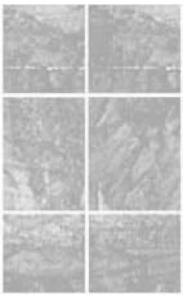
visual communication
ARTICLE



Transitivity of kinetic typography: theory and application to a case study of a public service advertisement

XIANZHONG HE
Chang'an University, Xi'an, China

ABSTRACT

With the advance of computer technology, kinetic typography, the animation of moving text, is becoming widely used in human communication. Yet, to date, there have been few social semiotic and multimodality studies in this area. This article draws on a case analysis of a national television public service advertisement in China to demonstrate how the concept of transitivity can be used to understand the meaning-making processes of kinetic typography. Kress and Van Leeuwen's *Reading Images: The Grammar of Visual Design* (2006[1996]) transitivity of visual grammar and Leão's 'A systemic functional approach to the analysis of animation in film opening titles' (2013) transitivity system of animation are applied in the analysis. The results show that their models can be basically applied to the analysis of kinetic typography. However, they also have restrictions that can be improved. For this reason, the author proposes an extended model of transitivity for the analysis of kinetic typography. The article ends with a discussion of some cross-cultural aspects of the analysed advertisement.

KEYWORDS

kinetic typography • meaning-making • public service advertisement • social semiotic multimodality • transitivity

1. INTRODUCTION

Advertising has become an increasingly important form of public communication in contemporary society (Fairclough, 2001), affecting our public and personal lives through mass media such as newspapers, magazines, television, billboards and the internet. As a persuasive genre, advertisements are primarily designed to promote the selling of products or services. However, there is a

Visual Communication 2016
Vol. 16(2) 165–194

DOI 10.1177/1470357216684080
SAGE

type of advertisement which does not sell goods for commercial purpose, but serves to inform and educate the general public – the so-called public service advertisements (PSAs). PSAs are messages in the public interest disseminated by the media without charge, with the objective of raising awareness, changing public attitudes and behaviour towards a social issue. Because PSAs have the potential of raising consciousness about social issues, portraying risks and issues relevant to ordinary people, and promoting social change, they are well within the interest of discourse studies (see Cheng and Chan, 2009; Cook, 2001; Schweitzer, 2009; Yu, 2011).

Over the last 20 years or so, with the increasing availability and affordance of digital technologies, PSAs in China have increasingly become multimodal. The creative use of semiotic resources such as fictions, wordplay, compressed story-telling, stylized acting, cartoon and puns has made PSAs memorable, enjoyable and even amusing. A case in point is a PSA entitled '*Family – Er de biao da shi*' ('Family – the expressive form of love') launched in December 2011 by CCTV (China Central Television), the predominant state broadcaster of China (thereinafter CCTV's PSA 'Family'). It is a one minute and 38 seconds television flash PSA released by CCTV Advertising Center, but the product was based on the flash project of a young man named Zhang Deyuan, who had just graduated from his college in Zhejiang province. Zhang's project was chosen because in 2011, the CCTV Advertising Center launched a nationwide campaign soliciting suggestions for PSAs from the public. The short PSA portrays the story of a typical Chinese family, whose members are not played by human figures, but by three animated letters of the English word FAMILY, 'F' standing for 'father', 'M' for 'mother' and 'I' for the narrator of the story. Through the animated actions of these letters, the advertisement narrates what happens to 'Father', 'Mother' and 'I' over time. It subtly interprets the meaning of 'family' ('Father and mother, I love you') from a new perspective and advocates that 'To be grateful to our parents' love should start from now and love should always be accompanied by responsibilities'. Since December 2011, this advertisement has been broadcast on different channels of CCTV several times daily and obtained a positive reception from the general public. The short video was reproduced on blogs, micro-blogs, and famous video-sharing websites such as YouTube and YouKu (a Chinese video hosting service) and received millions of hits and hundreds of positive comments.

2. SYNOPSIS OF CCTV'S PSA 'FAMILY'

CCTV's PSA Family portrays a typical one-child nuclear family in current China. The story is about the growth of the child from childhood to adulthood and the love and care between the parents and the child, as told through the perspective of 'I' as the child. When 'I' was young, 'I' received attentive care and love from the father ('F') and mother ('M'). However, as 'I' grew older,

'I' developed a mind of his or her own and often rebelled against the parents 'F' and 'M', which made them angry or sad. As time went by, 'I' grew up to find 'F' no longer strong and tall but old and bent and 'M' no longer young and slim but thick-waisted and no longer beautiful. 'I' realized it was time to take responsibility for his or her parents, so 'I' offered a shoulder for the aged father to lean on and hold an umbrella for the aged mother to shelter against life's storms. The story ends with a big Chinese character '*Jia*' (meaning 'family') and a Chinese slogan, '*You ai jiu you ze ren*' ('Where there is love, there is responsibility'). The screen captures and descriptions in Table 1 provide a synopsis of the advertisement. A web video clip version of CCTV's PSA 'Family' can be found at http://v.youku.com/v_show/id_XMzk1OTgzMzgw.html or at https://www.youtube.com/watch?v=1GMSKOroiAQ.

From screen captures 1 to 17, we can see that the story of this PSA is mainly told by actions and transformations of the animated letters which act as the members of a family. Other semiotic modes such as sound, music and captions also participate in the narration and meaning-making process. The sounds include coughing, whistling, weeping sounds and onomatopoetic utterance accompanying actions. The music is a Western-style melody played by the piano, violin and trumpet. The captions are Chinese sentences, appearing on screen without an accompanying voice-over. These are shown in Table 2.

Two things are worthy of special interest: the meaning-making of the animated letters and the borrowing of the English word *family* and its comprising letters. First, as mentioned previously, the advertisement narrates a typical story of a Chinese family through actions performed by the animated letters of the English word *family*. In the flash, English letters are animated to perform human actions and emotions. Without losing their original typographic quality and legibility, they are personified as typographic actors or actresses to mimic the typical movement and behaviour of humans. They possess a mouth that can speak, arms that can stretch and withdraw, hands that can cradle a child and feet that can stamp. Through the use of animation, traditional human feelings and actions are assigned to inanimate English letters. They become a total embodiment of human characteristics and abilities. This process is called anthropomorphism (Leão, 2013). In graphic design, the technology of mixing motion and text to convey ideas and emotions is called kinetic typography (Stock and Strapparava, 2008). So it is natural to ask how the animated motions represent processes, participants and circumstances, and how emotion is embedded in these animated actions. Secondly, the advertisement uses the *English* word '*family*' to transmit traditional Chinese values. Then, why are the signs from a foreign culture borrowed to persuade the Chinese public to show respect and care of their parents when they are old? This article explores how the modes of animation and narrative are brought into play to produce meaning as semiotic practice in a PSA. It further discusses the cross-cultural issues by exploring why English words and letters are employed in an advertisement conveying Chinese values.

Table 1. Synopsis: CCTV's PSA 'Family'.

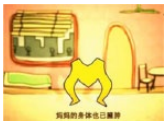
No.	Screen captures	Descriptions
1		The English word FAMILY appears as a family where 'F', 'M' and 'I' are the family members.
2		'F' notices the discomfort of 'I' and 'M' holds and opens an umbrella for 'I'.
3		'F' stretches his arms to provide protection for the family.
4		'F' protects the family and 'M' cradles 'I'.
5		'I' jumps, bumping against the protecting arm of 'F'.
6		'F"s 'arm' is hurt as a result and 'M' is angry with 'I'. 'M' loses her temper.
7		'M' scolds and criticizes 'I'.
8		'F' and 'M' shed tears.
9		'I' grows up as time goes by.
10		'F' gets old and bent.
11		'M' becomes old and thick-waisted.
12		'I' stretches his 'arms' to protect the whole family.

Table 1. (Continued)

No.	Screen captures	Descriptions
13		'I' walks towards 'F' to provide support for him to lean against.
14		'I' holds and opens an umbrella to protect 'M'.
15		*'Father And Mother, I Love You'* and Chinese equivalent '爸爸妈妈我爱你' appears.
16		The word FAMILY transforms into its Chinese equivalent '家'.
17		The Chinese word '家' and the slogan, '有爱就有责任' appear as a cluster.

Table 2. Captions appearing on the screen of CCTV's PSA: Family.

No.	Time	Captions (and English translation)
1	00:03	小时候爸爸是家里的顶梁柱 (When I was young, Dad was the backbone of the family.)
2	00:10	高大魁梧的爸爸遮风挡雨 (Tall, strong Dad sheltered us from wind and rain.)
3	00:15	温柔贤惠的妈妈相夫教子 (Gentle and virtuous Mom assisted Dad and raised me.)
4	00:20	渐渐我长大了 (Gradually, I grew up.)
5	00:24	少不更事的我总是想挣脱爸爸的束缚 (Being wet behind the ears, I always wanted to get rid of Dad's restrictions,)
6	00:30	屡次顶撞唠叨的妈妈 (and repeatedly contradicted my nagging Mom.)
7	00:35	长大的我渐渐体会到了生活的艰辛 (As I grew up, I gradually understood the hardship of life.)
8	00:40	发现爸爸的背早已驼的不成样子 (Then I found Dad seriously bent)
9	00:47	妈妈的身体已经臃肿 (and Mom thick-waisted.)
10	00:55	是时候尽一份子女的责任，细心呵护这个家 (It is time to take up the responsibility of looking after my parents)
11	01:01	做父亲贴身的拐杖，给他一个依靠的肩膀 (to become Dad's walking stick and give him my shoulder to lean on,)
12	01:09	给母亲撑把庇护伞为她遮蔽盛夏的骄阳 (and to hold an umbrella to prevent Mom from the scorching summer sun.)

Table 2. (Continued)

No.	Time	Captions (and English translation)
13	01:17	爸爸妈妈我爱你 (Father and mother, I love you.)
14	01:25	有爱就有责任 (Where there is love, there is responsibility.)

3. PREVIOUS STUDIES ON KINETIC TYPOGRAPHY

Kinetic typography is defined by Chew (2014) as an animation style in which text is the predominant animated feature on screen. With the availability of constantly improving digital animation and the increase of moving texts on mass media, kinetic typography has attracted attentions of scholars of different fields. In graphic design and media theory, Stock and Strapparava (2008) point out that kinetic typography, by combining verbal and visual communication, has the potential to capture and direct recipients' attention, create characters, express emotions and enrich the expressiveness of static texts. Stone et al. (2004) designed four typographic animations and one still image, showed them to one viewer and found an increase in emotional response to moving words. They proved that the kinetic typography, when specifically designed with the intent of enhancing meaning, can evoke emotional responses from the viewer. Malik et al. (2009) embedded specific emotions in typographic animations, tested them on 46 participants, and discovered that movements such as shaking, twisting, fading, bouncing, looping, jittery movements and flashing can convey emotions such as anger, sadness, happiness and fear.

In recent years, research has also been conducted on the typographical meaning making and its communicative effects by linguistics and social semioticians. Stöckl (2005) and Van Leeuwen (2005a, 2005b, 2006) believe that kinetic typography is not just an emotional overlay on letter forms or words, but a multimodal semiotic means of expression often integrated with language and with various non-verbal modes such as colour, music and sound. Typography is therefore a semiotic mode in its own right. Stöckl (2005) explores the meanings of typography on four levels: microtypography (the design of fonts and graphic signs), mesotypography (the configuration of graphic signs in lines and text blocks), macrotypography (the graphic structure of the overall document) and paratypography (materials, instruments and techniques of graphic sign-making). Van Leeuwen (2006) studies the meaning potential of letterforms along eight parameters: weight, expansion, slope, curvature, connectivity, orientation, regularity, and non-distinctive features. Although both Stöckl (2005) and Van Leeuwen (2006) prove that typography is a systematic and multimodal semiotic mode and capable of fulfilling the three Hallidayan 'metafunctions' (Halliday, 1994), to date, little research has been conducted on the systemic function of typography, especially of kinetic typography. This article intends to address the gap by focusing on the transitivity system of the experiential meaning represented in CCTV's PSA 'Family'.

4. TRANSITIVITY IN SFG, VISUAL IMAGES AND KINETIC TYPOGRAPHY: POINT OF CONTACT

The overall theoretical approaches adopted in this case study are social semiotics and multimodality (Jewitt, 2009; Kress and Van Leeuwen, 2006[1996]; Van Leeuwen, 2005a). These theories hold that the meanings of human communication are made and distributed through and across different semiotic modes, including verbal, visual and aural modes and that the use of these semiotic resources for meaning making is influenced by the motivations and interests of a sign-maker in a specific context. The research focus of this study is the transitivity system of representational meaning making in kinetic typography. Therefore, in what follows, I review the theoretical perspectives on transitivity studies on language and visual image, from which I intend to expand to kinetic typography.

Halliday's (1994) Systemic Functional Linguistics (SFL) studies the functional and situational organization of language in the social context. Language is primarily social and functional, and simultaneously performs three metafunctions reflected in huge system networks of meaning potentials: *the ideational function* expresses the experiential and logical content of the text and represents our experience of the outer world in the environment; *the interpersonal function* deals with the social and power relations among language users; and *the textual function* deals with cohesive and coherent text production by organizing and structuring the linguistic information in the clause. Transitivity is one of the two major systems (the other is lexical cohesion) for the realization of ideational meaning. It is a complex, clause level grammatical system that reveals how meaning is encoded in language and how human experience is construed in terms of processes, participants and circumstances. There are six processes in the transitivity system: material, mental, relational, behavioural, verbal and existential. In each process, different roles are allocated to participants, such as: Actor and Goal in material processes; Senser and Phenomenon in mental processes; Carrier, Attribute or Token and Value in relational processes; Behaver in behavioral processes; Sayer and Verbiage in verbal processes; and Existent in existential processes. Besides the major roles, some minor roles, such as Range, Beneficiary, Receiver and Target also exist in different processes. Halliday also identifies nine principal types of Circumstances: Extent, Location, Manner, Cause, Contingency, Accompaniment, Role, Matter and Angle.

Informed by Halliday's SFL and his social semiotic approach to language, Kress and Van Leeuwen (2006[1996]) extend the metafunctional theory to visual communication. The independent theoretical framework they have developed is called visual grammar (VG). They believe that visual communication constitutes a semiotic mode in its own right and, like language, is capable of simultaneously fulfilling the three metafunctions (Van Leeuwen, 2006). They adapted Halliday's metafunction, using a somewhat different terminology. Instead of ideational they refer to 'Representational' meaning,

instead of interpersonal they refer to 'Interactive' meaning and instead of textual they refer to 'Composition(al)' meaning. Representational meanings 'serve to present unfolding actions and events, processes of change, transitory spatial arrangements' (Kress and Van Leeuwen, 2006[1996]: 56). Interactive meanings are realized by the systems of the gaze, of social distance, of perspectival angle and of modality. Composition(al) meanings are realized through resources such as information value, framing and salience.

The visual image transitivity system proposed by Kress and Van Leeuwen (2006[1996]) comprises two main types of structures: Narrative structures and Conceptual structures. Narrative structures depict participants doing something or performing an action, with the processes realized by the presence of narrative vectors, in terms of either action, reaction, mental or verbal processes. Action processes depict 'doing' or 'happening' in the material world and include two participants, an Actor and a Goal. Reaction processes are realized by eyelines and include a Reacter as the active participant who creates the eyeline and a Phenomenon as the object of the Reacter's look. Mental processes depict participants' mental reactions in visual form where a Senser 'thinks' and what he or she thinks is called Phenomenon, depicted in a 'thought bubble' or similar conventional devices. Similarly, verbal processes depict participants' verbal actions where a Sayer 'speaks' in visualized 'dialogue balloon' or 'speech box' or a similar device. Three types of circumstances are identified in the transitivity of VG: Setting, Means and Accompaniment. Compared with Narrative structures, Conceptual structures depict participants' general relations to each other of a more static kind without vectors, including classification processes which construe taxonomic relations, analytical processes which represent participants in terms of a part–whole structure and symbolic processes which are about what a participant *means* or *is*. In short, Kress and Van Leeuwen's (2006[1996]) visual transitivity system provides a crucial toolkit for analysing and understanding the ideational meaning of still images. However, the model is primarily designed for analysing still images and dynamic modes of making meaning are not touched upon.

For this reason, Leão (2013) has conducted an exploratory study on animation of film opening titles. To establish a transitivity system of animation based on Halliday's SFG and Kress and Van Leeuwen's VG, Leão examined the animation of letters, words and objects in four film opening title sequences designed by the renowned American designer Kyle Cooper. According to Leão, the processes in animation are of two types: Transformational (the state of being of participants) and Actional (the concrete actions of participants). The first type, Transformational processes, 'actualize and transform Participants' and 'imply an alteration in the Participants' presence or nature' (p. 227). They are further divided into two subtypes: existential and attributional. The former refers to the process of the unfolding of the presence or absence of the material visibility of participants. The latter refers to processes in which the participants themselves transform, with one or several attributes

changing in quality (p. 208). Actional processes realize concrete actions performed by Actors. Similar to Kress and Van Leeuwen's (2006[1996]) Narrative structures, actional processes in animation can be either transactional or non-transactional. Further, in transactional processes, a third participant, the Recipient (as Beneficiary or as Target) is detected when the Goal is exchanged. Besides process types, Leão also identifies some circumstantial elements in animation, such as circumstances of time and space, and of setting. In animation, these are often graphically represented as a part of a Participant or process: location through graphics, distance through measure of instruments, duration through clocks, and so forth. Circumstances of manner/quality are generally realized by a multimodal clustered process combining sound and a shaking movement in the image. In short, Leão's study of transitivity system in moving images or animation provides us with new insights into the animated representation of the experiential meaning of the outer world. Since Participants in Leão's study mainly refer to letters and words and the movement, transforming, entering and leaving, appearing and disappearing of the typography is eminent in film opening titles, the part of the transformation processes of animation is a key element of film opening titles, and they receive especially detailed attention. The actional structures, on the other hand, are not treated with the same amount of detail. Perhaps this is because four film opening titles cannot reveal all the meaning-making possibilities of kinetic typography. Besides, film opening titles are only one genre of animated text. Elsewhere, letters, words may be animated or personified to act on each other, or tell a story, or to express human-like emotions such as anger, sadness, happiness and fear. Some music and sound effects may be jointly utilized. There are potentials to explore in this area.

To sum up, Halliday's (1994) transitivity system provides a powerful tool for analysing English clauses so as to understand how language encodes our experience of the world. However, it only specifies linguistic processes and structures. Since modern communications tend to be increasingly multimodal, realizing much of their meaning visually, Kress and Van Leeuwen (2006[1996]) apply the concept of transitivity to images and establish their visual grammar. They discover the different representation patterns (lexis and syntax) of the ideational meaning in visual grammar and enable us to see how our outer world experience is visually construed. However, Kress and Van Leeuwen's visual grammar applies mostly to still images and other visuals. Leão (2013) has begun to apply their transitivity system to dynamic visuals, but there is considerable scope for further development. With the increased availability of computer technology and the internet, more and more images and texts are animated, for example, in advertisements in new mass media. Therefore, we need more data and cases to study the meaning-making potential of kinetic typography.

As mentioned previously, this article draws on CCTV's PSA 'Family' as a case study. The purpose is threefold: first to extend Kress and Van Leeuwen's

(2006[1996]) transitivity of visual design and Leão's model of transitivity of animation of film titles and to explore how transitivity in SFG works in kinetic typography; second to propose a richer transitivity model and a more elaborate approach to analyse what resources are used and how ideational meaning is expressed in kinetic typography; and third to address some cross-cultural issues related to the visual design of the advertisement. This article therefore aims to make a contribution to the development of a transitivity system in kinetic typography. To this end, it addresses the following research questions.

(1) What are the possibilities and restrictions of the transitivity models of Kress and Van Leeuwen (2006[1996]) and Leão (2013) when applied to the analysis kinetic typography of CCTV's PSA 'Family'? How can the models be improved?
(2) What semiotic resources are employed in kinetic typography by CCTV's PSA 'Family' to express ideational meanings to persuade the public?
(3) As for the visual design, why does the CCTV's PSA 'Family' deploy the English word 'family' and its animated letters to tell a Chinese story?

5. METHOD

After introducing the genre of the PSA and the specific case of CCTV's PSA 'Family' and reviewing the relevant literature, this section introduces the research design. First, the data collection and sampling process of the research is described. Then, the transcription of data and the parameters employed for the analysis are illustrated. Finally, the analytical procedure of the case study is specified.

As mentioned, CCTV's PSA 'Family' was chosen as a particularly apt example for generating insights into the multimodal meaning making potential of kinetic typography. The images captured from the video clip and transcribed using a method and layout informed by Bezemer and Mavers (2011) and Baldry and Thibault (2006) constitute the data for analysis. To capture the most significant features in the greatest detail possible, we first downloaded the video clip from the internet and replayed it repeatedly. Having watched it carefully a number of times, we noted its most salient features to define the focus of the transcription. Next, media player software was used to capture shots of video stills demonstrating all the actions, movements and changes of the letters in chronological order. Each still was then cut to highlight the salient features of the action in detail and numbered accordingly. In total, 63 video stills were captured. These formed the basic unit of the analysis. To highlight the dynamic features of the advertisement for analysis, each still was annotated by adding arrows showing the direction of movements. The transcript was given a tabular format for the convenience of multimodal analysis, showing a series of actions and movements in temporal succession vertically and modal separation horizontally. Through this table, we could observe and analyse how meanings unfolded both synchronously and diachronically.

Table 3 shows part of the transcript. The analysis itself is found in the columns *Transactionality* and *Process types*. During the analysis, it became evident that some actions could not easily be analysed with either Kress and Van Leeuwen's or Leão's categories. They were indicated with question marks and these difficulties will be discussed in section 7 below.

To summarize, the analytical procedure of the research is: (1) the chosen sample, CCTV's PSA 'Family', was viewed repeatedly and each animated action, movement or transformation of letters was captured; (2) each screen capture was verbally described and arrows were added to the picture; (3) the transitivity models in Kress and Van Leeuwen's (2006[1996]) visual grammar and Leão's (2013) animation of text were applied to each video still to identify the process types, participants and circumstances and to examine how the concept of transitivity is realized in kinetic typography; (4) problems and difficulties were noted for further discussion (see the sixth column of Still No. 4 of Table 3 as an instance of these difficulties); (5) based on the possibilities and restrictions identified during the application, the existing transitivity networks were sorted and adapted for kinetic typography, and some new terms and categories were proposed; and (6) transitivity analysis was performed to identify the processes of each action and transformation of kinetic typography.

6. TRANSITIVITY ANALYSIS OF CCTV'S PSA 'FAMILY'

As mentioned in the previous part, the research intends to apply and review Kress and Van Leeuwen's (2006[1996]) and Leão's (2013) transitivity models to kinetic typography through analysing CCTV's PSA 'Family' as a case study. This section reports the application and reviewing processes followed by the analysis results. Based on the possibilities and limitations discovered during the application, the existing transitivity models are sorted and adapted. Finally, a richer transitivity model for analysing kinetic typography is proposed.

To have an overview of who is represented and what they do to or for each other, in short, to understand how ideational meaning is constructed in the advertisement, Kress and Van Leeuwen's (2006[1996]) and Leão's (2013) transitivity models were applied. Table 4 shows the analysis results of the participants and process present on CCTV's PSA 'Family'.

From Table 4, we see that seven types of processes are utilized. Out of the total of 63, actional processes are the most frequent, occurring in 28 (44.5%) of the video stills. The next most frequent processes – transformational existential – occur in 16 cases. The least frequent is the transformational attribute, occurring in only one case. It is obvious that CCTV's PSA 'Family' mainly deploys actional processes to realize ideational meanings. That is, the advertisement basically influences its audience through visually portraying actions of the participants. Transformational existential processes are used to represent the appearance and disappearance of letter clusters, or logos and slogans. The frequent appearance of the letters of 'FAMILY' as a cluster establishes both a

Table 3. Sample transcription and analysis of CCTV's PSA: Family.

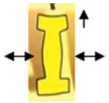
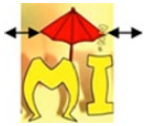
No.	Visual Images					Sound
	Animated participant (time)	*Kinetic actions*	*Gloss*	*Transactionality*	*Process types*	
2	Family (as a cluster) *(00:00)*		Appearing		Transformational (confined) *Existential*	
3	'I' *(00:02)*		Contracts and expands (breathing in and out)	Non-transactional	*Behavioral*	
4	'I' *(00:03)*		Contracts and expands (utering)	Non-transactional	*Emotional Behavioral? Actional?*	'Uh: Uh:' sound
5	'F' *(00:03)*		Angling toward (noticing 'I')	Transactional	*Mental*	
8	'M' *(00:06)*		Opening the umbrella	Transactional	*Actional*	
15	'F' *(00:12)*		Stretching out 'arms' (providing shelter and protection)	Transactional	*Actional*	

Table 4. Participants and Process Types in CCTV's PSA 'Family'.

Processes \ Participants	**F** (Father)	**A** (And)	**M** (Mother)	**I** (I)	**L** (Love)	**Y** (You)	Family (cluster)	Slogans and logos	Leaves	Rain-drops	**Total**
Actional	8		8	10					1	1	28
Behavioural	0		1	3							4
Verbal	2		2	0							4
Mental	2		0	0							2
Emotional	2		3	3							8
Transformational (Attributional)	0		0	0			1				1
Transformational (Existential)	0		0	0			9	7			16
Total	14	0	14	16	0	0	10	7	1	1	**63**

bond among the participants and the circumstance of setting of the story. A close observation of Table 4 reveals an interesting phenomenon: not all the participants in the advertisement are equally represented. While the letters 'F', 'M' and 'I' and letter cluster (also the word) 'FAMILY' are actively animated, the remaining three letters, 'A', 'L' and 'Y' remain inactive. Actually, the letter 'I' is most actively animated. The reason for this may be that the advertisement wants to represent a typical one-child Chinese family. It could also be that the advertisement is focusing only on 'I', the one who is watching the advertisement, and the spectator who is asked for the duty. I'm watching the advertisement, I identify myself, 'I' take on the duty no matter whether I have siblings or not. The one who ultimately says, 'Mother and father I love you.'

Table 4 also shows that besides actional and transformational processes, behavioural (4 cases), verbal (4 cases), mental (2 cases) and emotional (8 cases) processes are also deployed. While actional, verbal and mental are categories in Kress and Van Leeuwen (2006[1996]), and while transformational is included by Leão (2013) and behavioural by Halliday (1994), emotional is a new category. The reason why we retained the behavioural and proposed the emotional process type will be discussed in section 7 below.

7. POSSIBILITIES AND LIMITATIONS OF THE VISUAL TRANSITIVITY MODELS

As shown in the previous section, Kress and Van Leeuwen (2006[1996]) and Leão's (2013) models are basically applicable in analysing the ideational meaning realizations in CCTV's PSA 'Family'. For instance, actional processes are saliently deployed to represent the actions to tell the love story of the three highlighted participants, the animated letters of 'F', 'M' and 'I', and transformational processes, especially, transformational existential, are utilized to represent the appearance and disappearance of the letter clusters of 'FAMILY' and slogans to visually realize the element setting of the story. At the same time, however, we also detected some limitations of the present models in the course of application. Some processes were difficult to analyse and some processes such as mental and verbal processes are differently realized in kinetic typography in terms of Kress and Van Leeuwen (2006[1996]) and Leão (2013). These differences are discussed in detail below.

First, the behavioural processes, in Halliday's verbal language transitivity model, refer to human or animal physiological and psychological processes in which inner events are externalized as bodily behaviour, like staring, coughing, sleeping, breathing or crying (Halliday, 1994). The processes are typically represented in language by a conscious being participant called Behaver and a behavioural verb like *stare, chatter, smile, sigh, breathe, cough, dance*, etc. In Kress and Van Leeuwen's (2006[1996]) account of visual transitivity, however, behavioural processes are not labelled as a separate type. They would presumably analyse cases of this kind as 'non-transactional reactions' (pp. 76–77), which they define as human or human-like actors' behaviour of

'looking'. However, in CCTV's PSA 'Family', some physiological behaviours other than 'looking' are represented. They are more akin to Halliday's behavioural processes. Table 5 shows the distinctive features of this type in details.

Table 5 lists four types of bodily behaviours of the animated letters of 'I', 'M' and 'F', breathing, coughing, and trembling. They are akin to Halliday's behavioural processes in that the animated letters are anthropomorphized as conscious human Behaver to behave the physiological processes. However, the realization is different. Some different visual and aural resources are utilized to 'deliver' the behaviours. For instance, the process of breathing of 'I' in video stills No. 3 and trembling of 'M' in No. 45 are realized by visual signs only, without any sound effect accompaniment. The signs include slow body part expanding and extracting together with additional visual signs of 'ZZZzzz' coming out of the 'mouth' in No. 3 and the body trembling movement with some wavy lines around the body in No. 45. Next, the process of coughing of 'I' in No. 10 and No. 18 is realized jointly by both visual signs and aural accompaniment. Visual signs include rapid expanding and contracting of the 'body' in No. 10 and No. 18 with some 'drops' of nasal mucus running from the 'nose' in No. 10. Aural accompaniment includes the sound effects of coughing and sneezing and music. These processes are more akin to Halliday's behavioural than Kress and Van Leeuwen's reactional processes. Therefore, we propose to retain it as a separate process in our transitivity model.

Second, mental process and verbal process are two separate processes in Halliday's (1994) verbal language grammar. The former is defined as a process of feeling, sensing and seeing, and the latter, as a process of saying. In Kress and Van Leeuwen (2006[1996]), the two are similar processes in that both are visually represented by some visual structure devices such as oblique protrusions of thought balloons or dialogue balloons emanating from the senser's head or the speaker's mouth. However, the two processes are differently represented in CCTV's PSA 'Family'. The visual realizations of the mental process are listed in Table 6.

From Table 6, we can see that the mental processes in the kinetic typography of this advertisement are somewhat differently realized from those discussed by Kress and Van Leeuwen (2006[1996]). Here, the mental process is one of 'noticing' rather than just 'looking' in Kress and Van Leeuwen's sense. This noticing process is realized by the movement of the upper part of the letter 'F' as it angles towards 'I', who is also present on the screen. The visual resources deployed are animated actions instead of mental balloons

The verbal processes of stills No. 12, No. 13, No. 24 and No. 32 are also realized differently from Kress and Van Leeuwen (1996/2006). The realizations are shown in Table 7.

We find that visual resources such as the moving of 'small lips of the mouth' of the 'F' in No. 12 and No. 24 and the 'M' in No. 32, and the rapid vertical expanding and contracting of the letter 'M' in No. 13 are all accompanied by some onomatopoetic sound effects, such as whistling and bird-singing-like

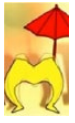
Table 5. Visual realizations of behavioural processes in CCTV's PSA 'Family'.

Video stills	Participant	Verbal descriptions		Visual realizations	Sound accompaniment
		Denotative	*Connotative*		
No. 3	'I'	Slow expanding and contracting of the 'body' part of the letter 'I'	Breathing in and out		None
No. 10	'I'	Rapid expanding and contracting of the 'body' part of the letter 'I'	Coughing and sneezing		Coughing sound
No. 18	'I'	Rapid expanding and contracting of the 'body' part of the letter 'I'	Coughing		Coughing sound
No. 45	'M'	The 'body' of the letter 'M' trembling	Shivering because of being cold		None

Table 6. Visual representation of mental processes in CCTV's PSA 'Family'.

Video stills	Participant	Verbal descriptions		Visual realizations	Sound accompaniment
		Denotative	*Connotative*		
No. 5	'F'	The upper part of the letter 'F' angling towards the letter 'I'	Noticing		None
No. 9	'F'	The upper part of the letter 'F' angling towards the letter 'I'	Noticing		None

Table 7. Visual representation of verbal processes in CCTV's PSA 'Family'.

Video stills	Participant	Verbal descriptions		Visual realizations	Sound accompaniment
		Denotative	*Connotative*		
No. 12	'F'	The lips of the 'mouth' of letter 'F' moving	Uttering (calling attention)		Three whistling sounds
No. 13	'M'	Rapid vertical expanding and contracting of the letter 'M'	Uttering (responding to call)		Two whistling
No. 24	'F'	The lips of the 'mouth' of letter 'F' moving	Uttering (criticizing)		Generic uttering sounds
No. 32	'M'	Generic forms (signs such as #$%&*%) of signs coming out of the 'mouth' of the letter 'M'	Uttering (criticizing)		Generic uttering sounds of scolding

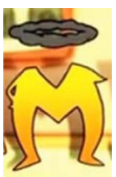
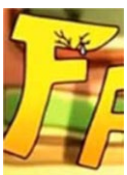
utterances. This is further enhanced by some visual signs of onomatopoetic sound effect expressions (Guynes, 2014) such as '@#$%&…' emanating from the 'mouth' of the 'M' in No 32.

Third, when analysing the advertisement, we also confronted some processes which were difficult to categorize in the process types in Kress and Van Leeuwen's (2006[1996]) or in Leão's (2013) transitivity model but are saliently in CCTV's PSA 'Family'. For example, the letter 'I' is showing feelings of satisfaction at the beginning of the advertisement and after 'M' cradles him. 'F's' fractured arm is showing 'being hurt'. 'M' is being annoyed, becoming angry and losing her temper. 'F' and 'M' are feeling sad, etc. Obviously, participants in these processes are performing one common function. All are expressing their psychological feelings or emotions such as satisfaction, discomfort, anger, fear, being annoyed and losing temper. Due to this common property, we thus propose a process type called emotional processes. The processes were so categorized and named because certain visual and aural resources are employed to realize meaning. Table 8 shows how these feeling and emotions are represented visually in kinetic typography.

Table 8 shows that both visual and aural resources are used to construct emotions. The first pattern is the 'visual-only' realization of the emotions of discomfort and losing temper in video stills No. 4, No. 11 and No. 29. The resources include the signs 'ZZZzzz' coming out of the letter 'I', a drop of nasal mucus running from the 'nose' of the letter 'I', and a puff of fire coming out of the letter 'M'. The second pattern is formed by the 'visual plus aural' realizations in No. 21, No. 27, No. 31, No. 34 and No. 35. For example, in No. 21, the feeling of satisfaction is realized through a combination of the visual sign 'ZZZzzz' coming out of the letter 'I' and the 'uh:, uh:ah' sound. In No. 27, the emotion of being hurt is realized through lines of fracture appearing on the stretched 'arm' of the letter 'F', accompanied by a cracking sound. In No. 31, the emotion of losing temper is realized through a puff of smoke coming out of the letter 'M' and imitative utterance (like bird-singing sound) of scolding. And in No. 34 and No. 35, the emotion of grief is realized by teardrops running from the 'eyes' of 'M' and 'F', together with the sound of weeping. On the basis of instances of this kind, we propose that emotional process be added to the previous transitivity models.

Another way for us to understand emotional processes as a special kind is to examine them in dynamic and multimodal artifacts. Our close observation revealed that the expressive processes are mostly not represented in a single process; rather, they are the results of an orchestration of a series processes. Leão (2013) recognizes these simultaneous or successive processes in animation as clustered processes. In the case of CCTV's PSA 'Family', for instance, the processes of being hurt in still No. 27 can be also understood this way after a series of steps with several processes within it. The letter 'F"s arm is stretching, 'I' is jumping twice and hitting 'F"s arm, and finally a 'fracture' appears in 'F"s arm. So we have four processes here: (1) stretching arm (Attributional);

Table 8. Visual representation of emotional processes in CCTV's PSA 'Family'.

Video stills	Participant	Verbal descriptions		Visual realizations	Sound accompaniment
		Denotative	*Connotative*		
No. 4	'I'	Signs 'Z Z Z' coming out of the letter 'I'	Uttering discomfort		None
No. 11	'I'	A nasal mucus running from the 'nose' of the letter 'I'	Showing discomfort		None
No. 21	'I'	Signs 'ZZZzzz' coming out of the letter 'I'	Uttering satisfaction		Uttering 'uh:, uh:ah' sound
No. 27	'F'	A fracture appearing on the stretched 'arm' of the letter 'F'	Getting hurt		Cracking sound
No. 29	'M'	A tongue of flame coming out of the letter 'M'	Being angry		None
No. 31	'M'	A puff of smoke coming out of the letter 'M'	Losing temper		Generic utterance of scolding
No. 34	'M'	Teardrops running down from the 'two eyes' of letter 'M'	Shedding tears to show grief		Weeping sound
No. 35	'F'	Teardrops running down from the 'eyes' of the letter 'F'	Shedding tears to show grief		Weeping sound

(2) 'I' jumping (Actional); (3) arm cracking (Attributional); and (4) a 'fracture' appearing (Existential). The effect of being hurt in fact realized through the working together of four processes plus some sound effects. Another example is still No. 34. The expressing of showing grief is represented through the process of continuous appearance of drops on top of 'M"s upper part (Existential) + the falling of the drops down (Actional) + an up and down movement of 'M"s shoulders (Attributional). These processes happen while we can hear weeping and breathing sounds (aural signs). It is obvious that different multimodal resources are working together to express the idea.

Finally, some visual and aural realizations of circumstantial elements in CCTV's PSA 'Family' have to be mentioned. First, locative and spatial circumstances are mainly realized by the drawings of a window and a door on a wall, some tables and chairs signifying a family's space (in the first half of the advertisement) and drawings of some trees, chairs on the street side and tall buildings signifying society's space (in the second half of the advertisement). This change of background from a family to a whole society implies a transfer of this particular instance of the traditional Chinese value of a reciprocal love and care of family members to the whole society. Second, some visual images, such as the umbrella, the walking stick, the two leaves, raindrops, etc. serve as instrumental circumstances. Interestingly, two leaves flying by the growing letter 'I' are used to realize time duration. In addition, colour also participates in meaning making in this advertisement. As Van Leeuwen (2011: 85) points out, colour plays a particular role in contemporary life in two aspects: identity and textual meaning making. In terms of identity, the mainstream colour of yellow of the letterforms and background drawings is deployed by the advertisement to represent the yellow-skinned Chinese national identity and to signify a lifestyle of warmth of care and love among family members. In terms of textual meaning, the colour and its warm temperature occurring throughout the advertisement help to unite the different scenes of the story as a whole.

To summarize what we have found so far in CCTV's PSA 'Family', we return to the first two research questions of this article and see to which extent they have been answered. As for the first question (What are the possibilities and restrictions of the transitivity models of Kress and Van Leeuwen, 2006[1996], and Leão, 2013, when applied to the analysis kinetic typography of CCTV's PSA 'Family'?), the case study of CCTV's PSA 'Family' has demonstrated that Kress and Van Leeuwen's and Leão's models are basically applicable in analysing ideational meaning making in kinetic typography. To be specific, Kress and Van Leeuwen's (2006[1996]) actional, mental and verbal process in narrative structures can be applied effectively, but other processes such as reactional and conversion and the processes in conceptual structures did not apply to this case. Leão's (2013) transformational processes also worked well, especially in the analysis of the animation of letter clusters to uncover the circumstantial meaning making of the story. Also, we found that Leão's category of clustered processes is useful in interpreting the multimodal artifacts of our

expressive processes. At the same time, we also detected some restrictions or limitations of their models. Since both models were originally designed for visual mode only, when they were applied to kinetic typography in CCTV's PSA 'Family', other multimodal resources such as sound effect and music and orchestration of different resources to realize emotive meaning could not be considered. Further, we found that the mental processes in our example could not be fully analysed with Kress and Van Leeuwen's categories, that the behavioural processes from Halliday's model are profusely utilized in the advertisement, and that some processes that were common in the advertisement could not be categorized with the existing models.

As for the second research question of this article (What semiotic resources are employed in kinetic typography by CCTV's PSA 'Family' to express ideational meanings to persuade the public?), our process analysis has shown that animated actions of the three letters of the English word 'family', 'F', 'M', and 'I' are mostly deployed to narrate the theme and ongoing story of Chinese love among family members, and that the appearance or disappearance and transformation of letters, especially word clusters and slogans, is heavily used to reinforce the setting or context of the story. Other processes, such as behavioural, mental, verbal and emotional processes, though small in number, are also saliently or uniquely utilized in the advertisement. One of the most interesting findings of the process analysis is that the advertisement employed a series of visual signs, such as teardrops, sweat, ZZZzzz, fracture, a puff of smoke, fire flames and waving lines to realize different bodily behaviours, speech acts and emotions of the typographic actors. Another finding is that these animated actions are often accompanied by various kinds of sound effects.

Based on the fact that some processes such as behavioural, mental, verbal and emotional have common features of expressing feelings, opinions, emotions and so on, we have categorized as Expressive, forming a third major type of processes, along with actional and transformational processes. Our proposal of transitivity model for kinetic typography is shown in Figure 1.

Figure 1 adapts Kress and Van Leeuwen's (2006[1996]) and Leão's (2013) transitivity models to kinetic typography. Kress and van Leeuwen's actional, mental and verbal process and circumstances, and Leão's transformational process are included, along with Halliday's behavioural process and the emotional process proposed above. Table 9 elaborates the distinct realizations of these processes.

While the realizations in Kress and Van Leeuwen's model are largely through the presence of vectors or a visual structure in static modes of communication, and those in Leão's are mostly in superficial changes of animated text, the realizations in kinetic typography in our model are applicable to dynamic animated texts. What is more, other modal resources such as sound and music are also considered. For the analysis of a dynamic audiovisual

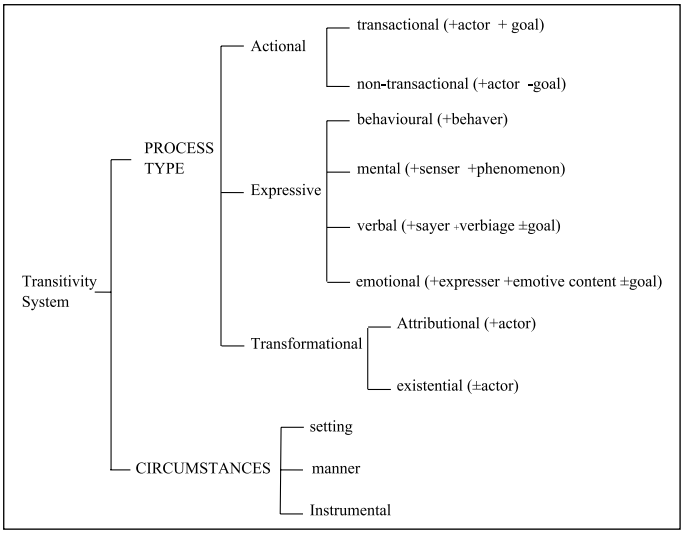


Figure 1. Transitivity system of kinetic typography.

text like CCTV's PSA 'Family', we argue that both visual and aural modes of resources should be addressed to uncover the ideational meanings.

8. DISCUSSION: A PROVENANCE AND CROSS-CULTURAL PERSPECTIVE

So far we have focused on the first two of the research questions. The third research question (Why does the CCTV's PSA 'Family' deploy the English word '*family*' and its animated letters to tell a Chinese story?) remains unanswered. Obviously, there is a need of putting it in a broader social context and 'positioning signs within the context of socially constructed discourse formations rather than as isolated phenomena' (O'Halloran et al., 2011: 109–110). To this end, in what follows, we draw on Kress and Van Leeuwen's (2001) and Van Leeuwen's (2001) concepts of denotative and connotative layers of meaning of visual semiotics and provenance of modal resources to conduct an extended analysis on CCTV's PSA 'Family'.

According to Kress and Van Leeuwen (2001) and Van Leeuwen (2001), a profound interpretation of visual multimodal text can be achieved through examining two different layers of meaning, *denotation* and *connotation*. The layer of denotation realizes the literal message of 'what, or who, is being depicted here' (Leeuwen, 2001: 94). At this level, analysts are interested in the factual information presented to the audience. By contrast, the connotation level conceptualizes much wider socio-cultural ideas and values which the represented participants 'stand for' (p. 96). It is from this layer of meaning that Kress and Van Leeuwen (2001: 23) proposed a notion called *provenance*. Provenance refers to the idea of involving or 'importing' signs from one context (another era, social group, culture) into another, in order to signify the ideas

Table 9. Realizations of the transitivity system of kinetic typography.

Processes and participants	Realization statements
Transactional actional	A visual movement is performed by an animated letter (Actor) on another letter (Goal) which is visible on the screen. The movement may be accompanied by a sound effect.
Non-transactional actional	A visual movement is performed by an animated letter (Actor), but is not acted on any other participant. The movement may be accompanied by a sound effect.
Actor	The image of an active participant is the animated letter by which the action is performed.
Goal	The image of a passive participant is the animated letter on which the action is performed.
Expressive processes	Bodily or mental feelings, verbal speech, or emotions are emanated (projected) from the participant through visual signs such as non-linguistic or imitative utterance or through a change of a part of the letter accompanied by sound effect such as onomatopoetic words.
Behavioural process	Bodily behaviours, such as breathing, shivering, or coughing and sneezing are emanated through animated changing of the body of the letter and/or through visual signs projected from the letter, and may be accompanied by sound effects such as weeping, etc. Behavioural process is non-transactional.
Behaver	The image of an active participant is the animated letter from which bodily behaviours emanate.
Mental process	The change of the upper part of the letter to angle towards the goal creates a body line vector from the Senser to the Phenomenon, representing the process of noticing, which may be accompanied by sound effect. The noticing process in transactional.
Senser	The participant who performs the action of noticing.
Verbal process	The process is visually realized by movements of the 'mouth' of the letter and/or graphic symbols of imitative utterance, and/or aurally accompanied by sound of onomatopoetic words or whistles. The process is transactional when the target is visible on the screen and non-transactional when the target is invisible.
Sayer	The image of the letter from which an utterance emanates.
Verbiage	Graphic symbols and sounds representing utterances such as coughs, whistles, etc.
Emotional process	Animated symbols or images, either accompanied or unaccompanied by sound effects, represent the emotions of an Expresser.
Expresser	The animated letter from which certain emotive content emanates.

Table 9. (Continued)

Processes and participants	Realization statements
Emotive content	Emotive content is realized by visual symbols or images, such as 'ZZZzzz', nasal discharge, and a puff of fire or smoke and may be accompanied by sound effects.
Transformational attributional	The changing, altering or transforming of the whole or part of a participant, Actor, is realized through animations and/or with sound effects.
Transformational existential	The material visibility of, usually, clusters of words or letters is realized through the animated process of appearing and disappearing from the screen.
Setting	Settings are realized by background images, often drawn or painted in less detail or in soft focus.
Manner	Manner is realized through the speed of the animated action and/or sound effect.
Means	Means is realized by the image of a tool with which a participant performs an action.

and values associated with that other context by those who do the importing. They derive the notion from Barthes' (1975[1972], 1977) concepts of 'myth', which function by importing 'parasitical' signs from other contexts into the system; that is, 'signs which use an already formulated "literal" or "denotative" sign and load it with a secondary or connotative meaning which then pushes the literal, denotative meaning into the background' (Kress and Van Leeuwen, 2001: 72). The importance of examining provenance in multimodal text is that it invokes the meaning potential of cultural myths and stereotypes which can signify whole discourse together with certain ideological meanings, positive or negative, attached to them (p. 73).

Certainly, the results of the case analysis of CCTV's PSA 'Family' can be perceived at these two levels of interpretations. At denotation layer, 'what, or who is being depicted' is the English word 'FAMILY' and its composing letters serving as human-like actors of reciprocal love and care among family members in China. Obviously, the target audience of the advertisement is the general public of China and the overall objective is to persuade them to act on the value it advocates. At the connotation layer, we find the practice of provenance of some global form of signs, an English word and Roman alphabetic letters as typographic actors to signify the traditional Chinese value of dutiful and filial-hearted love and care of young generation to the old generations in family and throughout the whole society. That is, CCTV's PSA 'Family' 'borrows' English signs to tell a Chinese story to Chinese people. Then why is there such provenance? We believe that there are several possible reasons. First, the rapid progress of linguistic globalization and the linguistic

imperialism of English have inevitably influenced the design and distribution of message in mass media (Machin and Van Leeuwen, 2007). CCTV's PSA 'Family' is an example of the cross-cultural and linguistic globalization influence on advertising. The local adoption of English letters provides new insights of a change of design in Chinese advertising. However, in a context where English is a foreign language, the word image 'FAMILY' and its string of Roman letters are not available to everyone. Then how do they make sense in a Chinese context? Fortunately, the anecdote interpretation of the word 'family' = 'Father and mother, I love you' and the typographic meaning potential entered the young designer Zhang Deyuan's consciousness. He realized this affordance of English and the absence in Chinese language. When one semiotic mode is absent, a way of signifying a discourse is through attaching a discourse to a signifier imported from another place, another time, another culture or another social group (Kress and Van Leeuwen, 2001: 73). Another reason why the English word and characters are used may be that the advertisement is targeting the new Chinese generations. The designers and CCTV are well aware that modern Chinese young adults are learning and speaking and becoming more cosmopolitan. More of them are travelling and studying abroad and thus being influenced by the Western culture. Finally, this imported typographic meaning potential was further extended by the designer through an innovation of animating and personifying the letters in a dynamic process. Other multimodal resources such as the yellow colour of the letters and the background, stereotypical way of representing family members (e.g. father as heroic protector, mother as a tender caretaker of a family) were deployed to anchor the '*Chinese-ness*' connotation in the advertisement. All these, as a result, helped invoke great emotion impact and had far-reaching effects to persuade the public, especially the young, to take the view the advertisement advocates.

Besides these visual and aural modal resources, several points are noteworthy here. First, language plays a complementary or marginal role in meaning making in the advertisement. The Chinese captions (see Table 2) narrate a complete family story typical to Chinese 'one-child' family and contain some four-character Chinese idioms such as '高大魁梧' (meaning *tall and burly*), '温柔贤惠' (*gentle and virtuous*), '少不更事' (*being wet behind the ears*) and '细心呵护' (*tender caresses*). These help anchor the 'Chinese-ness' connotations that are available for the understanding of the general public in China. Second, when comparing captions with image, we found that they are confirming each other in most cases. That is, what is described in the captions is in accordance with visual images. However, there are discrepancies. For example, in the caption, one part of a Chinese sentence, 'Gentle and virtuous Mom assisted Dad' is not visually shown on screen. Another example is a line that says, 'I always wanted to get rid of Dad's restrictions' but the visual images on the screen are "I" jumping up and down and striking the stretched arm of "F"'. Last, the narrative elements and CCTV's strategy of persuasion should

also be noted. Throughout the advertisement, the animations of the actions of each letter performing love and care to each other are narrative elements to entertain the audience. However, before the point '*As time went by*', in the background we found some pictures such as a door and a window on the wall, an electric fan on the ceiling and a chair and table on the floor, signifying an environment of a family where the actions are taking place (see video stills 1 to 11 in Table 1). But, after that point, the background changes into pictures of some buildings, trees, a bench and a lamp by the side of the street and some clouds in the sky, signifying a context of a society at large (see video stills 12 to 17 in Table 1). In Chinese tradition, family is the basic unit of the whole society. Clearly, CCTV wants the advocated practice of family love and care between old and young to extend to the whole society. At present, there are too many old people in the country to be cared for by the young, who are becoming inadequate in number in comparison to the older generation, and the national underdeveloped pension system is constantly being criticized and challenged. Therefore, to normalize this practice is just what the Chinese government needs.

9. CONCLUSION

The analysis of CCTV's PSA 'Family' in previous sections of this article demonstrates our attempt to apply and extend the notion of transitivity of visual grammar to kinetic typography. As we have seen, Kress and Van Leeuwen's (2006[1996]) narrative structures (transactional and non-transactional action, verbal and mental processes, in particular) of visual transitivity are basically applicable for analysing the ideational meaning-making in animated text in kinetic typography. Leão's (2013) transformational processes of the transitivity system of animated texts are also feasible in unveiling the transformation meaning realizations of word or letter clusters in CCTV's PSA 'Family'. Based on the two models, our case study has also used process type analysis to uncover the contrasting representation patterns of narration of the story. In addition, some stereotypical representation patterns of the roles of family members and Chinese traditional value of love in family were detected. At the same time, we have found some restrictions of the two models. Kress and Van Leeuwen's (2006[1996]) model applies basically to still images and Leão's (2013) model does not elaborate the visual realizations of animated text. Based on these findings, we proposed our transitivity system of kinetic typography. The most significant contribution of our extension of the previous models is that our system not only contains and reorganizes the process types suitable for kinetic typography but also accounts for multimodal realizations of these processes. Other multimodal semiotic resources such as sound effect, music and colour are considered. Finally, based on Kress and Van Leeuwen's (2001) and Van Leeuwen's (2001) notion of denotation and connotation layers of visual meaning, we discussed why CCTV's PSA 'Family' deployed English words and letterforms to tell a Chinese story.

Like any other studies, our study is not without its limitations. The most obvious is the small scale of the data collected from a purposive sample, a short PSA of one minute and 38 seconds on national television of China. Most instances of provenance were only case specific. However, the contribution of this case study obviously outweighs its limitations. The rich and in-depth insights obtained from the intriguing data with some unique and not-yet-understood features enabled us to formulate theoretical principles and models in this rather uncharted area. As Dörnyei (2007: 155) points out, 'The case study is an excellent method for obtaining a thicker description of a complex social issue embedded within a cultural context. It offers rich and in-depth insights that no other method can yield.' In the future, more examples and data need to be collected to tap into more multimodal resources for meaning-making in kinetic typography. Needless to say, as an analytical instrument, our transitivity system is subject to further development and improvement.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Professor Theo van Leeuwen, who gave me insightful guidance, patient encouragement and kind supervision in the drafting of this paper while I was on my scholarly visit to the Faculty of Language and Communication at the University of South Denmark from September 2013 to March 2014. I am also grateful to the anonymous reviewers, as well as the editorial team, of *Visual Communication* for their insightful and invaluable comments and suggestions that have helped me enormously in the revision of this paper. However, I am solely responsible for errors that may remain.

FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REFERENCES

Baldry, A. and Thibault, P.J. (2006) *Multimodal Transcription and Text Analysis*. London: Equinox.

Barthes, R. (1972[1957]) *Mythologies*, trans. A Lavers. London: Jonathan Cape.

Barthes, R. (1977) *Image-Music-Text*. London: Fontana.

Bezemer, J. and Mavers, D. (2011) Multimodal transcription as academic practice: A social semiotic perspective. *International Journal of Social Research Methodology* 14(3): 191–207.

Cheng, H. and Chan, K. (2009) Public service advertising in China: A semiotic analysis. In: Cheng, H. and Chan, K. (eds) *Advertising and Chinese Society: Impacts and Issues*. Copenhagen: Copenhagen Business School Press, 203–221.

Chew, J. (2014) What is kinetic typography? Available at: http://animation.about.com/od/recommendedreading/fl/What-is-Kinetic-Typography.htm (accessed 8 July 2014).

Cook, G. (2001) *The Discourse of Advertising*, 2nd edn. London: Routledge.

Dörnyei, Z. (2007) *Research Methods in Applied Linguistics: Quantitative, Qualitative and Mixed Methodologies*. Oxford: Oxford University Press.

Fairclough, N. (2001) *Language and Power*, 2nd edn. London: Longman.

Guynes, S.A. (2014) Four–colour sound: A Peircean semiotics of comic book onomatopoeia. *Public Journal of Semiotics* 6(1): 58–72.

Halliday, M.A.K. (1994) *An Introduction to Functional Grammar*. London: Arnold.

Jewitt, C. (2009) An introduction to multimodality. In: Jewitt, C. (ed.) *The Routledge Handbook of Multimodal Analysis*. London: Routledge, 14–27.

Kress, G. and Van Leeuwen, T. (2006[1996]) *Reading Images: The Grammar of Visual Design*. London: Arnold.

Kress, G. and Van Leeuwen, T. (2001) *Multimodal Discourse: The Modes and Media of Contemporary Communication*. London: Bloomsbury.

Leão, G. (2013) A systemic functional approach to the analysis of animation in film opening titles. PhD thesis, University of Technology, Sydney.

Machin, D. and Van Leeuwen, T. (2007) *Global Media Discourse: A Critical Introduction*. Abingdon: Routledge.

Malik, S., Aitken, J. and Waalen, J.K. (2009) Communicating emotion with animated text. *Visual Communication* 8(4): 469–479.

O'Halloran, K.L., et al. (2011) Multimodal analysis within an interactive software environment: Critical discourse perspective. *Critical Discourse Studies* 8(2): 109–125.

Schweitzer, J.C. (2009) Cultural values reflected in Chinese advertisements: A critical analysis. In: Cheng, H. and Chan, K. (eds) *Advertising and Chinese society: Impacts and Issues*. Copenhagen: Copenhagen Business School Press.

Stock, O. and Strapparava, C. (2008) Ironic expressions and moving words. *International Journal of Pattern Recognition and Artificial Intelligence* 22(5): 1045–1057.

Stöckl, H. (2005) Typography: Body and dress of a text – a signing mode between language and image. *Visual Communication* 4(2): 204–214.

Stone, R.B., Alenquer, D.P. and Borisch, J. (2004) Type, motion and emotion: A visual amplification of meaning. In: McDonagh, D., et al. (eds) *Design and Emotion*. London: Taylor & Francis, 212–219.

Van Leeuwen, T. (2001) Semiotics and iconography. In: Van Leeuwen, T. and Jewitt, C. (eds) *Handbook of Visual Analysis*. London: Sage, 92–118.

Van Leeuwen, T. (2005a) *Introducing Social Semiotics*. London: Routledge.

Van Leeuwen, T. (2005b) Typographic meaning. *Visual Communication* 4(2): 137–143.

Van Leeuwen, T. (2006) Towards a semiotics of typography. *Information Design + Document Design* 14(2): 139–155.
Van Leeuwen, T. (2011) *The Language of Colour: An Introduction*. London: Routledge.
Yu, N. (2011) Beijing Olympics and Beijing Opera: A multimodal metaphor in a CCTV Olympics commercial. *Cognitive Linguistics* 22(3): 595–628.

BIOGRAPHICAL NOTE

Xianzhong He (何献忠) is an Associate Professor in the School of Foreign Languages at Chang'an University, Xi'an, China. His research interests include (critical) discourse analysis of media and textbooks, social semiotics and multimodality in public communication, corpus linguistics and language testing.
Address: School of Foreign Languages, Chang'an University, PO Box 337, Middle Section of Nan'erhuan Rd., Xi'an, 710064, Shaanxi Province, China. [email: xianzhongh@126.com]