

Running head: the narrative joke

The narrative joke: conceptual structure and linguistic manifestation

Max Petrenko

Purdue University

Abstract

The paper represents an object-based and problem-driven approach to the genre of the narrative joke. We describe how the narrative joke is generated by a speaker. The study draws on the SSTH-GTVH trend in humor research. We claim that the comical storyline of the narrative joke is constructed via instantiating its conceptual structure. A two-stage model of the narrative joke generation is introduced and illustrated with an example. At the first stage, the conceptual structure of the narrative joke is instantiated through the application of specific rules. At the second stage, the instantiated conceptual structure is manifested linguistically based on underspecification and overspecification constraints which regulate the selection of the appropriate linguistic form.

Objectives

In this paper, we will introduce a plausible explanation of how narrative jokes are created by a potential joke-teller. In particular, we will focus on what entities a speaker should manipulate and under what conditions in order to create an efficient narrative joke. By creation here we mean the act of generation of a humorous text (the narrative joke) based on its non-humorous (conceptual) basis. The objective above can be captured in two questions that need to be tackled in this paper: the *what*-question entails describing a typical organization of the comical situation in narrative jokes; the *how*-question entails describing the rules and principles of the production of the narrative joke text. The two-stage model of the narrative joke generation, described and presented in this paper, is supposed to answer both questions.

Two underlying ideas of the present research need to be explicated before the main theory will be introduced. First, we believe that the narrative joke, as any joke, is a tool which modifies our knowledge of things in a way which makes us laugh. By stating this, we adopt a cognitive stance with respect to the issue of joke-reality relationship. The narrative joke text (as any joke) is rather remotely related to reality because its comical content derives not from the immediate knowledge of things but from their socially acknowledged and mostly stereotypical perception. In other words, the creation of the narrative joke involves modification, or “distortion” (Attardo and Chabanne, 1992, p. 170) of a well-established knowledge and belief system; marginal and idiosyncratic interpretations of objects are never used in the narrative joke generation.

The second premise is related to a useful, in our opinion, distinction between the two modes, as it were, of how joke manifests itself in reality: joke as it is available to the speaker/writer (joke-generation), and joke as it is available to the hearer/reader (joke-

comprehension). Although mostly the same elements are to be studied within the two modes, each involves different procedures of conceptualization and information encoding. We view the generation/comprehension distinction as an effective theoretical tool which would clearly prioritize issues to be tackled, depending on in which of the two directions in which a study develops. For instance, the incongruity-resolution group of issues lies within the joke-comprehension mod, whereas mechanisms of the construction of a comical situation, as well as and discursive strategies of joke telling reside within the joke-generation mode, and non-bona-fide-switch-related issues embrace both mode.

The study of the narrative joke text creation, naturally, places the present approach within the joke-generation mode. In this connection, it should be noted that while the joke-comprehension mode has been covered extensively by recent and earlier studies and within a variety of frameworks (which can be evidenced by an exhaustive list of publications devoted to the incongruity-resolution issues), the question of (narrative) joke generation and mechanisms of joke production at the joke-teller's perspective has not received enough attention. The present paper's focus on the joke-generation mode also delineates the range of concrete tasks to be resolved:

- 1) to describe the non-humorous basis from which the humorous situation is constructed in the narrative joke;
- 2) to show how the conceptualization of the non-humorous basis occurs and according to what rules and principles the humorous content is generated;
- 3) to show how the constructed comical situation is manifested linguistically.

Theoretical background

The present study draws significantly on the SSTH-GTVH¹ trend in humor research. To generalize, the trend is a formal theory of verbal humor which presents a humorous text as a composite unit formed by the combination of necessary elements (knowledge resources). Chronologically, the trend originates from semantic-based script description of jokes first presented in Raskin (1985). The study formulated two conditions (widely acknowledged and often referred to in current humor research paradigm) which need to be met in order for a text to be humorous:

- 1) the text should be compatible with two different scripts;
- 2) the two scripts should form the relations of opposition which is motivated by culturally valuable oppositions (life/death, sex/non-sex, money/no money, etc). Raskin, 1985)

Within GTVH, it was proposed in Attardo and Raskin (1991) that script oppositions represent only one of six knowledge resources (KR's). Within GTVH, a knowledge resource is a repository of information, as it were, pertaining to one of the six levels of humorous text structure. In order for a humorous text to be produced, contribution from six knowledge resources is needed: Situation (SI), Target (TA), Script opposition (SO), Logical mechanism (LM), Narrative strategy (NS) and Language (LA). In (Ruch et al., 1993) an empirical verification of the existence and hierarchical organization of the six KR's was provided.

Our theory generally complies with the GTVH-based understanding of the compositional nature of humorous texts, including narrative jokes. In fact, narrative jokes exhibit the presence of the six knowledge resources introduced in their text structure.

¹ SSTH stands for "Script-based semantic theory of humor", and GTVH stands for "General theory of verbal humor"

However, the present theory shifts the emphasis from the general explanation of humorous text ingredients to a dynamic description of the production of a specific text type – narrative joke. It has been argued by the proponents of GTVH that the theory “claims its neutrality to the process of joke-creation. (Attardo and Raskin, 1991, p. 341). Although GTVH does not assume any psychological reality of the six knowledge resources and does not argue that jokes are actually generated through the temporarily ordered choice making within each of the KR’s, there are reasonable grounds to assert that the creation of any joke inevitably involves resorting to the informational building blocks which contribute to its creation and which GTVH claims to be six in number (Ruch, et al., 1993).

In this study, we tried to tackle the issue of narrative joke generation. We claim that the six knowledge resources contribute to the narrative joke creation differently and at different stages of its generation. Specifically, when trying to relate GTVH to the joke generation process, one could observe that the six knowledge resources pattern around two general functions. Whereas the Situation, Target, Script opposition and Logical mechanism KR’s contribute to the construction of the joke storyline and thus *inform* the narrative joke, Narrative strategy and Language work towards the linguistic manifestation of the created comical situation, and thus *form* the narrative joke. The joke-informing and joke-forming knowledge resources are thus activated at two different stages of the narrative joke generation. In what follows we will briefly outline the proposed model of the narrative joke generation and will then illustrate the model in action by a detailed explanation of an example.

The narrative joke generation

Brief Overview

The two-stage model of narrative joke generation is meant to show and explain how a text of the narrative joke is created for the first time by a potential joke-teller. The idea underlying the model is that the creation of a joke as a humorous text involves transformation of some non-humorous knowledge basis according to certain rules and its constraint-regulated linguistic manifestation. What do we mean by knowledge base? As any humorous text, narrative joke constructs a situation which is a comical interpretation of a stereotypical fragment (or rather cognitive picture) of reality which is publicly acknowledged. By knowledge base we mean a stereotypical fragment of reality used for the generation of the narrative joke text. In the research, the term “script configuration” is used to represent formally the knowledge base. The literature on scripts is broad both inside and outside the humor research paradigm. Scripts represent common knowledge (Raskin, 1985), or cultural competence (Attardo, 2001).

The two stages of the model rather transparently reflect the idea of the script configuration transformation and linguistic manifestation: the first stage is called “Conceptual structure instantiation”. The second stage is called “Linguistic manifestation”. Several theoretical notes on the stages should be made.

The first stage involves the instantiation of the conceptual structure (CS) of the narrative joke. Most narrative jokes exhibit a typical repetitive storyline organization which can be formalized as:

[X is presented through X` with a problem Y to which X provides a solution Z, which triggers script opposition SO],

where X, X', Y, Z and SO are slots filled in during the instantiation process. The slot fillers are borrowed from an appropriate knowledge base represented as script configuration. The conceptual structure can be further formalized as:

[EXPER [entity (X), event-problem (Y)]]
 [INSTR [entity (X'), event (Y)]]
 [MAKE [entity (X), event-solution (Z)]]
 [CAUSE [event-solution (Z), property (SO)]],

where EXPER, INSTR, MAKE and CAUSE are conceptual schemas of EXPERIENCE, INSTRUMENT, MAKE and CAUSE.

The understanding of the conceptual structure of the narrative joke thus lies within the framework of cognitive linguistics and is inspired by Croft and Cruise (2004), and the formal system of description has been partially adapted from Jackendoff (1987).

The process of the generation of the storyline of the narrative joke can be described as the mapping of the conceptual structure (which is to carry the humorous element of the storyline) onto the knowledge base/script configuration (which is originally non-humorous). By mapping on the latter, the conceptual structure basically reinterprets the knowledge base in a humorous sense and thus recasts a typical non-humorous situation as a humorous one. Obviously, there is no possibility for a direct mapping of CS onto knowledge base; transformations are needed. The rules of transformation and CS instantiation constitute the core of the first stage of the narrative joke generation.

What is the role of knowledge resources (as defined in GTVH) in the conceptual structure instantiation? The first four KR's – Situation, Target, Script opposition and Logical mechanism – are the information domains to which the joke creator resorts when generating the comical sense of the narrative joke. The remaining two KR's – Narrative

strategy and Language – perform a similar function at the second stage of narrative joke generation, the output being the concrete joke text. The four KR's contribute differently to the process of the conceptual structure instantiation, as will be illustrated by the example.

The second stage involves linguistic manifestation of the instantiated conceptual structure. Whereas the instantiated conceptual structure should already contain all the necessary humorous elements of the storyline, the function of the linguistic manifestation stage is to provide a most accurate linguistic manifestation, accounting for all the properties present in the CS and eliminating all the redundant ones.

In this connection, two constraints are introduced which would regulate the process of selection of an appropriate linguistic form: underspecification and overspecification constraints. The underspecification constraint (USC) stipulates that only those properties present in the instantiated conceptual structure be manifested in the narrative joke text. The overspecification constraint (OSC) stipulates that all linguistic candidates manifesting any redundant features be ruled out in the selection process. Both constraints will be elaborated on in detail during the demonstration of the model. Respectively, the two other knowledge resources (Narrative strategy and Language) are activated at the second stage of the narrative joke generation.

In what follows, the model will be illustrated in detail through the description of the generation of a narrative joke.

Illustration of the narrative joke generation model

In the following section, we will show how, step by step, the following narrative joke is generated:

(1) A lady walks into the drugstore and asks the pharmacist for some arsenic. "Ma'am, what do you want to do with arsenic?" "To kill my husband." "I can't sell you arsenic to kill a person!" The lady lays down a photo of a man and a woman in a compromising position.

The man is her husband and the woman is the pharmacist's wife. He takes the photo, and nods. "I didn't realize you had a prescription!"

The model will reconstruct how the given humorous text has been produced from non-humorous material.

The ultimate result of the first stage of narrative joke generation, "Conceptual structure instantiation", is comical situation which would yield a narrative joke text, provided that the linguistic manifestation is proper. An important issue is to show accurately the original knowledge base into which the conceptual structure will be mapped. We assume that the formal method of representing scripts as complex concepts introduced in Nirenburg and Raskin (2004), Triezenberg (2005) allows us to capture a variety of semantic properties of entities which are harnessed into structured (temporarily or orderly) mental constructs called scripts.

When activated in context, scripts form a semantic network which functions as a cognitive picture, or a knowledge base of a reality fragment. In the case of this narrative joke, the following knowledge base has been used:

[A woman comes to a pharmacist to buy arsenic. She wants to use it in order to kill her husband who has cheated on her. The pharmacist would not sell the arsenic to her to kill a human].

The stereotypicality of the situation above may raise suspicions, especially when it comes to the woman's behavior. We would like to point out, however, that it is the pharmacist's reaction which becomes the object of comical transformation, and which is

originally stereotypical. The script configuration of the described stereotypical situation (knowledge base) will look as follows:

WOMAN

is-a human

activity come to pharmacy
 has-parts pharmacist

 buy arsenic
 kill husband

has-relatives husband

HUSBAND

is-s human

gender male

activity cheat on wife
 is-a event
 has-parts find mistress
 have sex with mistress

PHARMACIST

is-a social role

activity sell medication
 not sell arsenic to kill

ARSENIC

is-a chemical element

used-for anesthesia
 murder

The conceptual structure of the narrative joke will map onto this script configuration, and this will produce the instantiated conceptual structure. Cognitively speaking, the typical situation described above will be conceptualized as humorous. Certain transformations are needed which will adjust the given script configuration to the conceptual structure. Such transformations are common in all cases of the narrative joke

generation; they have been formulated as two rules: negation and opposition matching. After the two rules apply, the script configuration becomes capable of instantiating the conceptual structure.

The negation rule is meant for creating the script opposition as it was defined in Raskin (1985) and further strengthened in Attardo et al. (2002). In Attardo et al. (2002, pp. 23-25) the concept of script opposition was defined within the terms of complementarity and oppositeness: “two overlapping scripts (A and B) are opposed when within the complementary sets of the intersection we can locate two subsets (C and D) such as that the members of the subset C are the (local) antonyms (i.e. the negation) of the members of the subset D” (Attardo et al., 2002, p. 25). By “negation” a “common linguistic negation” is meant which is compatible with the logical operation of negation outlined by Attardo (1997). Within the script structure, negation operates with the properties of scripts by simply applying the \neg operator to each of the instantiated property. The formal definition of the negation rule will look as follows:

Negation rule:

(1) The two properties A and $\neg A$ are negated when the members of the set A` are not members of the set $\neg A$, i.e. $A \& \neg A = \neg (A' \cap \neg A')$

When applied, the following script configuration can be derived:

WOMAN

is-a	human/no human
activity	come to pharmacy/not come to pharmacy
	has-parts pharmacist/no pharmacist
	buy arsenic/not buy arsenic
	kill husband/not kill husband
has-relatives	husband/no husband

HUSBAND

is-s	human/no human
gender	male/no male
activity	cheat on wife/not cheat on wife
	is-a event
	has-parts find mistress/not find mistress
	have sex with mistress/not have sex with mistress

PHARMACIST

is-a	social role/no social role
activity	sell medication/not sell medication
	not sell poison-name-arsenic to kill/sell poison-name-arsenic to kill

ARSENIC

is-a	chemical element/ no chemical element
used-for	anesthesia/no anesthesia
	murder/ no murder

In order for the script opposition to be formed in the conceptual structure of the narrative joke, the opposition matching rule applies.

Within the framework of SSTH and GTVH, the concept of oppositeness is discussed in relation to scripts, which led to the definition of script opposition (SO) as a verbal humor knowledge resource which contributes to the generation of any type of humorous text.

Script opposition is a necessary condition for the text to produce humorous effect. We refer the interested reader to Raskin (1985), Attardo and Raskin (1991), and Attardo et al. (2002), and Attardo (2001) for a detailed discussion of the nature and exhaustiveness of script oppositions for humor. Within the present approach, the list of negated script properties is matched with the list of oppositions. It was highly essential that the oppositions be typical of joke texts, therefore a list of concrete oppositions was formed.

The proposed list of oppositions is partly based on that introduced in Raskin (1985); the remaining part was derived by this author on the basis of the analysis of narrative jokes randomly selected from the Internet and the author's personal collection of American, Soviet and Russian jokes.

sex vs. non-sex;	fair vs. cunning;	competence vs. incompetence;
money vs. no money;	liberal vs. tyrant;	practical vs. impractical;
logical vs. illogical;	professional vs. dilettante;	lucky vs. unlucky;
smart vs. dumb;	beautiful vs. ugly;	tolerant vs. intolerant;
dumb vs. smart;	difficult vs. easy;	honest vs. dishonest;
life vs. death;	slow vs. fast;	faithful vs. unfaithful;
live vs. artificial;	simple vs. complex;	
young vs. old;	dressed vs. naked;	

The list of oppositions above constitutes the Script Opposition knowledge resource which is brought into action during the generation of the narrative joke. The SO KR operates based on the set of properties with their negated counterparts in a given script configuration via the application of the opposition matching rule:

Opposition matching rule:

Within the structure of script A, the properties A' and $\neg A'$ match the opposition B if the member of the subset B' of the opposition B is a member of subset A' and the member of the subset $\neg B'$ of the opposition B is a member of the subset $\neg A'$

A' and $\neg A'$ match B' and $\neg B'$ if $A' \cap B'$ and $\neg A' \cap \neg B'$

The application of the opposition matching rule thus yields followings results:

WOMAN

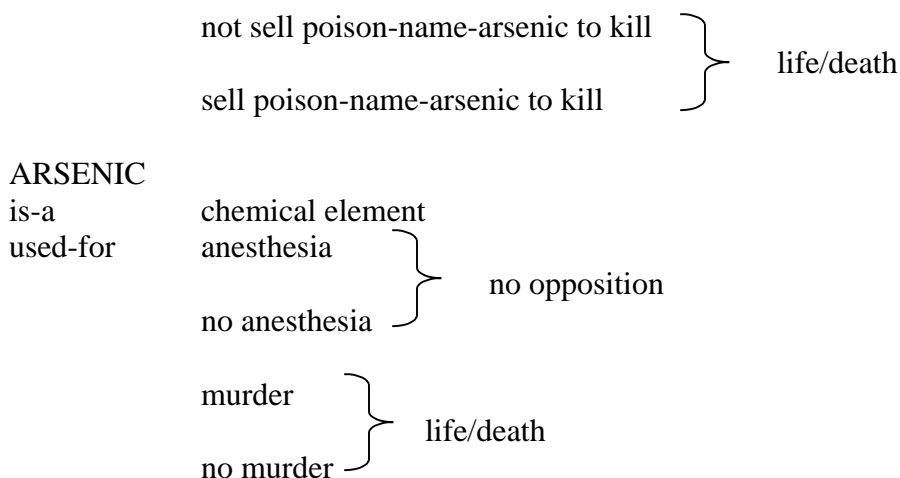
is-a	human	}	no opposition
	no human		

activity	come to pharmacy	}	no opposition
	not come to pharmacy		

	has-parts	pharmacist	}	no opposition
		no pharmacist		
		buy arsenic	}	no opposition
		not buy arsenic		
		kill husband	}	life/death
		not kill husband		
has-relatives		husband	}	no opposition
		no husband		
HUSBAND				
is-s		human	}	no opposition
		no human		
gender		male	}	no opposition
		no male		
activity		cheat on wife	}	faithful/unfaithful
		not cheat on wife		
	is-a	event		
	has-parts	find mistress	}	no opposition
		not find mistress		
		have sex with mistress	}	sex/non-sex
		not have sex with mistress		

PHARMACIST

is-a		social role		
activity		sell medication	}	competence/incompetence
		not sell medication		



As a result, several successful matches are possible within the given script configuration. Each of the matched oppositions can constitute a separate trajectory in which the derivation of the narrative joke text can proceed. In other words, the given stereotypical situation, as presented here, has a potential of generating as many different narrative jokes as there are matched script oppositions.

For the given narrative joke, the opposition “life/death” matched onto the properties “not sell poison-name-arsenic to kill/sell poison-name-arsenic to kill” is selected. Other matches are ruled out. The modified script configuration is now ready to instantiate the conceptual structure. We propose the following rules of instantiation:

- (1) the entity captured in the lexical script with the matched opposition fills in the X slot in the conceptual structure;
- (2) the entities of the remaining lexical scripts fill in the X` slot in the conceptual structure;
- (3) the matched opposition fills the SO slot in the conceptual structure;

After the three rules have applied to the given script configuration, the conceptual structure will have the following form:

[(pharmacist)X is presented through (woman who wants to buy arsenic to kill her husband)X` with the problem Y to which (pharmacist)X provides a solution Z which triggers script opposition (“life/death”)SO]

As we can see, the rules allow only for the partial instantiation of the conceptual structure; slots Y (problem) and Z (solution) still need to be filled. For that purpose, the notions of trigger and licensing factor are introduced. A trigger is a set of properties which immediately trigger the script opposition in the conceptual structure. A licensing factor is a property (properties) which semantically makes it possible for the trigger to be manifested in the conceptual structure. In terms of comical situation, licensing factor brings a turning point where several alternative scenarios are possible and where the character is presented with a set of options the selection of which determines whether the situation will take the comical turn.

The licensing factor may or may not be present in the original script configuration; in the case of doctor’s wife joke it is generated that is, new properties in an existing script or whole new scripts are generated and incorporated into the script configuration. In the case of the present joke, the whole script of PHOTO is generated, with the following set of properties:

PHOTO

is-a	object	
has-parts	image1	
	is-a	customer’s wife
	image 2	
	is-a	pharmacist’s wife
	image 3	
	is-a	event-have sex
	agent	is-a \$image1
	patient	is-a \$image 2
	modality-type	evaluative
	modality-value	<0.5

The role of licensing factor in the model is that of filling the Y(problem) slot in the conceptual structure, which is captured in the following rule:

Y slot instantiation rule:

Within the conceptual structure, the element (property or script) which functions as a licensing factor fills in the Y slot; interrogative features are assigned if necessary.

In many cases the instantiation of the Y (problem) slot requires that the licensing factor undergo modification in order to acquire the features of a problem which is what the Y slot intrinsically contains. A least costly way of transforming a licensing factor into a problem is assigning the interrogative features to it, or, to put another way, transformation into a question. To illustrate, in the doctor's wife joke, the licensing factor "not be at home" in the DOCTOR script can instantiate the Y slot in the conceptual structure only through being transformed into a question which produces the following filler:

(a question whether doctor is at home)Y,

where the bracketed expression is the licensing factor carrying interrogative features.

In the case of the narrative joke in question, where the licensing factor is represented as a whole script, interrogative features are assigned to each property, and each of the properties is checked for the possibility for functioning as a Y(problem) slot filler:

PHOTO

is-a object – *photo is an object?*

has-parts image1 – *photo has image1 as part?*

is-a husband – *husband is an image1 of the photo?*

image 2 – *photo has image2 as part?*

is-a pharmacist's wife – *pharmacist's wife is an image2 of the photo?*

image 3
 is-a event-have sex – *event-have-sex is image3 of the photo?*
 agent \$image1 – *\$image1 is the agent of the event-have-sex?*
 patient \$image 2 – *\$image2 is the patient of the event-have-sex?*
 modality-type evaluative – *modality-type is evaluative?*
 modality-value <0.5 – *modality-value is <0.5?*

After the interrogative features have been assigned to each of the properties of the licensing factor, the selection is possible of the property (-ies) which could fill in the Y(problem) slot:

patient \$image 2 – *\$image2 is the patient of the event-have-sex?*

Recast in plain English, the question states, “Is the person on the photo picturing a lovemaking scene a pharmacist’s wife?” The form is now ready to instantiate the conceptual structure.

Before showing how the conceptual structure is further instantiated, let us explore the structure of this joke storyline in more detail. Even a cursory view would suffice to see that the storyline has a circular organization that is, the joke falls into two parts. One part illustrates the pharmacist’s refusal to sell arsenic for the purposes of murder; another part illustrates the pharmacist’s agreement to sell arsenic for the purposes of murder. Within the light of the conceptual structure organization, we can state that in this joke, the conceptual structure is instantiated two times, the last time leading to a comical turn.

CS instantiation-1

[(pharmacist)X is presented through (woman who wants to buy arsenic)X` with the (problem whether to sell arsenic to the woman to kill her husband)Y to which (pharmacist)X provides a solution (not to sell arsenic)Z]

As we can see, the first instantiation of the conceptual structure is driven by the knowledge base; no transformations are required for it, the standard situation is presented: the pharmacist would not sell poison for the purposes of murdering a person. The script configuration needed for this instantiation is readily provided by the existing knowledge base; hence no comical sense is produced and no opposition is triggered. In this instantiation, the Z(solution) slot is instantiated by default, based on standard knowledge about behavior of the character solving the problem (pharmacist).

Multiple instantiation of the conceptual structure seems to be relatively typical among narrative jokes; in every case the first instantiation is driven by stereotypical knowledge; and the second instantiation always becomes the resource for comical situation.

CS instantiation-2

[(pharmacist)X is presented through (woman)X` with the (question if the person on the photo making love to her husband is his wife)Y to which (pharmacist)X provides a solution Z which triggers script opposition (“life/death”)SO]

For the instantiation of the Z (solution) slot, the Logical mechanism knowledge resource is employed. The approach follows the definition and taxonomy of logical mechanisms introduced in Attardo et al. (2002).

Ideally, all logical mechanisms used for jokes generation are checked for possibility of generating a filler for the Z(solution) slot. In this case, two logical mechanisms have been employed: missing link and false analogy: the pharmacist sells arsenic by taking the photo as a legal reason, i.e. prescription. The decision to sell the poison is not explicated in the text and thus becomes a missing link, and the showing of the photo to the pharmacist is falsely equaled to the typical action of showing the

prescription. At the level of the script configuration, the default property “activity show prescription” in the WOMAN script is substituted for the property “show photo to pharmacist”, which licenses the analogy in the joke. Thus, the following filler of Z slot is provided:

(take the photo for the prescription)Z

The activation of logical mechanism completes the instantiation of the conceptual structure of this narrative joke, which has now the following form:

[(pharmacist)X is presented through (woman)X` with the (question if the person on the making love to her husband is his wife)Y to which (pharmacist)X provides a solution (take the photo for the prescription and sell arsenic) Z which triggers script opposition (“life/death”)SO]

The instantiated conceptual structure (ICS) carries all the semantic features necessary for the construction of the comical situation. The remaining task would be to select appropriate linguistic form manifesting ICS, which is captured in the second stage of the narrative joke generation model.

Two knowledge resources are activated in order to provide linguistic manifestation of the instantiated conceptual structure: Narrative strategy and Language. The Language KR has been defined as the whole complex of phonological, phonetic, morphological, syntactic and lexical choices made by the speaker in order to linguistically represent the content of the joke (for detailed description see Attardo, and Raskin, 1991, pp. 297-299; Attardo, 1994, p. 223; Attardo, 2001, pp. 22-23). The Narrative strategy KR is generally understood as some kind of genristic organization of a joke, either as a simple narrative, or as a dialogue, or as a riddle, as an aside conversation, etc (Attardo, 2001, p. 23). Within the scope of our theory, LA should provide concrete

form manifesting the instantiated conceptual structure and its narrative framing provided by NS. How does NS frame the instantiated conceptual structure?

In Attardo and Raskin (1991), a variety of narrative strategies is introduced which are employed in verbal humor: expository, dialogue-type, pseudo-riddles, riddles, etc. For the generation of narrative jokes, two narrative strategies are used: expository and dialogue-type. Moreover, the text of any narrative joke is always an amalgamation of the two. This being said, we propose that the amalgamation is not random and is based on the assignment rule. The rule stipulates that the expository (E) and the dialogue-type (D) narrative strategies are assigned to specific instantiated slots in the conceptual structure in the following fashion: [FIGURE 1 to be placed below]

No narrative strategy is assigned to the SO slot; the latter functions as rather an instruction for the joke-teller and is never explicitly presented in the joke text. In fact, it is the implicit nature of the SO slot which triggered inferential activity on the listener's part and contributes greatly to the joke comprehension.

Given that NS constrains LA, we state that there are a number of language parameters which the expository and dialogue-type narrative strategies determine [CHART 1 to be placed below]:

With that said, when a particular NS is selected and assigned to the slot in the instantiated conceptual structure, a number of corresponding language parameters are also automatically assigned to the slot. We can thus derive the following form:

ICS-1

<i>[(pharmacist)X</i>	Past tense, compl. sent., reported sp., poor int., written mode.
<i>is presented</i>	Present tense, simple sent., direct sp., rich int., oral mode.

through (woman who wants to buy arsenic)X` Past tense, compl. sent., reported sp., poor int., written mode.

with the (problem whether to sell arsenic to the woman to kill her husband)Y Present tense, simple sent., direct sp., rich int., oral mode.

to which (pharmacist)X Past tense, compl. sent., reported sp., poor int., written mode
provides a solution (not to sell arsenic)Z] Present tense, simple sent., direct sp., rich int., oral mode.

ISC-2

[(pharmacist)X Past tense, compl. sent., reported sp., poor int., written mode.

is presented through (woman)X` Past tense, compl. sent., reported sp., poor int., written mode.

with the (question if the person on the photo making love to her husband is his wife)Y Present tense, simple sent., direct sp., rich int., oral mode.

to which (pharmacist)X Past tense, compl. sent., reported sp., poor int., written mode.
provides a solution (take the photo for the prescription and sell arsenic) Present tense, simple sent., direct sp., rich int., oral mode.

*Z which triggers script opposition (“life/death”)*SO] N/A

After language parameters have been assigned to the slots of the ICS, the selection of language form can begin. The major issue of linguistic manifestation in the narrative joke is the precision in matching between the contents and linguistic units. In other words, the linguistic form should neither underspecify nor overspecify the information encoded in the conceptual structure. The linguistic form should manifest whatever needs to be manifested, and infer whatever needs to be inferred, not more, not less. At this point, lexical units carrying too general or too concrete meaning, as well as

syntactic structures blocking a necessary property or providing a redundant one, would not qualify. To formalize, the linguistic manifestation is determined by the underspecification and the overspecification constraints:

Underspecification constraint (USC):

i. the linguistic form of the narrative joke must manifest:

- 1) all the entities and their relations instantiating the conceptual structure;
- 2) all the actions instantiating the conceptual structure (slots X, X', Y, Z);
- 3) all the properties instantiating the conceptual structure (slots X, X', Y, Z);
- 4) all the properties inherited by a slot from respective conceptual type and conceptual schema;
- 5) all the textual parameters set up by the respective narrative strategy.

ii. the linguistic structure of narrative joke should infer:

- 1) the opposing script properties instantiating the SO slot in the conceptual structure;
- 2) the negatively valued property of the script opposition instantiating the SO slot in the conceptual structure.

Overspecification constraint (OSC): no linguistic unit should be present in the linguistic form that:

- 1) manifests an entity, action, property other than those instantiating the conceptual structure (slots X, X' Y, Z);
- 2) infers properties other than those instantiating the SO slot in the conceptual structure;
- 3) manifests properties other than those inherited by a slot from respective conceptual type and conceptual schema,

4) manifests textual parameters other than those set up by the respective narrative strategy.

The selection of language form, on the one hand, is determined by the language parameters assigned by a respective narrative strategy, and, on the other hand, is regulated by the two constraints. The selection takes a form of generating a number of possible units (words, clauses, sentences or sequence of sentences) which could textualize the instantiated slots without violating USC and OSC.

Both ICS-1 and ICS-2 are linguistically manifested based on and with accordance to the NS-assigned language parameters and USC and OCS. The ultimate output of this selection is a number of possible language units which can be used for telling the narrative joke. Put another way, each instantiated slot gets a number of alternative wordings, all of which are suitable and constraint-compliant, and this is as far as the present theory can go. In other words, we cannot predict why the narrative joke, as we currently know it, has this specific textual form, but we can claim that alternative textual forms could be possible, and that textual variation of the joke could be a matter of selecting alternative wordings from the pool of candidates selected this way.

We will not present all the list of selected candidates for manifestation of all instantiated slots in ISC-1 and ISC-2 due to size limits. We will illustrate how only one instantiated slot – (pharmacist) X – acquires verbalization.

(pharmacist) X slot

Language parameters: Past tense, compl. sent., reported sp., poor int., written mode.

1. “Man”
2. “Pharmacist”
3. “Drugstore assistant”

4. “A gentleman working in the pharmacy store”

5. “An assistant at the pharmacy store”

6. “A very conscientious and diligent man who works at the pharmacy store”

(1) violates USC: does not manifest the necessary entity of pharmacist and thus does not trigger the respective script PHARMACIST;

(2) selected as a possible candidate;

(3) selected as a possible candidate;

(4) violates OSC: manifest the redundant property “activity work” in the PHARMACIST script; also, “gentleman” activates a redundant script of GENTELMAN which is rather remotely related to the conceptual structure and may lead to redundant semantic overtones;

(5) selected as a possible candidate;

(6) violates OSC: manifests two redundant properties “modality-scope conscientious” and “modality-scope diligent” in the script of PHARMACIST, also violates USC: does not manifest explicitly the script of PHARMACIST the latter can only be derived through semantic links to the script of MAN;

Candidates selected:

“Pharmacist”

“Drugstore assistant”

“An assistant at the pharmacy store”

The selection of other candidates is carried out in a similar fashion until a set of possible verbalizations is developed. The selection of the language form for both ICS-1 and ICS-2 are shown below:

[(pharmacist)X is presented

“Pharmacist”
 “Drugstore assistant”
 “An assistant at the pharmacy store”

through (woman who wants to buy arsenic)X`

“A woman comes to a drugstore and asks for arsenic”
 “A woman goes to the drugstore and asks for arsenic”

with the (problem whether to sell arsenic to the woman to kill her husband)Y

“I need arsenic to kill my husband”
 “I want to kill my husband with this arsenic”
 “What do you need the arsenic for?” “To kill my husband”

to which (pharmacist)X

“Pharmacist”
 “Drugstore assistant”
 “An assistant at the pharmacy store”

provides a solution (not to sell arsenic)Z]

“I cannot sell you arsenic, ma’am”.
 “This is illegal; I cannot sell arsenic to you”
 “I cannot sell you arsenic to kill a person!”

ISC-2

[(pharmacist)X

“Pharmacist”
 “Drugstore assistant”
 “An assistant at the pharmacy store”

is presented through (woman)X`

“The woman”
 “She”

with the (question if the person on the photo making love to her husband is his wife)Y

“The woman shows him the photo: “Is this your wife making love to my husband?”
 “The woman gives the pharmacist a photo with her husband and the pharmacist’s wife in bed. “Is this your wife?”
 “The woman shows the pharmacist a photo with her husband and the pharmacist’s wife in bed”.
 “The woman shows a photo with a man and a woman in bed. The man is her husband, and the woman is the pharmacist’s wife”.

to which (pharmacist)X

“Pharmacist”
 “Drugstore assistant”
 “An assistant at the pharmacy store”

provides a solution (take the photo for the prescription and sell arsenic)

“Oh, ma’am, if you have a prescription, than it’s fine”
 The pharmacist nods, “Well, I didn’t realize you have a prescription!”

Z which triggers script opposition (“life/death”) SO N/A

The list of linguistic units provided above constitutes a possible textual inventory available for the linguistic manifestation of the two instantiated conceptual structures. Put another way, the joke-teller can freely produce various texts of the joke by combining the candidates available for each slot, and each of these text variants will be equally efficient in creating a comical situation.

At this point, it should be said that for every instantiated slot more possible candidates may be selected which might not have been provided in this research. We did not seek complete determinacy in the description of the language of the narrative joke. As any genre of oral communication, the narrative joke is a combination of variable and invariable units. It is mainly invariable constants and their foundations that our model attempts to capture. We have shown how the generation of the narrative joke text is contingent on its semantic foundations (conceptual structure) and what constraints regulate the selection process.

Conclusions

In the present paper, we have introduced a model-based description of the narrative joke as it is viewed and generated by the speaker. We have utilized the thesaurus and main postulates of SSTH-GTVH trend in humor research. We claim that albeit the SSTH-GTVH theory is neutral to the real process of humorous texts (narrative

jokes included) generation, it provides a sound theoretical basis for describing the dynamics of joke generation process. We particularly focused on the narrative joke and addressed the questions of how the humorous content of the narrative joke is generated by a prospective joke-teller. We have designed a model of the narrative joke generation which we illustrate by the analysis of a joke. We subscribe to the idea that humorous texts always have a non-humorous basis from which they are derived.

The model consists of two stages: the conceptual structure instantiation and the linguistic manifestation. We introduce the notion of the conceptual structure of the narrative joke which captures its schematic plot organization where a character faces a problem which s/he/it solves in a way that triggers a particular script opposition. During the narrative joke generation process, the conceptual structure maps onto the existing knowledge base. We represented the knowledge base as a configuration of scripts. During the mapping, the conceptual structure gets instantiated and thus produces a semantic basis for the narrative joke. Four of the six knowledge resources described in GTVH contribute to the instantiation process: Situation, Target, Script opposition and Logical mechanism. The instantiation process follows a set of rules during which the slots of the conceptual structure are filled with appropriate content. The joke under analysis presents a case where the conceptual structure is instantiated two times which allows us to differentiate between single and multiple instantiations of the conceptual structure.

The linguistic manifestation stage captures the selection of the linguistic form most appropriate for manifesting the instantiated conceptual structure. The remaining two knowledge resources - Narrative strategy and Language as described in GTVH – are activated at this stage. Narrative strategy encodes a number of language properties, depending on its type: Expository or Dialogue type. Each slot of the instantiated

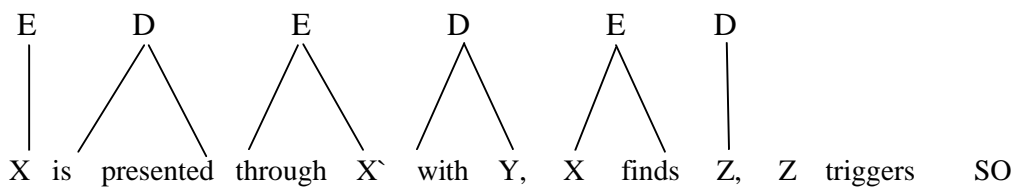
conceptual structure is assigned either expository or dialogue-type narrative strategy and thus also acquires specific language properties. The selection of the language form is then oriented towards manifestation of these language properties. In order to regulate the precision level of manifested information, two constraints – underspecification and overspecification constraint – are employed which rule out those linguistic units which are either too general or redundant semantically. The selection process ends with a number of several alternative linguistic units for each instantiated slot so that the joke teller can combine them freely with equal efficiency.

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Figures:

Page 22: Figure 1: Assignment of the narrative strategy to the slots of the instantiated conceptual structure in the narrative joke.

**Charts:**

Page 22: Chart 1: Correlation between Narrative Strategy selection and Language choices in the narrative joke.

LA choices NS selection	Tense selection	Sentence selection	Speech type	Intonation inventory	Performance mode selection
Expository	Past	Complex multipredicate structure with relative clauses; rich argument structure	Reported	Rich	Written
Dialogue-type	Present Future	Simple subject-predicate structure, poor argument structure	Direct	Poor	Oral