Telop, Affect, and Media Design: A Multimodal Analysis of a Japanese TV Program

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Abstract

Japanese and other Asian TV producers have been deploying multi-colored, and highly visible, intra-lingual captions on TV programs to enhance their appeal and to influence their viewers' interpretations. The practice of adding these captions is far from innocent and is prone to abuse and overuse due to the lack of official guidelines and an evidence base. We conducted a multimodal analysis within the framework of relevance theory to provide an empirically supported insight into the way in which these captions, known as "telop" in Japan, form part of a production's deliberate and careful media design. Our findings suggest that telop are deployed in conjunction with other communicative resources that are deliberately used to influence viewers' interpretations, to enhance and make affective values in TV programs more explicit. The increasing use of diegetically integrated captions elsewhere further justifies the need for critical TV and new media research on telop.

The research literature on TV and new media published in English has ignored post-production editing techniques of adding the same language captions used outside of the Anglophone world. A case in point is a unique form of TV captions that has been a regular feature of Japanese TV for some time. The brightly colored texts occupy a sizable part of the screen in many Japanese domestic programs.

The term *telop* was derived from the name of the American equipment *television opaque projector*, which was prevalently used in the pre-computer era to project different types of images onto a TV screen. Telop are open captions that cannot be turned on or off by the viewer, as opposed to closed captions, which are also referred to as subtitles for the deaf and the hard-of-hearing (SDH) in the United States. With distinct appearances and further added effects, telop instantly defy the Western norms for typical intra-lingual subtitles (Díaz-Cintas and Remael 2007, 14). Instead, television producers typically use telop to attract viewers' attention to a selected element in a specific scene from a given program. These captions can therefore be

considered to be a purposeful media design component rather than a mechanism to transmit spoken utterances faithfully, as in the case of SDH (O'Hagan 2010).

Since the late 1980s, when telop were first used on screen in Japan to enhance TV programs' entertainment value, their quantity and variations in style have grown steadily (Shitara 2011). "Variety shows"—an entertainment program genre incorporating more than one type of content (Koga 2013, 68)—use them most commonly, although the use of telop is also increasing in news programs, which may be considered part of tabloidization (cf. Kawabata 2006). They have spread to China and Korea, where Park (2008) calls them "impact captions." More recently telop can be linked to so-called integrated titles, which are diegetic texts intended to be part of the narrative, as illustrated by the BBC's *Sherlock* series (e.g., Kruger et al. forthcoming). These integrated titles, a.k.a. "authorial titles" (Pérez-González 2012), are becoming more common in the West and are novel in that they break the priority typically given to visual, non-verbal images (i.e., faces and scenes) over visual, and verbal texts on screen. This trend can potentially evidence how TV producers on a global scale are exploiting textual inserts as a new form of meaning making on screen, and hence a new way to enhance their programs and their reception.

Telop are usually inserted in post-production editing, largely based on the editors' or directors' intuitions, and not on evidence-based practices based on industrial or official standards. However, the lack of agreed-on standards does not necessarily mean the use of telop is totally intuitive. Rather, the industry seems to have developed tacit guidelines shared inside the industry itself, with different TV stations or productions developing their own specific styles. TV producers and directors in Japan whom we contacted confirm that the industry is well aware of the power of telop to manipulate viewers, and, further, that the industry has been accumulating telop know-how, despite the absence of codified standards (Personal Communication Yamamoto 2016). Nevertheless, the lack of standards remains problematic as it has led to a number of ethically inappropriate uses of telop, as well as technical errors, such as in synchronization. These errors have caused serious consequences in some cases (Kato 2012). For example, on March 13, 2016, Nihon TV used a telop that represented only part of an utterance by Japanese Prime Minister Shinzo Abe at the Liberal Democratic Party's (LDP) annual convention. The selective captioning in this case resulted in the perception that the Prime Minister had hinted he would use dirty tactics to win the upcoming election when in fact, he was criticizing the opposition parties' strategy to gather force to go against the LDP. Similarly, the Western newspaper *The Independent* reported on June 29, 2015, that a Japanese current affairs show displayed an inaccurate telop over utterances by South Korean interviewees. The telop read as though the interviewees had expressed their hatred toward Japanese people, adding fuel to the fire in view of the long-standing problematic relationship between Japan and Korea (Sehmer 2015).

Such a state of affairs calls for a critical assessment of these captions, especially because telop are so public and audiences have no choice but to watch them. This article seeks not only to inform TV and new media scholars globally of the little-known regional TV editing practices that are common in parts of Asia but also to raise

awareness of the potential link between these pre-existing examples and the current increasing use of integrated titles in the West.

As an initial step, we conduct a systematic analysis of the way in which an actual Japanese TV program uses telop together with other added effects. In so doing, we aimed to investigate empirically the way in which they are applied to influence viewers' interpretative processes. This analysis will show how telop, as part of the program, are integrated deeply into the complex layers of representations delivered through other communicative modes. In particular, using a popular Japanese variety show as our primary data, we focus on how telop are presented on the TV screen with many semiotic modalities. This led us to a second step, in which we paid particular attention to multimodal meaning making and its consequences by examining telop in relation to other related effects. In this study, multimodality refers to "[t]he use of several semiotic modes in the design of a semiotic product" (Kress and Van Leeuwen 2001, 20). We also draw on relevance theory to articulate the way in which telop are purposefully deployed to increase the intended effects.[1] The next section presents our research question, which is then linked to our multimodal analysis methodology and relevance theory. That section is followed by a description of the research design, including tools and the coding method. We then present our data analysis, which is followed by a summary of the key findings and a conclusion.

Research Question and Framework for Methods and Theory

While the general consensus is that the role of telop is to incorporate TV producers' editorial intentions into their media designs (Kawabata 2006; O'Hagan 2010; Sasamoto 2014; Shiota 2003), there have been few studies that empirically examine how such media designs are realized in real-life programs. To this end, we provide further evidence of the way in which these captions are deployed in multimodal TV program environments to encompass both visual, non-verbal and visual, verbal elements. Our research question is,

> **Research Question 1:** How are telop deployed as part of the overall media design in an actual television program?

To answer this question, we will first outline our methodology and theoretical framework.

Multimodal Transcription Methods

To understand telop as part of media design, we needed a method that enabled us to examine the captions in relation to, rather than independent of, other modes of media communication with the viewers. We thus sought to situate our interest in telop in broader visual communication schemes to explicitly incorporate other elements that are an integral part of telop design, such as font selections. Our multimodal analysis was intended to enable us to understand the way in which different communicative

modes in a television program contribute individually and collectively to meaning making. Within this framework of multimodal analysis, telop and the other effects are modes, each with different meaning potentials. Jewitt (2014, 27) explains how multimodal research calls into focus "the interplay between modes to look at the specific work of each mode and how each mode interacts with and contributes to the others in the multimodal ensemble."

Even though the field of multimodal analysis has recently begun to be extended in response to the needs arising from the proliferation of audiovisual content (Jewitt 2014), the application of this framework to the analysis of subtitles and captions remains limited in the field of audiovisual translation (AVT). Among the paucity of studies is work by Taylor (2004), who used a multimodal transcription to illuminate subtitling strategies used in different types of media contents, including feature films, soap operas, and documentaries. Taylor's multimodal transcription develops a procedure introduced by Baldry (2000) and Thibault (2000) that captured the concurrent elements to subtitles, such as the time of the visual frame, the visual image, the kinesic action, and the soundtrack, as well as a meta-functional interpretation of how meaning is created in an audiovisual program. Although Taylor (2004, 170) found that such an approach is beneficial to translators, by making them simultaneously aware of all the elements in a given audiovisual text, multimodal transcription as a methodology has not yet been mainstreamed in AVT research, most likely due to its labor-intensive nature and the growing technological development of this field (see, for example, Doherty 2016). Yet, the increasing availability of computer tools, such as Computer-Assisted Qualitative Data Analysis Software (CAQDAS), has made multimodality studies more feasible and attractive to a broader array of fields (Flewitt et al. 2014).

In the context of our study, we examined telop in their natural surroundings, while focusing on the specific functions served by the captions from the holistic perspective of the TV program as a multimodal ensemble. We first identified units of analysis in accordance with the original multimodal transcription units used by Taylor (2004), namely, elements that are (1) caption related, and (2) related to actors on screen, as well as (3) those other added effects working in ensemble with the captions. We transcribed the telop, including their attributes as meta-descriptions, such as fonts and functions. The actor-related elements included their facial expressions (FEs) and the behaviors displayed with their utterances, although some of these had been captioned too. Furthermore, we transcribed other effects, such as canned laughter. In this manner, the totality of the audiovisual content was subject to a granular analysis, with telop acting as the reference points of the multimodal transcription method.

Theoretical Framework

We used relevance theory (Sperber and Wilson [1986/1995) to account for the role of telop in communication. Relevance theory is a cognitively grounded theory of communication; it explains why and how communication works in terms of two principles of relevance. First, the cognitive principle of relevance describes how human cognition tends to be geared to the maximization of relevance (Sperber and Wilson [1986] 1995, 260), that is, human cognition is organized in such a way that we pay

attention to what appears likely to create improvements to our representation of the world. This cognitive tendency leads to the second principle, the communicative principle of relevance, which describes how the hearer, upon recognizing this as a communicative act, presumes that the utterance is optimally relevant and looks for an interpretation compatible with this presumption (Sperber and Wilson 1986/1995).

While relevance theory has been developed most in the realm of pragmatics, and hence is often perceived to focus mainly on the implicit aspect of communication, its cognitive orientation allows for broader analyses of all cognitive experiences humans undergo, and not just those of a communicative nature. In fact, in recent years, scholars have started to work on affective dimensions of communication (e.g., Blakemore 2008, 2011, 2013, 2015; Pilkington 2000; Sperber and Wilson 2015; Wharton 2009). In relevance theory, the affective aspects of communication are considered to be a subset of "expressive" meaning, which includes the communication of non-propositional effects, such as impressions and attitudes. According to Sperber and Wilson (2015), one might have experiences and impressions that one does not necessarily communicate to others such as seeing a car coming, forming a belief that the meeting starts at 2 PM, and so forth. An impression is a sub-type of cognitive experience: one that involves a diffuse range of evidence, often emotional and/or sensory, yet pointing toward a certain conclusion. An impression is formed on an array of propositions that become more manifest in the particular context. The speaker might not entertain all propositions individually, but all together, they lead the speaker to draw a conclusion.

This cognitive account of an impression demonstrates cognition and communication are intrinsically linked; hence, such an account can be applied to phenomena that might not fall into the field of pragmatics in a conventional sense. Indeed, Sperber and Wilson's (2015) account of impressions may seem irrelevant to telop and their impacts on viewers at first glance. However the information conveyed by telop, especially the linguistic information, is "redundant" in that most of these impact captions are verbatim, albeit selective, textual representations of speakers' utterances. Therefore, it would be reasonable to claim that such captions communicate another layer of "meaning." By using telop, TV producers are thus making impressions manifest. The fact that telop involve communication beyond linguistically encoded meaning justifies the use relevance theory for our analysis. Indeed, attempts have already been made to account for the functions of telop using relevance theory (cf. Sasamoto 2014; Sasamoto and Doherty 2013; Shiota 2003).

Based on this relevance theoretic explanation for the rationale behind the design of impact captions, it is logical then to suggest that impact captions form part of the whole package of various effects that are also added to the content to provide cognitive and affective cues for the viewers. This means that TV producers intuitively exploit a cocktail of stimuli from multiple modalities to reinforce the intended effects on viewers. However, no studies have so far demonstrated empirically how impact captions interact with other stimuli via different channels in such multimodal contents, as most studies have focused on linguistic properties alone of samples of telop (cf. O'Hagan 2010; Sasamoto 2014; Shiota 2003; Shitara 2011). Yet, the affective dimension of

communication demands the incorporation of other semiotic resources involved in the presentation of telop. In the remaining sections, we attempt to unpack such orchestrated edits, focusing on the use of telop and their link to other editorial effects.

Research Design

In this study, we used an episode of *Honmadekka* ([*Is it Really True?*] Fuji TV 2009–present) that was broadcast and recorded in Japan on August 7, 2013. This variety show has scored high weekly audience ratings since its launch and it retains a prime-time scheduling slot to date (Nikkei Style 2011). *Honmadekka* uses a talk-show format with a well-established comedian as the host, a popular female newsreader as an assistant, a panel of experts selected for a given theme, and a group of celebrity commentators. During the show, each expert panelist presents an expert opinion related to the theme of the week. As indicated by the title of the program, it aims to surprise viewers by revealing lesser known scientific facts on a given topic. The theme of the studied episode was "summer heat." The didactic elements in the show are delivered in an informal, and often humorous manner. The host and the regular panel members constantly add comical touches to the otherwise serious topic.

From the sixty-minute episode, we selected twenty minutes for full transcription. We included all utterances to gain an overview of the multiple semiotic resources involved (Kress and Van Leeuwen 2001). We analyzed these data with NVivo software (Version 10) to show correlations among the coded elements. This approach was partly based on Koga (2013) who conducted quantitative research on telop using NVivo, focusing on the timing, frequency, and volume of telop in relation to the actual utterances made by different speakers. Unlike Koga, however, we focused less on these quantitative dimensions of the use of telop and more on the affective dimensions of communication in relation to telop. To do this, we imported into the software the video clips and transcribed captions, together with the temporal information based on each caption's screen display time as a reference point. We coded the transcription into collections of reference points, which were then matrix coded to find correlations. The actual act of coding was useful as it flagged the researchers' own potential coding bias, albeit implicitly, at a relatively early stage. That said, it is generally acknowledged in the literature (Boellstorff et al. 2012) that it is not possible to provide entirely unbiased coding. In total, 432 separate reference points were coded.

Table 1. A Summary of Key Coding Types of General Transcription.

	Coding categories					
	Affective cues			Speaker	Captioned utterance type	Typography	
Subc	Behavioral expression			Panelist	Response to expert discourse	Background	Keyword labeling
	Backchannel	Laughter	Smile				

Facial expression	Host	Expert	Speech
Contempt Disgust Happy Surprise		discourse	bubble
Sound effect	Expert	Banter	Textbox
Applause Backchannel Laughter Surprise			background
		Font	Serif
			Sans serif

Next, we used the screen capture software Camtasia Studio (Version 8) to create individual still-image frames to help visualize the complex layers of the multimodal contents. These still images were automatically marked with a time stamp, which we used to maintain temporal integrity for caption-centered transcription. As more than one caption can remain on the screen simultaneously at any given time with each caption appearing separately, timing was calculated from the time of entry of the first caption on screen to the time it was removed. The applicable frame was then transcribed according to the other stimuli observed within the same frame, both visual and aural. Transcription also included overlaid inset still images if appeared on the same scene. Utterances that were produced but not captioned within the time span were also transcribed to capture any pattern that differentiated them from captioned dialogue. Typographical features and other visual elements such as color, fonts, and background were also transcribed. This process allowed for affect-focused coding by giving us a corpus of actors' utterances or reactions that generated telop in the first place.

Affective cues in the program were divided according to (1) the actors' FE and bodily displays and (2) diegetic audience responses. Table 1 shows the key coding types and categories, followed by more detailed explanations for each affective category. Our approach generated a clearly attributed and more legible dataset for the purpose of classifying the intertwined multimodal data into the categories below.

Speakers and Utterance Types

Each caption was coded according to the speaker of the utterance, that is, the "host," "expert," or "panelist," as well as the type of utterances associated with each speaking role. Types of utterances were coded as main topic, banter, narrative, and referential. The label "main topic" referred to an expert panelist discussing a main topic or non-expert panelist's comments on the topic. The label "banter" identified utterances produced as part of mock or joking dialogue (cf. Culpaper 2011). "Narrative" referred to captions in which source utterances signaled a change of the narrative flow of the program. "Referential" captions were those depicting names of panelists.

Actors' Affective Cues

Based on our observation that the camera often focused on actors on the program who are not directly involved in the on-screen dialogue, this category includes the FE and bodily displays of other panel members. For the purpose of this article, we call

these panel members who are not the speaker of particular utterance *actor*. Ekman et al.'s (2002) codes for micro-actions in FEs were used, namely, (1) contempt FEs, (2) disgust FEs, (3) happy FEs, and (4) surprise FEs. The involvement of three trained coders ensured the level of accuracy and inter-coder reliability of the data. In addition, we coded behavioral displays by the actors' whole body movements as a behavioral expression (BE), divided into (1) smile BE, (2) laugh BE, and (3) backchanneling BE (e.g., nodding as indicative of agreement).

Audience Sound Effects as Affective Sound Effects

This category included canned sound tracks of laughter, surprise, applause, and backchanneling that was vocalized, such as sounds of an agreement. Each of these sound effects (SEs) was coded as (1) laughter SE, (2) surprise SE, (3) applause SE, and (4) backchannel SE.

Data Analysis and Results

The data analysis examined the correlations of (1) the telop, the actors' affective cues and other added effects and (2) the telop stylistic features and the intended impact on audiences. The findings show how telop in the sample was integrated deeply into the media design of the program to guide audiences' reactions using all available multimodal resources. Telop were designed to operate in concert with other affective cues to achieve the intended effects.

The Correlation between the Actors' Affective Cues and the Telop, Together with the Other Editing Effects

Table 2 shows the number of correlated occurrences for each coded category:

As shown in Table 2, each coded element is almost always used in conjunction with other stimuli, creating an environment in which viewers are showered with multiple stimuli. The results show that telop closely echo the actors' affective cues, while stressing the messages delivered by experts, that is, TV producers use telop to optimize the program's didactic goals through an array of semiotic resources.

In comparing the types of telop used for different speakers to the affective cues displayed by the actors in terms of FE and BE, we found that telop linked to the experts on the program most often correlated with surprise FE and BE (thirty-three of fifty-four BEs and forty-four of seventy-four SEs), and backchanneling BE (twenty-seven of fifty-four BEs). This seems logical, given that *Honmadekka* aims to introduce

Table 2. Correlation between Telop and Other Multimodal Stimuli.

	Actor's affective cues	Affective sound effects	Actors/ speakers

		BE	FE	SE	Captioned utterance type	
actor's affective BE cues	Backchannel		0	15	30	32
	Laughter		50	34	43	47
	Smile		6	3	3	3
FE	Contempt	0		2	8	8
	Disgust	0		2	2	2
	Happy	55		44	54	59
	Surprise	1		26	37	32
Affective Sound SE Effects	Applause	3	4		7	7
	Backchannel	8	6		20	17
	Laughter	34	42		59	62
	Surprise	7	22		44	31
Captioned utterance type	Response to expert discourses	8	7	13		39
	Expert discourse	36	54	74		244
	Banter	32	40	43		95
Actors/speakers	Panelist (5)	18	17	18	34	
	Host (2)	21	30	33	80	
	Expert (7)	43	54	66	294	

Note. BE = behavioral expression; FE = facial expression; SE = sound effect.

experts' specialized knowledge to viewers with an element of surprise. Concurrently, we found that banter was often accompanied by laughter BE (twenty-nine of thirty-two BEs) and happy FE (thirty-seven of forty FEs), which were amplified by laughter SE. There was a clear emphasis on the experts' utterances, which were enhanced by other production means and light-hearted exchange via banter and laughs. These results indicate the production's attempt to hammer home the producers' intentions through all available affective avenues.

We also found that different speaker roles were linked to different types of affective cues. Telop that represented the host's and non-expert panelists' utterances correlated most to happy FE (forty-three of seventy-nine FEs) and to laughter BE (thirty-five of sixty-four BEs). The data suggested that television producers, who perhaps wanted their roles to inject humor into the program, treated the utterances from these speakers in a less serious manner. In contrast, telop representing experts' utterances were often linked to surprise FE (thirty of fifty-four FEs) and backchanneling BE (twenty-nine of forty-three BEs). These results illustrated how the experts' role in providing new information in the sample was boosted by a combination of semiotic resources working in concert.

The Correlation between the Telop Typographic/Stylistic Features and the Intended Impact on Audiences

As discussed in the introduction, telop often use various typographical and stylistic features. The program sample most often used sans serif or serif typefaces within a speech bubble or textbox. Speech bubble instances signaled informal chatty utterances, highlighting particular keywords highlighted in the program (e.g., *dehydrated*, *a hot day*, and *too late*) in white letters against a red background. We compared how each font and its background was used in relation to other coded elements in the program. The results showed that 180 of 432 captions presented in a textbox background and the majority of these captions (173 of 180) were associated with utterances by the expert panelists. In addition, the telop for these expert speakers used serif and sans serif fonts, while other speakers were associated only with sans serif. We observed that sans serif was typically used when the experts' utterances were incongruent with their roles as program theme specialists, for example, when they made jokes or off-the-cuff comments.

The results emphasize the semiotic significance of these elements in telop as opposed to other kinds of television captioning. According to Van Leeuwen (2005), typographical choices influence the way visual messages are interpreted through associations with cognitive metaphors. For example, the use of medieval gothic fonts would be perceived as suitable for a fancy dress party invitation, but not for a legal letter. Typically, inter-lingual subtitles for hearing viewers are standardized, either in white or yellow text, while different colors may be used to distinguish different speakers for SDH (Díaz-Cintas and Remael 2007, 130). Similarly, the background box, known as "black box" in the trade, regardless of the background color, has been historically intended for better accessibility for hearing-impaired viewers (Ivarsson and Carroll 1998, 46). In AVT norms, "a simple, stark, sans serif typeface" have been preferred to serif fonts for subtitles due to their better legibility (Ivarsson and Carroll 1998, 42). Serifed typeface has been associated with longer sentences for readability, while sans serif has been associated with shorter headings for visibility (cf. Takahashi and Katayama 2012).

Our findings seem to confirm that telop typographical and stylistic features were correlated with affective cues. There was a high co-occurrence of textbox backgrounds and surprise SEs and FEs (thirteen of twenty-five SEs and seventeen of twenty-three FEs), backchanneling BEs and SEs (seventeen of twenty-three BEs and thirteen of twenty-five SEs). The use of a background box was exclusive to expert speakers in all cases (ninety-eight times). In terms of fonts, the use of serified typeface was correlated to surprise SEs and FEs (twenty-eight of forty-four SEs and twenty-three of twenty-nine FEs), and backchanneling SEs (twelve of forty-four SEs). Sans serif typeface was more widely used with a range of affective cues, although it was explicitly linked with laughter SEs and BEs (forty-three of seventy-two SEs and twenty-eight of thirty-three BEs), and happy FEs (thirty-nine of fifty-five FEs). Considering the role of experts in this program, this result fits the general trends identified with other editing effects. These

findings demonstrate how the program uses multimodal resources to manipulate viewer responses, and how telop are an integral part of the manipulation.

Conclusion

Our study was motivated by the continued and increasing use of telop in Japan and across Asia, directing our interest to understand the way in which they are designed to influence television viewers' reactions to programs. The current lack of formal guidelines and regulations in Japan for the use of telop has led to a broad range of styles and formats being used, sometimes putting the audience at risk of being misinformed and misled. Yet, there are more to these captions than conveying information. Taking the case of a popular Japanese variety show with some didactic elements, we applied a multimodal analysis to unpack the complex layer of communicative stimuli centered around telop, treating them as multimodal resources with semiotic meaning potentials. The results yielded empirical evidence to confirm that telop indeed operated in concert with other communicative resources that were deliberately deployed by TV producers to manipulate and influence viewers' interpretations. In particular, our approach focused on the affective dimension of communication helped to draw out the evidence that telop is not merely used as providing linguistic information, but to enhance and make explicit affective values that are usually already available from the speakers and other participants in the program. Furthermore, the multimodal nature of telop themselves is maximally exploited by the use of colors, particular fonts, formatting as well as accompanying SEs. Our findings therefore confirm a need for further investigation into telop and other multimodal stimuli used in media design, to inform best practice, eventually developing telop standards, so that viewers are not left vulnerable at the whim of TV producers or editors.

Given the paucity of prior work on telop and impact captions, and also the lack of studies applying a multimodal analysis to captions and subtitles with dynamic stimuli, our approach was novel, even if exploratory. In the future, more work will be needed to systematize data coding categories, for example, the non-verbal categories used for actors' behaviors and FEs. There were some instances in this study in which coders found the identification of FEs and expressive behaviors ambiguous, and thus had to rely on contextual cues to determine categories. Despite such shortcomings, we have demonstrated how our methodological framework could be useful in correlating cognitive and affective processing of stimuli on television. Clearly, our next step is to link the study to a study on audience reception to empirically investigate just exactly how these telop are received by viewers in real-life situations.

Declaration of Conflicting Interests

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Note

1. This analysis formed part of a larger research project that is not reported here, which encompassed users' reception of these captions.

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