hg4RI&feature=youtu.be.

Fig. 2 Group one investigating a design probe light/shadow play, trying to experience and capture aspects from the poem "Bola Lampu" by Separdi Djoko Damono (1974), and building other probes

Bola Lampu

A Sebuah bola lampu menyala tergantung dalam kamar. Lelaki itu menyusun jari-jarinya dan bayang-bayangnya tampak bergerak di dinding; "Itu kijang," katanya. "Hore!" teriak anak-anaknya, "sekarang harimau!" "Itu harimau." Hore! "Itu gajah, itu babi hutan, itu kera . . ."

Sebuah bola lampu ingin memejamkan dirinya. Ia merasa berada di tengah hutan. Ia bising mendengar hingar-bingar kawanan binatang buas itu. Ia tiba-tiba merasa asing dan tak diperhatikan.

Poem 1 "Bola Lampu" © 1973, Sapardi Djoko Damono Publisher: Puisi Indonesia, Jakarta, 1974

Light Bulb

A light bulb hangs shining in the room. The man entwines his fingers and their shadows seem to move on the wall; "A deer," he says. "Hooray!" shout his children. "Now a tiger!" "A tiger." Hooray! "An elephant, a wild boar, a monkey . . ."

A light bulb wants to close itself off. He feels to be in the middle of a jungle. He hears loud noises - clamour of the group of wild beasts. Suddenly he feels estranged and unnoticed.

Poem 2 The poem "Bola Lampu" by Separdi Djoko Damono (1974) ©2015 translated by the students Gijs de Boer, Tove Elfferich, Fabienne van Leiden, John Vlaming

water is poured over them. Ample amounts of sugar are added and the tea is stirred.

Students explained that "the glass was made partially matt, to create shadows on the glass while stirring. The absence of ears stimulates embracing the glass when picking it up. Besides it amplifies the gesture of closing off,

therefore, enlarging the contrast with the attention-grabbing shadow play." Teh Lampu, at stirring the tea, projects an intriguing shadow play of the tea leafs on the white opaque surface of the tea glass: the effect is both relaxing and mesmerizing (Fig. 3).[2]

In the end of the process it became clear that a single poem carries an huge amount of cultural and meaningful subtleties. These were conveyed via a poem in the native tongue and later into a tangible, meaningful and culturally rich design that connects both original and the designers' native cultures.

7.1.2 Reflections

Students reported that the continuous feedback on performance and reciting was an unexpected sidetrack.

Reciting was a way to bodily experience the poem not only with respect to content and meaning, but also in relation to the sound and rhythm of the language. All these subtleties inspired the final design.

The most challenging part of the process was to balance abstract analysis with concrete design decisions and to try to stay close to an existing product re-design. They injected imagination into a mundane context and explored different materials to translate it into a final product. In doing this, they were able to capture both intangible and tangible aspects of culture.

Translation was also challenging and required many iterations. The Indonesian person who joined the project had a difficult time in explaining the subtleties of the language of the poem, the context and the ultimate meaning. During the confrontation phase the students had to fine

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[2] A video describing the design process and the final product is available at: https://www.youtube.com/watch?v=E6MYr7Hg4RI&feature=youtu.be

Fig. 3 "Teh Lampu" Tea glass with illuminating stir stick by Gijs de Boer, Tove Elfferich, Fabienne van Leiden and John Vlaming: a re-desing of the poem "Bola Lampu" by Separdi Djoko Damono (1974)

tune the English translation several times until the Indonesian reader was completely satisfied about the result.

The students appreciated to focus the design assignment onto a product re-design. This forced them to make subtle, pragmatic, design changes instead of creating complex user experiences. They learned that even a small adjustment in style creates a totally different experience.

The mood-board was an effective design tool that helped them to move from talking to seeing and doing. This supported the students in identifying abstract qualities and values of the poem. Even if the team decided to remain rather abstract with their video mood-board, it still helped them in translating the poem's qualities to more concrete (material) design afterwards.

7.2 Kwai

"Kwai" is the title of the project developed by three students from China and The Netherlands. Kwai-tsze, which literally means 'nimble boys', is the Chinese term used to mean chopsticks. The team analysed the Dutch poem "Sieraad", (English: "Jewel") by Ria Rokent (1950) (Poem 3) and a Chinese titleless poem (Poem 4) by an anonymous poet.

7.2.1 The process

7.2.1.1 Experience　The Kwai team attended the same introductory workshop as the Teh Lampu team: the introductory poetry workshop by Jan Glas, a lecture on the relation between culture and design by Patrizia Marti and a workshop theatre performance by Ward van der Houwen.

In the experience phase, they selected the poems "Sieraad" and a Chinese titleless poem about chopsticks (Fig. 4). The poems were recited many times in Dutch and in Chinese. The students interviewed each other to share

feelings and mind-sets about the experience of listening an unknown language.

7.2.1.2 Confrontation　Translation from Dutch into Chinese and vice versa was the first step in the design process. A Chinese native speaking student who participated in the project performed the translation. It is worth to highlight the importance of having a cultural mediator (a person who knows the language and the foreign culture) versus merely sourcing translations from the web. The cultural mediator plays a fundamental role in supporting the designer to grasp the subtleties of the poem and the ultimate meaning.

With the help of the Chinese native speaker, the students tried not only to "transport" words from one language to another, but also to respect the visual design emerging from the ideograms of the Chinese poem. Their main goal was to explore how poetry expression in all its forms (oral, written and visual) is a powerful, living organism that changes, vibrates, and fluctuates in the translation process from a culture into another one.

7.2.1.3 Acquaintance　From reading and reciting the poems the students got a feeling of tragedy and beauty that they visualised with drawings (Fig. 5). There is beauty in tragedy. The appreciation of a delicious food coincides with its destruction. Figure 5 (left) depicts an imperfect beauty while Fig. 5 (right) shows invisible chopsticks and their relationship with ornaments and food.

7.2.1.4 Extraction　From the previous phases of the process, a set of core-values was derived: decay, sacrifice, tragedy, vanity, beauty, senses, food, mocking, and contrast. These were used to compose a mood-board depicting a monster that expressed a feeling of tragedy, but also beauty. From these two contrasting values a third value

Sieraad

Zij voert haar strijd tegen verval,
al weet zij die verloren.

Gaafheid is geluk.
Aantasting is verdriet;
de dood in het verschiet.

En vraagt het kind: 'Mag ik nu gaatjes in
mijn oren?'
Dan zegt de moeder: 'Nee, nog niet.'

Jewel

She battles decay,
although she knows it's lost.

Flawlessness is bliss.
Infestation is sadness;
death is ahead.

And asks the child: 'Can I get my ears pierced
now?'
Than the mother says: 'No, not yet.'

Poem 3 The Dutch poem "Sieraad" by Ria Borkent (1950) and its translation "Jewel" by the student Marieke Voorthuijzen. Together with poem 4 these were re-designed into "Kwai", edible chopstick design

笑君攫取忙
送入他人口
一世酸咸中
能知味也否

I always laugh at you.
You're always busy picking up things
and sending it into somebody else's mouth
For your whole life,
you are salty or sweet.
Do you really know the tastes?

Poem 4 The Chinese titleless poem by anonymous. Translated by the student Lois Luo. Together with poem 3 these were re-designed into "Kwai", edible chopstick design

Fig. 4 Experiencing poems

emerged: contrast. Students experimented with such values using drawings and videos as expression means.

7.2.1.5 Integration Focusing on the subject of beauty, two concepts for a product were generated: the "paper napkin dress" and the "crazy chopsticks". The paper napkin dress is a dress that can only be worn to one occasion, because it is made of paper and will not last long (Fig. 6).

The students explained that "this is a dramatic dress, that will decay very fast and will show traces of what the user has been doing that day in the form of stains, rips or folds". This corresponds with the idea that a face full of wrinkles expresses personality and life of a person. Wrinkles can show that this person has frowned a lot, or has laughed a lot in his or her life. Next to this symbolic aspect of the dress, it also has a function: serve as a napkin. The students envisioned a girl wearing the dress while eating
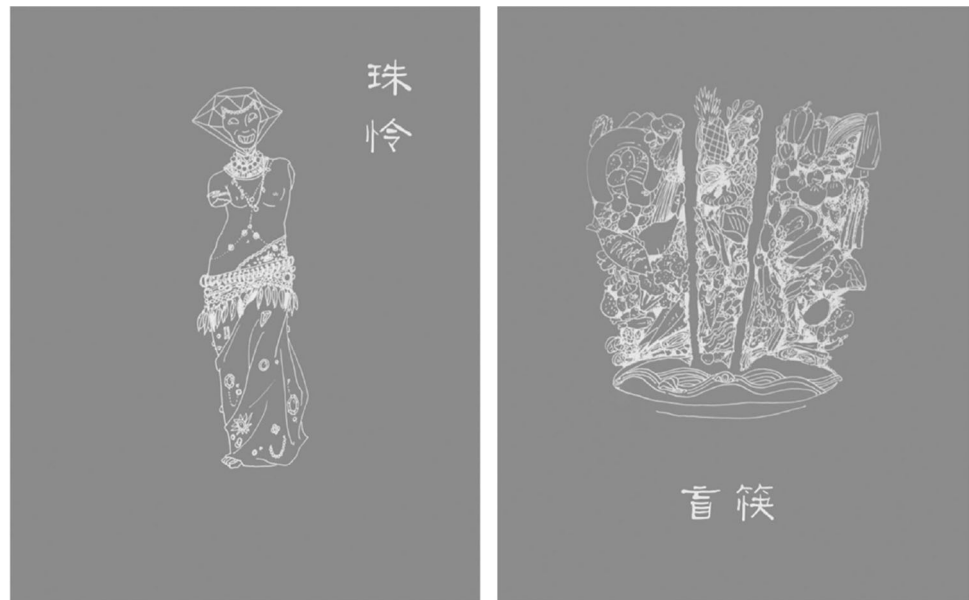
Fig. 6 The paper napkin dress

something with a brown sauce. She spills one drop of this sauce on her perfect white dress and this leads to immediate imperfection.

The second concept was developed exploring the affordance of the Chinese chopsticks, as depicted in the Chinese poem. Students envisioned the use of chopsticks in the Dutch culture. Their purpose was to appreciate how people from a different culture than Chinese would react to weirdly shaped chopsticks, with a more expressive, free, messy and alive appearance.

By elaborating on the values extracted from the two poems, focusing on beauty, decay and sacrifice, students designed edible chopsticks that are transitory in nature and give the user the ultimate sacrifice. These chopsticks are fully made of edible material, and give off a certain taste while using them. By using them the chopsticks will decay, and eventually disappear (get eaten) (Fig. 7).

To make the chopsticks fully edible, students decided to use sugar as a material. Sugar is easily mouldable when melted and can be casted into any shape. At the first try, they melted sugar and simple poured it onto a tray with baking paper in a long shape. Soon they noticed that this gives the chopsticks an organic and free shape, and this is not what was envisioned. In the second iteration they decided to stick to the normal shape of chopsticks to preserve the affordance. Therefore, they made a mould out of baking paper, which worked well (Fig. 8).

The prototype was evolved through different explorations with shapes, with different statuses of the sugar in the melting process and with herbs to adapt the taste of food to the taste of the chopsticks. By adding herbs to the chopsticks the appearance changes, and evidently the taste. In their nature of ephemeral objects, the chopsticks are an interesting example of transferability of cultural values inspired by poetry. Food has a special meaning to the Chinese people with a surprising range and variety of ingredients and tools (chopsticks, bowls). To Westerners this can be sometimes overwhelming, but above all, different. The edible chopsticks transfer elements of the Chinese long history of rituals and etiquettes associated to eating, where food and cutlery assume an equal importance, to the Dutch cuisine which is simple, straightforward and faster. The result is a surprising combination that both the Chinese and Dutch students found engaging and inspirational.

Fig. 7 Final Kwai prototype: the experience of eating Dutch food with edible Chinese chopsticks

Fig. 8 The edible chopsticks

k w a i 筷

7.2.2 Reflections

The team reported that the main lessons learned was how to master a value-driven process. They felt like they were designing on a deeper level, more from feelings and intuiting than from a problem-solving perspective.

A challenge in teamwork was the cultural differences and sometimes the occurring language barrier both during the discussions and the translation of the poems in three different languages: Dutch, Chinese and English. However, what they could not satisfactorily translate in words, they did with the mood-board and intermediate probes.

The Chinese student derived cultural differences from simply listening to, and reciting poems. She had the impression that "Dutch poems are cold, Gronings poems are far, Indonesian poems have a sense of tolerance, but not giving up hope at the same time, Chinese poems are simple and clear, English poems are direct, and Spanish poems are always in a hurry" (Chinese student Junyu Lu). Even though she could not understand most of foreign poems, she showed to be able to absorb information and feelings of different cultures and embody them in the final design.

One of the most remarkable comments from the students was that they considered the poems as a new tool for gathering user requirements. A poem is a way of looking at the world around us, a way to understand difficulties, needs, opportunities and desires from an experiential viewpoint.

8 Discussion and concluding remarks

In this paper we described our research on poetry-inspired design and how we can use poetry as a meaningful tool in the design process. The objective of this research is to stimulate sensitivity toward cultural subtleties of interaction, and to endow aesthetic significance into the design through the lens of poetry.

Poetry is a differentiator, and a true alternative to merely functional design. It is not a commodity, but something that does make us reflect on what we do and how. Poetry enables an indirect, non-rational language, in which what speaks is not the established meaning, but rather a new order of sense and expression. Moreover, the meaning of a

poem does not dissipate when expressed. It is made lively, persistent and significant by those who experience it. The more a poem is read and recited, the deeper its meaning becomes, and the richer the interpretations. The student projects show that even a single, short, poem can be very rich, once deeply experienced, little more is required to re-design it into a meaningful tangibly designed product.

Poetry is about thoughtfulness and observation. It is a way to sensitize our design skills on a experiential level of emotion and being rich and profoundly human. It enables the mind to pick up on subtleties, cultural and interpersonal, that analytical design tools are insensitive to. The student projects described above showed that poetry could provide a framework to create, through design, rich sensory, beautiful, engaging and mindful interactions. A common aspect of the student projects was the embodiment of sensing, acting and feeling. This was partly afforded by the aesthetics of material and the way it was used. Overall, the course "Cultural sensitivity" was both an educational activity and a research-through design, a designerly way of doing research, where prototypes, iterations, and future visions are integral parts of the research method.

With this research, we aim to provide a theoretical and methodical contribution to cross-cultural community design that embraces culture from a personal, intimate and value-related viewpoint as well as from a social and community based perspective, and at the same time introduce a subtle cross-cultural engineering tool for industrial designers.

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