14 Schemas, Culture, and Moral Texts

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In the midst of teaching, teachers make a dazzlingly quick series of judgments about what to do next or how to respond to unforeseen eventualities. These intuitive and immediate judgments are based not on calmly reasoned discussions that occurred months before but on viscerally felt, "gut" instincts concerning which actions best fit certain situations. They are informed by recollections of similar situations experienced in the past. Even as we react to a situation, we are scanning our memories for incidents that felt like the ones we face and that might provide some guidance on how to respond. This process occurs almost instantaneously so that reflection is perceived as concurrent with action.
(Stephen Brookfield, *The Skillful Teacher*, 1990)

Whether it's presidential dalliances, Taliban rulings, Teletubbies, altercations in the former Yugoslavia, individuals differ in their interpretations and evaluations of socio-moral events. Such moral conclusions vary according to the background knowledge and experience the interpreter brings to the situation. What are the factors that lead to these radically different understandings? What brought the Rev. Jerry Falwell to "besmirch" the reputation of the Teletubby, Tinky Winky? A cognitive psychological interpretation would be that Falwell has a general knowledge structure, or schema, for homosexuality (which he condemns) that Tinky Winky evoked (carries a purse, has a triangle on his head, and so must be gay).

"Schema," refers to a general knowledge structure in the mind, formed by repeated experience, and evoked by stimuli in the environment (Bartlett 1932). Repeating patterns in the world are encoded in memory as chunks of information, or schemas, that save repeated processing of previously experienced material. Over time, toddlers learn that an object with four legs, a seat and a back is a chair and is used for sitting. This knowledge is automatized so that older children don't even think about the usage of such an object but automatically use it appropriately. What schemas do is enable the perceiver to identify stimuli quickly, fill in information missing from the stimulus configuration, and provide guidance for obtaining further information, solving a problem, or reaching a goal. Schemas are tacitly and automatically invoked, working "behind the scenes." The major tenet of schema theory is that people simplify reality by storing knowledge at a molar, inclusive level, rather than squirreling away, one by one, all the original individual facts of experience (Taylor and Crocker 1981, Fiske and Taylor 1991) for which there are not enough hours in the day!

Recently, our research in moral judgment has demonstrated the effects of schemas on moral decision-making. Rest, Narvaez, Bebeau, and Thoma (1999) have revised and reformulated Kohlberg's (1984) theory into a neo-Kohlbergian theory using three schemas instead of six stages to refer to developmental change. Research with tens of thousands of subjects using the defining issues test (DIT) indicates that individuals change over time in their preference for these global moral-judgment schemas (personal interest schema, maintaining norms schema, postconventional schema). Evidence for the existence and developmental sequence of these schemas is provided by means of seven validity criteria (see Rest et al., 1999). Among these are demonstrated relations to behavior.

Taylor and Crocker (1981) provide one of the most thorough descriptions of schemas in the social domain. They list seven characteristics (in italics

below). We match each characteristic to research in moral judgment.

1   *Schemas lend structure to experience.* When a stimulus configuration is encountered in the environment, it is matched against a schema from the long-term memory store, and the order and relations among the elements of the schemas are imposed on the elements of the stimulus configuration. Thus the schema is "activated" (or triggered or evoked) from long-term memory in the perceiver. Similarly, moral schemas drive the interpretation of socio-moral events, as in the dilemmas of the DIT (see Rest, Narvaez, Bebeau, and Thoma, in press).

2   *Schemas determine what information will be encoded or retrieved from memory.* Which schema is activated makes a difference in the interpretation of stimulus events. Imposing a schema on a stimulus configuration increases overall recall, especially recall of schema-relevant material. In Narvaez (1998) moral schemas affected both accurate recall of moral reasoning in stories and the invention of reasoning that was not in the story. When subjects were asked to recall narratives about moral situations in which moral reasoning (at different Kohlbergian stages) was embedded, sometimes they introduced distortion in the form of invented arguments that were not in the story. Here is an example of an argument distortion. A neo-Kohlbergian Stage 4 excerpt from "Tom, the Manager" reads: "What had been keeping him tossing and turning sleeplessly every night for the last two weeks, however, was his feeling of responsibility to the business as well." Some subjects incorrectly recalled this passage as a Stage 1 concern: "He was afraid of losing his job." The type of moral-judgment schemas the reader has developed affects recall from the narrative of the moral arguments which are based on those schemas. In fact, those who had developed the higher schemas (as measured by the DIT) were significantly more likely to recall and even invent high-stage arguments for the story.

3   *Schemas affect processing time, speed of information flow, and speed of problem-solving.* A schema is an efficient means for moving information speedily through the human processing system. For example, chess experts can "read" and solve chess board configurations more quickly than novices (Chase and Simon 1973). This is one of the assumptions of the study of moral thinking that we describe below, whereby cultural schemas affect the speed of reaction to moral inferences.

4   *Schemas enable the social perceiver to fill in data missing from an input stimulus configuration.* Schemas supply missing information when there is a lack of information, or ambiguous data. In morality research, the DIT is a device that provides fragments of moral-judgment schemas which in turn activate the participant's existing moral-judgment schemas (not activating schemas the participant does not have). Once activated, the individual's moral schema fills in the gaps in the moral arguments presented in the stories and items on the DIT (Rest, Narvaez, Bebeau, and Thoma, in press).

5   *Schemas provide bases for solving problems.* As schemas provide an interpretation of events in the world, the interpretation suggests courses of action and lines of decision-making for solving problems. In our work at the Center for the Study of Ethical Development, we find that participants who lack the more sophisticated schemas have a more difficult time making decisions about social-policy issues (Rest, Narvaez, Thoma, and Bebeau, in press).

6   *Schemas provide a basis for evaluating experience.* A corollary to this proposition is that people with highly developed schemas make more confident and extreme evaluations. Our work indicates that when groups of people have different schemas that are highly developed, they polarize on ideological and public-policy issues (Rest, Narvaez, Thoma, and Bebeau, in press).

7   *Schemas provide a basis for anticipating the future, setting goals, making plans, and developing behavioral routines to deal with them.* Schemas don't just describe and catalogue experience; schemas also suggest prescriptions for action. In morality research, this has been best described by Thoma (e.g., 1994) in terms of the relation between responses on the DIT and behavior.

Whereas the neo-Kohlbergian schemas are worthwhile in predicting group developmental differences, they are not finely tuned enough to distinguish among other group differences, such as religious or political differences. Hence, further studies have been performed looking at other influences on decision-making between groups known

for their differences. Narvaez, Getz, Rest, and Thoma (1999) looked at the effects of religious group differences on attitudes toward human rights. Fundamentalism, political orientation (conservative), and moral judgment score predicted over 60 per cent of the variance of attitudes towards human-rights issues (women's rights, homosexual rights, abortion, etc.)

One large-group difference that has been studied in cross-cultural research is orientation to relationships in terms of individualism or collectivism (Triandis 1995). Like religion and politics, difference in orientation to relationships can be a source of value conflicts. In an individualistic orientation everyone is expected to look after self and immediate family, whereas with an orientation to collectivism persons receive protection from a cohesive ingroup in exchange for loyalty (definitions are from Hofstede 1991). Triandis and his colleagues (e.g., Kim, Triandis, Kagitcibasi, Choi, and Yoon 1994) have studied this construct and postulate that it reflects cultural syndromes for which evidence at the individual level is accumulating. Triandis gives the following definitions:

> *Collectivism* may be initially defined as a social pattern consisting of closely linked individuals who see themselves as parts of one or more collectives (family, co-workers, tribe, nation); are primarily motivated by the norms of and duties imposed by, those collectives; are willing to give priority to the goals of these collectives over their own personal goals; and emphasize their connectedness to members of these collectives. A preliminary definition of *individualism* is a social pattern that consists of loosely linked individuals who view themselves as independent of collectives; are primarily motivated by their own preferences, needs, rights, and the contracts they have established with others; give priority to their personal goals over the goals of others; and emphasize rational analyses of the advantages and disadvantages to associating with others. (Triandis 1995: 2)

So, Triandis suggests, in a restaurant setting, waiters in places with different cultural orientations on individualism-collectivism will behave differently. For example, a waiter in Brazil (collectivist) takes the order from the senior member of a group because he assumes that the group will build bonds by sharing the same food. In contrast, most waiters in Western countries (individualist) will assume that each person will order according to individual preference. As cultural background individualism-collectivism can have such a strong influence on the way an individual approaches a social situation that it is an empirical question whether such orientations can influence the activation of moral schemas.

We were interested in studying the effects of the individualism-collectivism construct on moral judgment. First, we consider the methods of study previously used in moral-judgment research.

Methods for studying moral judgment

Moral judgment has been studied in a variety of ways. The method that Piaget and Kohlberg used to measure how people make moral decisions was to directly interview individuals about their moral reasoning. Although both researchers spawned a great deal of important research in moral development, research in cognitive science is pointing out that the direct-interview method may not give us what we seek.

> A vast amount of research in cognitive science clearly shows we are conscious only of the content of our mental life, not what generates the content. It is the products of mnemonic processing, of perceptual processing of imaging, that we are aware of – not what produced the products. Sometimes people report on what they think were the processes, but they are reporting after the fact on what they thought they did to produce the content of their consciousness. (Gazzaniga, Ivry, and Mangun 1998: 532)

Gazzaniga has described the responses of patients whose linkage between the halves of the brain has been severed (for therapeutic reasons) when one side of the brain is shown a picture and they are asked to say what it was. If the non-verbal right side of the brain is shown a picture of someone laughing, the patient will laugh but when asked why will make something up, such as "I felt like it."

Similarly, Toulmin (1981) has noted that whereas expert bioethicists may agree on what should be done in a case, they are unlikely to agree on the principles by which the decision should be made. In other words, individuals can identify the product of their thinking but have difficulty describing the process by which they arrived at that conclusion. Therefore it is doubtful that a person interviewed about their moral reasoning is able to accurately know or convey their decision-making process. "Should Heinz steal the drug?" "Yes!" "Why?" "Well... (the subject makes up an answer that

satisfies the interviewer)." Thus, if we ask people from different groups how they made a judgment from an individualist or collectivist perspective, we run the risk that they merely construct an *ad hoc* rationalization for the conclusions they reached.

Another way to study moral judgment is indirectly via recognition. The DIT has been successful in accessing the tacit knowledge of the individual as represented in moral schemas. A measure like the DIT is not easy to construct. Triandis (1995) and colleagues are developing multiple-choice tests of individualism-collectivism with some success. In the study described below, we used as the independent variable a scale of collectivism inspired by their work, a measure of a cultural schema.

A third method for studying moral judgment is to study the effects of unconscious processing on behavior, a process often used in cognitive science. This can be done in various ways. As responses to texts provide a microcosm of an individual's response to events in the world, we describe below two methods that use texts: recall of moral texts (e.g., Narvaez 1998) and lexical decision. In lexical-decision studies, the reader is reading a story (typically) off a computer screen and is periodically interrupted with a string of letters such as "potato" or "ibsenah." The reader decides whether or not the letters represent an English word or not. The time it takes to respond is assumed to reflect the accessibility of the letter string. Readers respond more quickly to words that have been activated by the reading context (see Haberlandt (1994) for a review). For example, if a reader sees "She carried in the groceries and began to prepare dinner" and then is interrupted with a decision about the word "kitchen," the reader is quicker to indicate that "kitchen" is an English word than if the word presented were "engine." The word "kitchen" is activated faster than the word "engine" because it is evoked in the context of the sentence about groceries and preparing dinner.

The lexical-decision task has been successful in measuring the activation of particular kinds of inferences during reading. For example, in van den Broek et al. (1994), readers of literary stories were asked to respond to inference words that represented knowledge they would need to apply in order to understand the story at that point. Van den Broek et al. were able to select words that represented inferences from general background knowledge as well as reinstatements of earlier text

information, indicating particular activations in the minds of the readers.

Studying schemas using texts

In general, as a reader reads and remembers text, he or she attempts to create a coherent mental representation of the text not only by integrating text information but also by elaborating on the text with prior knowledge about the world (van den Broek 1994) and by building a mental model (overall meaning structure) of the text (Van Dijk and Kintsch 1983, McNamara et al. 1991). Prior knowledge often comes in the form of general structures such as schemas, and has been shown to affect how readers comprehend a text (e.g., Anderson and Pichert, 1978; Bartlett, 1932; Bobrow and Norman, 1975; Rumelhart, 1980; Rumelhart and Ortony, 1977).

Two kinds of processing affect the comprehender's understanding of discourse (Bower and Cirilo 1985). Bottom-up, data-driven processing (based on what the text says) initially activates cognitive structures which, in response, guide further processing according to the conceptual structures activated in the mind of the comprehender. Readers form a mental representation of the text using top-down processing – applying their background knowledge – and bottom-up processing – constructing word and phrase units by deciphering the cues in the text. For example, the processing of the sentence "Tristan threw his jeans into the washer" might proceed in the following manner. First, "Tristan threw his jeans" is processed as pieces of data involving a subject, an action, and an object. Second, "in the washer" might activate a high-level "laundry schema." After the high-level structure is activated, it, in turn, activates accompanying subschemas or conceptually driven processing. Associations of "doing the laundry" are activated and would include, in an industrialized nation, laundry detergent, washer selections, and so forth. Processing, then, continues concurrently guided by expectations ("top-down" processing). The next sentence, "He sorted the rest of the items by color" is immediately coded as fitting into the "laundry" schema because of its context. Alone, this sentence would otherwise require additional elaboration to comprehend, because "the rest of the items" could refer to candy, toys, shoes, or any number of things. As processing continues, guided by expectations, it

is an interaction between the two types of text processing – what the words of the text mean and what the reader expects.

Differences in text comprehension as a result of conceptually driven or top-down processing have been documented in various situations. For example, initial perspective plays a role in what is represented and later recalled due to the conceptually driven processing it elicits. Pichert and Anderson (1977) demonstrated that when readers are instructed to read a description of a home either as a potential burglar or a potential home buyer, recall is significantly influenced by the "biased" representation one has for the characteristics of the home. That is, recall is influenced by what is salient to the purpose of the perceiver. Anderson et al. (1977) postulated that a subject's schemas provide the interpretive framework for the understanding of a discourse. They instructed subjects to read and then describe a paragraph about a person escaping a situation in which he was trapped that could be interpreted in two ways. Physical education majors interpreted the story as a wrestling match, whereas non-majors interpreted it as a prison escape. Alexander and Judy (1988) describe research comparing good and poor readers as they studied a science lesson. Both groups of readers frequently distorted text content to conform with their pre-existing knowledge, in other words, with their expectations. In short, schemas can influence the reader's mental representation of a text and are demonstrated by the characteristics of what a reader recalls or does not recall from the text, including distortions, intrusions, and the elimination of information that does not match the schemas of the reader. Cultural differences are a mismatch of schemas.

What knowledge do people from different cultures draw on when they read culture-specific texts? When texts are inconsistent with the expectations or high-level knowledge structures of the reader, the reader will poorly understand (Bransford and Johnson 1972), misrecall (Steffensen et al. 1979), and even distort memory to fit with his or her mental schemas (Reynolds, Taylor, Steffensen, Shirey, and Anderson 1982). A classic example is Bartlett's (1932) seminal work with "The War of the Ghosts" folktale in which subjects had an increasingly distorted recall over time of this Native American story, making it conform to familiar story schemas. Bartlett was the first in this century to provide evidence for the influence of cultural expectations, a type of conceptually driven orientation, on narra-

tive recall. In subsequent research, Harris et al. (1988) found that routines from another culture were increasingly misrecalled over time by those from a different culture, indicating a conceptual influence during memory retrieval. Readers apply culture-based schemas to how they mentally represent the text (e.g., Reynolds, Taylor, Steffensen, Shirey, and Anderson 1982). For example, when Harris et al. (1988) asked subjects to recall texts about events in a different culture, they found distorted recall as in the following. The text said:

> Ted was eager to go downtown to do some shopping for Carnival. He needed to buy some gifts for his parents and some new costumes for himself and his friends . . . He got on the bus at the rear door and found a seat in the back. After getting settled, he pulled out his wallet . . . He then carried a stack of fifties up to the cashier in the center of the bus . . . Ted passed through the turnstile and found a seat just behind the driver . . . When he arrived, he scrambled out the front door of the bus.

Subjects from the United States tended to recall incorrectly that Ted got on the front of the bus, paid and sat down in the back. Subjects from Brazil did not make these errors because the bus experience was a familiar schema.

What knowledge do people draw on when they read moral texts? In the 1990s there has been widespread popular interest in reading moral stories to children in order to develop moral literacy (e.g., Bennett's bestselling book, 1993). Underlying this popularity, there seems to be an implicit assumption that individuals – for example, adult writers and child readers – extract the same themes from a moral text. However, text-comprehension research has demonstrated that readers do not comprehend (non-moral) texts in the same way, due to individual differences in skill and background knowledge (see for examples, Gernsbacher (ed.) 1994). In other words, a comprehender does not necessarily understand what the author intended. In addition, there is considerable empirical evidence for developmental and expert–novice differences in moral judgment (e.g., Rest 1986) that suggests individuals often view social events differently and, as a result, perform moral-comprehension tasks distinctively (e.g., Rest, Thoma, and Edwards 1997). Narvaez and colleagues (Narvaez, Bentley, Gleason, and Samuels 1998, Narvaez, Gleason, Mitchell, and Bentley 1999) have found developmental differences in moral-theme comprehension.

Young children are unable to select a moral theme for a children's story (11 per cent correct), being attracted to distortions based on lower-level reasoning. Older children are more likely to make the correct selection (45 per cent of the time) but still do not perform as well as adults (91 per cent). In short, people apply their moral-judgment schemas to how they represent the text.

Influence of culture on moral-text processing

Not only is culture known to affect the recall of culturally relevant texts, as discussed earlier, it can also affect reaction time to personal questions (Kitayama and Markus 1996) in that collectivists may be slower at decontextualizing questions about the self than are individualists. Keeping this in mind, we designed a study to examine the influence of culture (individualism-collectivism) on the online processing of moral texts, an indirect, non-personal method.

In Narvaez, Mitchell, and Linzie (1998) we tested two groups: Asians/Asian-Americans and non-Asians, expecting that the Asian group would more reliably provide us with collectivists than other groups. Participants had native skills in English and read several stories on computer. Half of the stories were "filler" (non-moral) stories and half were moral stories. The moral stories were about individuals who were asked for help by a relative (aunt, uncle, cousin). In half of these stories, the protagonist sacrificed his/her own goals in order to help ("help" stories); in the other half he/she did not help ("no-help" stories). See the following sample story, with target probes.

Leroy and the race ("no-help" story)

Every morning, Leroy got up early to run before breakfast and work. He was in good shape for his age. After running, he would shower and eat breakfast and then head out for work. He was a carpenter and would drive to many places around the city. Every other Saturday he wouldn't work so he could do a 10- to 15-mile-long run. He knew how important this run was for developing good endurance, so he rarely missed it. He liked to enter races and, even though he had never won, he usually finished in the top of his age group. He worked hard to better his times. For four months, he trained for the local "Grandpas'" marathon race, for men 55–65. He logged nearly 60 miles a week. As a 57-year-old in good shape, his wife and friends were certain that he could win the local title.

When the day of the race finally arrived, he got up early for breakfast, pancakes and coffee. He drank lots of orange juice and water. The event started at 8 a.m. (PROBE FOR REINSTATEMENT: MARATHON) While he was getting dressed, the phone rang. It was Thomas, his cousin. Thomas had a family emergency, his father-in-law had had a heart attack during the night and was in the hospital. Thomas needed to drive the family to the small town hospital to see him. Thomas asked if Leroy would watch his corner grocery store for the day. The supply truck would be bringing the week's produce during the day. If no one was there to receive them, Thomas would miss getting the supplies for the week. Leroy was the only person he trusted with running the store. Leroy sympathized but told him that he had other plans. Leroy said he had a good chance at winning the race this year. He told Thomas he would call after the race. He wished him well and then hung up the phone. (PROBE FOR MORAL INFERENCE: DISLOYAL)

After he parked his car, he jogged around to warm up and then headed for the starting line. There were so many people on the narrow street that he could hardly move. As the race got underway, Leroy found that he wasn't able to reach his normal pace until more people fell behind him. Once he hit his regular pace, he felt comfortable. Although he was exhausted at the finish, he came in with a faster time than he ever had. But he didn't win. A 62-year-old came in first. He felt good about his personal record. After some stretching, he milled around with the crowd, picked up his marathon t-shirt and ate some bagels. That night, he went out to celebrate his accomplishment with some other racers.

While they were reading, the participants were interrupted with a lexical-decision task, as described earlier. Some of the letter strings were not (English) words, some were words irrelevant to what they were reading, and some of the words represented inferences assumed to take place by the reader at that point in the story. (See the following examples of inference types.)

Category	Example
Reinstatement	Mary was looking for her car keys. She looked on the dining-room

Elaboration

table. Then she looked on the kitchen counter. She found them (MENTAL REINSTATMENT: KEYS) next to the sink.

Mary took her car keys and went out the door. She pulled out of the driveway. (MENTAL ELABORATION: SHE GOT IN THE CAR, PUT THE KEYS IN THE IGNITION AND STARTED THE ENGINE. SHE STARTED DRIVING.)

In this study two kinds of inferences in the moral stories were tested: reinstatements of information from earlier in the text necessary to understand a current sentence, and moral inferences – elaborations on current text action based on background knowledge. (Look back at p. 150 for examples of probe words for "Leroy.") The moral inferences occurred after the protagonist decided to help or not help in the story. In the "help" stories the moral inferences were represented by words like "dutiful" or "loyal." In the "no-help" stories the moral inferences were represented by words like "self-centered" or "shameful." Using the non-relevant English words as a baseline, each subject served as his or her control. We expected there to be a significant response-time difference between the two groups for both kinds of moral stories. We also expected that the Asian group would react more quickly, especially to the moral probes in the "no-help" stories. We expected the violation of expectations (of the protagonist to help a relative) to create a greater reaction (immediate and negative) to the protagonist. Participants also took an inventory of their orientation to individualism or collectivism. Reading-skill differences were controlled.

Scores on the collectivism scale were split into high and low groups using a median split. As expected, there were no significant differences in reaction time for reinstatement (non-moral) probe words based on collectivism score, ($F_{(1,75)} = .79$, $p <.37$). But we did find significant differences in reaction time to moral probe words in the "no-help" stories based on collectivism scores ($F_{(1,76)} = 5.43$, $p <.022$, effect size $=.51$). Further, significant differences in reaction time to moral probe words remained after holding ethnicity constant ($F_{(2,75)} =3.98$, $p <.023$, effect size $= .71$). Similar results were obtained with the "help" stories. Collectivism scores, regardless of culture, were significantly related to reaction time for moral inferences but not for non-moral inferences.

We concluded that cultural-ideological background can influence which moral inferences are made while reading. The results also suggest that judgments about moral events can be successfully examined at the preconscious level. Online processing of moral events can be studied with activation measures used in discourse research. Rapid-fire, preconscious reactions to the moral or immoral actions of others may influence group and individual interaction, fuel prejudice, and contribute to disputes. Various cultural and moral schemas of interpretation may be examined with this technique and give insight into schema activations and their effects. Studies at this level may provide more insight into the sources for moral and cultural conflict.

While we process familiar things quickly to fit into our existing schemas, we process unfamiliar things slowly, often consciously. As a result, we tend to feel negatively towards the unfamiliar because it stops us in our flow of expectations and takes energy to figure out (Bargh 1989). We process familiar things more rapidly, which results in positive feelings (Zajonc 1980). Cultural differences are often processed negatively because they are unfamiliar and require extra processing. We tend to feel uncomfortable in situations in which our expectations are thwarted, inclining us to avoid such encounters or to shut out those who act "offensively" (not in accordance with our schema-driven expectations).

Returning to the quote by Stephen Brookfield with which this chapter opens, the quick-fire effects of cultural moral schemas occur also in the classroom. For example, the child who was raised in a culture in which respect is shown by not looking into the other's eyes offends the teacher whose cultural schema of "respect" requires direct eye-gaze. The student whose culture-based schema of 'authority' requires a commanding adult is not impressed with the teacher whose culture-based schema of 'authority' involves playing down power by asking for compliance rather than demanding it. As Brookfield points out, these judgments usually occur subconsciously and according to what "feels" right. The judgments occur so quickly that what is "right" seems directly perceived and coordinated simultaneously with action, making changes in these reactions difficult. After the first encounter, one party or both may feel a residue of discomfort that, unexamined, can build into blatant disregard over time. To circumvent this process and enable

teachers to be effective with all students, we need to establish what kinds of preconscious culture-based inferences occur in which groups (Narvaez 1996). Then we will be able to design methods for preparing teachers to be interculturally adept for the multiple cultures of students they will encounter.

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