Event mappings for comparing formal frameworks for narratives

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1 Introduction

In this paper, we shall consider narrative as a form of storing and transmitting information and discuss tools to access and compare this information. In practice, narratives are presented to us as informal entities: as natural language text in written or recorded form, possibly with visual components (e.g., if the narrative is given to us as a video). Narrative in this format has many aspects or dimensions, many of which are not directly related to the purpose of storing and transmitting information. If we consider narratives as tools to store and transmit information, we typically reduce them to their story, i.e., what is the case and what happens in the narrative.¹

The link between narrative and information has been observed by many authors (often in the form of the crucial role that narrative plays for memory) and goes back to antiquity;² Schank even subsumes almost all of human intelligence in narrative when he says “in the end, all we have are stories and methods of finding and using those stories” [25, p. 16]. Thus, a representation of stories in a description language that captures the structural narrative core would be a formidable candidate for a measure of narrative information.³

This paper can be seen as part in a sequence of papers [14, 15, 4, 7] that aim at developing tools for constructing such a description language and empirically establishing its adequacy. The computational models of narrative community has provided several (vastly different) approaches for such a language, some of which claim that the formal representations in the framework correspond to an actual cognitive representation of the story in the human mind.⁴ Most of the frameworks from this community focus either entirely or primarily on structural properties of the stories, ignoring other narrative dimensions; however, it is unclear whether

¹This corresponds to Schmid’s second level (“Geschichte”) of narrative constitution [27].
²Cf. [23, 1]: “Memory is, then, the precondition of narrative, and when it is disturbed or malfunctioning, narratological coherence and efficiency suffer as well. […] However, the memory-narrative relation is far from unidirectional: just as memory engenders narrative, so is narrative, at times, indispensable for the agility of the faculty of memory.”
³It is interesting to compare Aristotle’s focus on the chronological sequence of events for memory in his De Memoria (451b-452a) with our discussion of the sequence of events as constitutive element of narration in §2.2. For an overview of the development of mnemotechnics from antiquity to the renaissance, cf. [31].
⁴With a view towards a possible application in narrative information retrieval, Schank elaborates: “What makes us intelligent is our ability to find out what we know when we need to know it. What we actually know is all the stories, experiences, ‘facts,’ little epithets, points of view, and so on, that we have gathered over the years. […] We can compare two stories and attempt to find the similarities and differences, or we alter a story to invent a new one for some purpose. […] In the end, all we have are stories and methods of finding and using those stories. Knowledge, then, is experiences and stories, and intelligence is the apt use of experience and the creation and telling of stories.” [26, pp. 15–16]
⁵Cf. [13, pp. 293–294]: “When a person reads a narrative story, an internal representation of that story is constructed in memory. […] Vast amounts of information within the memory representation are selectively ignored, in order to produce a distilled version of the original narrative.”
this matches well with the human ability to extract narrative information. In [14, 15], the author discusses a general formal approach for comparing such frameworks. Yet most existing frameworks will simply be incomparable in the formal sense defined in [15, §5.1, Case 3]; thus our situation calls for a comparison at a lower resolution, using a high-level conceptual description of narrative structure that is independent of the formal frameworks and can be applied to different such frameworks.

In this paper, we continue the methodological discussion of [15] with a special emphasis on providing such a high-level conceptual description of narrative structure based on the sequence of events. In §2.1, we discuss the task at hand in the methodological setting of conceptual modelling. In §2.2, we argue that it is natural to look for the structural narrative core in the sequence of narrated events. We then discuss some of the frameworks from the literature in §2.3, and show that while very different in their formal approaches, the fact that they all focus on the story as a sequence of events allows us to apply a general comparison method to them.

§3 is the heart of this paper: here, we describe an algorithm for constructing an event mapping. A comparable structure is constructed from natural language descriptions of stories on the one hand and annotations in the Proppian system (explained in §2.3) on the other hand, so that a comparison between both on the event level is possible. We applied this algorithm to the results of two experiments, described in §4. The results reported in §4 serve as an illustration of the use of the algorithm, and are also interesting in their own rights (if quite preliminary).

2 Preliminaries

2.1 The methodological setting

Our overall aim can be described in the framework of conceptual modelling, a technique ubiquitous in analytic philosophy (cf. [17, 16]). Conceptual modelling is an iterative process through which a stable equilibrium is reached between a concept or a collection of concepts as explanandum and a formal or semi-formal representation. Each iteration towards the equilibrium involves a representation in terms of a formal or semi-formal language on the basis of pre-theoretical understanding or earlier iteration steps; a collection of stable phenomena as evidence to validate or invalidate the current representation; and an assessment of the representation in the light of the phenomena.

At this level of abstraction, conceptual modelling is a generalization of the well-known technique of mathematical modelling from the natural sciences and engineering. In mathematical modelling, a physical situation is modelled by a mathematical representation which allows to make predictions; these are then contrasted against the phenomena observed in the assessment step. Typically, the methods for collecting the data, interpreting the data as stable phenomena, and the calculations or reasoning done on the mathematical side to provide the predictions are quite different.

Our present enterprise aims at conceptual modelling of the structural narrative core where the phenomena are less well-defined than in the natural sciences or engineering: in mathematical modelling, we have a clear methodological separation between (1) collecting data, (2) consolidating the data into phenomena and (3) making mathematical predictions on the basis of the mathematical representation. In our situation, this methodological separation is much harder to maintain. This problem is exacerbated by our earlier observation that the concept of being structurally the same story does not naturally occur as the most prominent means of comparing stories [7], and thus data collection will require training or focusing of test subjects which in turn influences the results of the comparison of the data and the predictions. As mentioned, we shall need to restrict the training and focusing to elements of the structural narrative core that are common to all (relevant) formal frameworks. Since we shall want to distinguish very clearly between the different levels, we fix our nomenclature for the rest of the paper: by the word narrative, we are referring to the informal object consisting of text or images. Such a narrative has social and cultural embedding, a context of reception, etc. We refer to the formal systems used for representing narratives as formal frameworks and

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Human test subjects, when prompted for judgments whether stories are similar, seem to focus mostly on superficial features (such as vocabulary, setting, motifs) [7].
the individual representations as structures. The process of transforming a narrative into a structure is at best as semi-formal process, yet we shall briefly call it formalization.

2.2 The narrative core: Events

The most common definition of a narrative in contrast to other, non-narrative texts or media, is that of a description of a sequence of events. Genette discusses the meaning of récit via its relationship to événement:

“[D]ans un premier sens – qui est aujourd’hui, dans l’usage commun, le plus évident et le plus central –, récit désigne l’énoncé narratif, le discours oral ou écrit qui assume la relation d’un événement ou d’une série d’événements.” [8, p. 13]

Also, in text linguistics (cf., e.g., [9, pp. 238ff]), narrative is used as a label for texts that relate events in temporal order. Hoffmann [10, p. 373] goes even further and highlights agreement that narration generally involves events or action (“Handlungen, Ereignisse oder Geschehen”), and that “Handlungsträger menschliche oder zumindest belebte Wesen sind bzw. […] als solche dargestellt werden”.

Defining event precisely is not trivial, especially in the context of Natural Language Processing (cf., e.g., the TimeML guidelines [24]). We follow the general definitions in linguistics and narratology in defining an event to be a change in the state of affairs. If nothing changes, there is no event; following established terminology, we call such non-events states.

We assume that a story consists of several events happening in order. In general, events can be recursively decomposed into smaller sub-events and summarized in larger super-events. We do not claim that there is an objective and unique way of representing the story as a sequence of events; consequently, our high-level description language has to be able to deal with variations in the perception of the story as sequence of events.

We claim (and make this claim precise in §§3 and 4) that an informal description of narratives based on sequences of events is an adequate level of description for the structural narrative core in order to compare representations developed in different formal frameworks both with each other and with natural language descriptions of stories. In the following section, we shall argue that our focus on sequences of events is matched by the important formal frameworks for narratives.

2.3 Concrete formal frameworks

In the following, we discuss a number of formal frameworks for narratives that have been proposed and discussed in the literature and show that these are largely event-based and that we can distill events in the sense defined above from the representation, and that thus an event-based comparison method should yield reasonable results.

The first and most celebrated formal attempt is Propp’s famous system for classifying Russian folktales [22]. In the following, we shall describe Propp’s system [21, 22], Lehnert’s Plot Units [13], and the doxastic preference framework of [18].

These frameworks are vastly different and incomparable in the formal sense of [15]. And yet, they all have in common that the most fundamental building blocks of the formal representations are the events of the narrative. In the following, we give brief descriptions of the frameworks.

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6The relevant OED definition is: “[...] 2. a. An account of a series of events, facts, etc., given in order and with the establishing of connections between them; a narration, a story, an account. [...]” [20, accessed 30 July 2012].

7As an example for the linguistic context, consider the notion of event from [30, pp. 328–329] subsuming all dynamic aspects of [29, 28] (accomplishment, achievement and activity). For instance, activities such as reading a scientific article or skipping rope are considered as “constant change”, and thus as events.

8Goethe’s famous characterization of a novella as “eine sich ereignete unerhörte Begebenheit” (from his conversations with Eckermann, 29 January 1827) is the extreme case of subsuming events into a super-event.

9There is evidence against such an assumption, cf., e.g., [6, 12].

10In [15, §5.2], we show that the concept of “expectation of agents” is not expressible in the plot unit framework and the concept of “causality” is not expressible in the doxastic preference framework.
Propp’s Morphology. Working with a corpus of 100 Russian folktales from the collection of Narodnye Russkie Skazki by Alexander Afanas’ev [1], Vladimir Propp developed a formal system that could describe the structure of each folktale by short annotation strings consisting of symbols representing what Propp calls functions.

Propp identified seven11 dramatis personae representing roles the characters may play within the tales. They are: the hero (H), the villain (V), the princess (P), the princess’s father (PF), the dispatcher (Di), the donor (Do), the (magical) helper (MH) and the false hero (FH) [22, § 3]. Not every dramatis persona occurs in each story, not every character represents a dramatis persona, and some dramatis personae can be represented by the same character.

The actions of the dramatis personae are described by a set of thirty-one functions described in [22, §3] by means of examples and more specified subfunctions. These functions are marked by symbols in the order of their occurrence in the folktale; the first seven functions, marked with lowercase Greek letters, are called preliminary functions: β Absentation; γ Interdiction; δ Violation, ε Reconnaissance, ξ Delivery, η Trickery, θ Complicity. The preliminary functions are not fully developed in [22] and are not included in Propp’s own annotation strings. The main functions are: A Villainy, a Lack, B Mediation, C Beginning counteraction, ↑ Departure, D First function of the Donor, E Hero’s reaction, F Provision or receipt of magical agent, G Spatial transference between two kingdoms, H Struggle, J Branding, I Victory, K Liquidation, ↓ Return, Pr Pursuit, Rs Rescue, o Unrecognized Arrival, L Unfounded Claims, M Difficult Task, N Solution, Q Recognition, Ex Exposure, T Transfiguration, U Punishment, W Wedding. These functions, instantiated by subfunctions marked by superscripts, occur in strict sequential order, i.e., functions have to occur in the folktale in the order they are given in the list above. In the full Proppian system, there are some few specific ways to break strict sequentiality [22, § IX.A]: The most important one is that some folktales contain a series of individual tale units, called moves. Examples are trebling, the triple repetition of moves within the tale, and moves in which a magical agent is obtained in the first move but only used in the second move of the tale.

Most of the Proppian functions represent events in the sense of §2.2. The only one that does not necessarily (but still often) represent an event in the story is the function Lack. However, large spans of the text (and hence: a good part of the events) may go unlabelled in Propp’s system, and will then be omitted from the structure.

Plot units. In the plot units framework, we represent a narrative as a grid of events. Each agent in the narrative is represented by a column in the grid; all events occurring in that column are events affecting that particular agent. There are three types of events: mental events, and positive and negative events; here, “positive” (“negative”) means “positively (negatively) affecting the agent corresponding to the column where the event is listed”. Events in the same column can be linked by causal links of which there are four types: motivation, actualization, termination and equivalence. Events in different columns can be linked by interactive links. There are a number of rules as to which links are allowed (cf. [13] for details.) A list of basic constituents in the form of plot unit structures can then be used to generate more elaborate narratives.

The plot unit structures can now be represented graphically as labelled graphs where +, − and M represent the three types of events (positive, negative and mental, respectively), and m, a, t, and e label the causal links as “motivation”, “actualization”, “termination”, and “equivalence”, respectively. In Figure 1, we give an example of a plot unit structure with two agents: we read it from top to bottom, thinking of time flowing downwards; the second agent (right column) has a mental state representing the desire to perform an action of mutual benefit to both agents; this action in turn motivates the first agent (left column) to reciprocate in kind.

The notion of event used here is not identical with the notion of event from §2.2: This formalism only captures such events that have an mental/emotional impact on the agents. Events represented in the narration (such as “the birds are singing”) would only be included if the song affects the agents’ emotional or

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11One of these, the Princess/Princess’s Father, can be split into two with a slightly difficult delineation. Here, we are using the resulting list of eight dramatis personae.
mental state;\textsuperscript{12} Lehnert herself notes that she is only concerned with “gross distinctions between ‘positive’
events, ‘negative’ events, and mental events of null or neutral emotionality” \cite[p. 294]{13}. In this regard, the
selection mechanism for events can be seen as an elaboration of the concept of eventfulness (cf. footnote 7).

**Doxastic preference framework.** The doxastic preference framework \cite{18} considers narratives as game-
theoretic (perfect information) decision trees where each node of the tree represents either a decision of one
of the agents or an event. The terminal nodes of the tree are the possible outcomes of the narrative, and the
agents of the story have a preference concerning those outcomes, represented by a linear order of the set of outcomes.

In the terminology of the doxastic preference framework, the nodes are either actions or events, but both
types of nodes fall under the notion of event from §2.2; taken together, both notions correspond to the full
notion of event as discussed above. However, its focus on counterfactual reasoning requires to include a
number of fictitious events that never take place in the story.

In addition, we have layers of belief about these preferences: at the first level of these layers, agent \(X\)
has a belief about what he or she thinks is the preference relation of agent \(Y\) for each point in time (i.e., a
node of the decision tree). At the next level, we have the belief about what agent \(X\) thinks what agent \(Y\)
believes are the preferences of agent \(Z\) for each point in time.

Formally, this is represented as follows. For each sequence of agents \(\vec{P} = (P_0, ..., P_n)\) of agents, every
agent \(X\), and every node \(v\) of the decision tree, we write

\[
S(v, \vec{P})(X)
\]

for “the belief of \(P_0\) about the belief of \(P_1\) about ... about the belief of \(P_n\) about the preference of \(X\)”. If
\(\vec{P} = \emptyset\), then \(S(v, \emptyset)(X)\) stands for the true preference of agent \(X\) at node \(v\). We represent preferences as a
sequence of terminal nodes, i.e., \((t_1, t_2, t_0)\) stands for “\(t_1\) is preferred over \(t_2\) and \(t_2\) is preferred over \(t_0\). If \(v\)
is a non-terminal node and \(t\) is a terminal node, we write \((v, t)\) to mean “all terminal nodes succeeding \(v\) are
preferred over \(t\)”, and similarly for \((t, v)\). Figure 2 gives an example of a typical doxastic preference structure
representing a narrative. Details can be found in \cite{18}.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure1.png}
\caption{An example of a plot unit structure with two agents.}
\end{figure}

3 Event mapping

In this section, we shall describe the technique of event mapping that we used as a means of comparison
between natural language descriptions of narratives and a formal system. The technique of event mapping
works on a finite list of text representations of the same narrative: these representations are either given in
natural language (in our example, summaries of the narrative) or are formal annotations linked to passages
\textsuperscript{12}If one wants to be pedantic, it could even be difficult to deal with certainly relevant events such as the death of one of the
agents, as this is strictly speaking not a change of the agent’s emotional state.
of the natural language text of the original narrative (so that the selected natural language text of the original narrative can serve as a text representation). Event mapping produces, based on the given list of text representations, a list of events that we shall call the event table in which the rows correspond to all events represented in at least one of the representations from the list and the columns correspond to representations from our list. The entries in the table indicate whether the event corresponding to the row is represented in the representation corresponding to the column. We should stress that the result of event mapping is highly dependent on the finite list of representations it is produced from: starting with a different list of representations might greatly affect the resulting event table.\footnote{For instance, if a given list of representations produces an event table $M$, and you add one additional representation to the list producing an event table $M'$, you cannot assume that $M'$ differs from $M$ by just having one extra column (corresponding to the extra list item). Instead, the process of determining the structure of the rows may be affected by the additional list item, resulting in a rather different event table. The procedure should, however, yield the same (or very similar) final result for the same input independently of the order in which the input is processed.}

In §4, we shall give an application of this technique in the case of two experiments, comparing natural language summaries to the annotation results of the Proppian system. We shall use examples from these experiments to illustrate our description of event mapping. We refer to the two experiments by the labels Propp and Summaries. These experiments are described in detail in §4; in the next paragraph, we give a short overview of the narratives used for the sake of understanding the examples.

### 3.1 Data and Examples

The empirical data were all generated using the same narratives as material. We used the folktales The Seven Semyons, 147, Shabarsha, 151, and Ivan the Bear’s Son, 152 from Afanas’ev’s corpus Narodnye Russkie Skazki as also Propp had worked with them; in the following, we refer to these folktales as Semyons, Shabarsha, and Ivanko.\footnote{We used the translations of Gutermann [1] for Semyons and Ivanko, and the translation of Cook [2] for Shabarsha.}

**Data and Labels.** In the summary experiment, test subjects were instructed to write summaries of the narratives. All references to data from experiment Summaries are labelled as follows:

\[
\langle \text{< <(narrative)(test subject), (sentence)>> } \rangle.
\]

These labels can be used to find the data in Appendix B; the narratives are abbreviated as Iv(anko), Se(myons) and Sh(abarsha). Some sentences were split into sentence parts, marked by a dot:

\[
(1) \quad \langle \text{Iv1,2.1} \rangle = \text{Ivanko summary of the first test subject, second sentence, first part.}
\]

In the experiment Propp, test subjects assigned Proppian function labels (cf. §2.3) to concrete passages of text. These assignments are labelled as follows

\[
\langle \text{function} \rangle : \langle \text{< (sentence) >>} \rangle (\langle \text{test subject} \rangle, \langle \text{narrative} \rangle)
\]
3.2 Description of the Algorithm.

We shall now give a description of the algorithm that produces the event mapping from a given list of text representations. The algorithm is not deterministic, but involves a number of modelling choices which we shall highlight in the description.

Let us fix our terminology first: we first construct an event list for every representation; these lists are then aligned, structured and enriched by occurrence information. We say that the event lists are merged to constitute an event table. The event table then constrains the evaluation phase (§3.3) for the representations, which can be understood as mapping events from these representations to each other. We refer to both the whole process and its result as event mapping.

Granularity. Before we start, we must choose a granularity level, defining the level of resolution of the comparison. Possible options would be the level of granularity of the original narrative, the level of granularity of one of the frameworks or the common refinement of the two frameworks to be compared. In our application, we chose the level of granularity of the framework in the Summaries experiment.

Step 1. Initialization. The representation in the given framework is translated into an event list. After this step, the differences between the frameworks have been removed and the created event lists are comparable. Therefore, obviously, the initialization step is the most framework-dependent.

An example for the initialization step: text mapping. For a simple text representation, a list of all occurring events is created from the text by following the linguistic structure of the text as described below. In this example, the choice of sentence predicates in the text representation will indicate what is presented as an event.

To identify events and overall the elements to include, we count a sentence or fragment of a sentence as an event description if it describes a change of the state of affairs. So, for instance, “Kurz darauf verwiesen die sieben Brüder” (“Shortly after that, the seven brothers are orphaned”) is an event description, whereas “Sieben Waisen namens Simeon...” (“Seven orphans named Semyon...”) is not.

Event descriptions can regroup non-contiguous events (e.g., “Every year, Joan published an article.”). For the initialization step, we treat such descriptions as if they were a single event and insert them into the event list at the point where they are mentioned in the text. In the merging step described below, these may be decomposed into constituents.

The decision to base the identification on the grammatical structure of the natural language text is one of the modelling decisions that we were referring to earlier. In addition to the events, we decided to include non-events if they were expressed as a full clause, and also references in sentences to states resulting from events in the story description of the original narrative. Again, this was a modelling decision, and one might have considered to include also state references of the type “the seven orphans” as a reference to the event of the Semyons’ losing their parents. We decided against this as this would have inflated the number of elements in the mapping beyond measure.

Step 2. List merging. After Step 1, we now have an event list for each of the text representations (we call these the individual event lists) and aim to merge them into one event list (called the merged event list).

[15]In our application, the original narrative itself is also a natural language text, and one could have considered including it as one of the text representations in the list. We did not do this in our construction of event tables: the original narrative will typically be at a rather different level of granularity from the other representations, and thus including it would make the event table much larger without real benefit for the comparison task.
1. Suppose that an event $e$ occurs in at least one of the individual lists, and in each of the other individual lists, $e$ either occurs as well or $e$ does not occur and no event occurring in that list is a super-event or sub-event of $e$. In that case, we simply add $e$ to the merged event list.

2. Suppose that an event $e$ occurs in at least one of the individual lists, and one of the events in one of the other lists has a sub-event of $e$, super-event of $e$, implicates or implies $e$ or a super-event or sub-event of $e$. In this case, we have a number of options:

(a) *add a hierarchical structure* to the event list, which indicates that we *unfold* $e$ into sub-events $e_1, e_2, e_3, \ldots$ (cf. discussion in *Decomposing a Trick: Success* below), or subsume $e$ with other events into one *super-event* (cf. the discussion of the Example for different granularity: *Fishing plan* below). We use the following notation for this:

$$e\langle e_1, e_2, e_3 \rangle, \ldots$$

(b) sub-events occurring *non-contiguously* in the text are regrouped and reordered into a *super-*sequence of sub-events (for concrete examples, cf. the discussion of *Regrouping Repetitive Sequences: challenges and tasks* below). Assume the some lists contain (in temporal order) the events $e_1, e_2, e_3, e_4$, while others contain event descriptions $e^*_1, e_3$, and $e^*_2, e_4$, which comprise $e_1$ and $e_3$ and $e_2$ and $e_4$, respectively. We want to add this information to our list. As pointed out above, we want to retain the original temporal order; hence we have to use some notation to indicate reordering groups. We use the following notation for this:

$$e_1, e_2, e_3, e_4, e^*_1 \{e_1, e_3\}, e^*_2 \{e_2, e_4\}$$

For instance, a merged structure after unfolding and reordering might look as follows:

$$e_1\langle e_2, e_3 \rangle, e_4 \langle e_5, e_6 \rangle, e^*_2 \{e_2, e_5\} \{e_3, e_6\}$$

In both cases, the decision to introduce additional structure is a modelling decision. This decision should be made in such a way that the representation stays as close to the original text as possible. In borderline cases, the modeller should avoid introducing additional structure in order to facilitate comparison.

As mentioned, a major source of difficulty is the fact that both the original narrative and the natural language text representations could lack direct references to events and instead only have implicit, implied or implicated events (cf. the examples in the next section). The modeller has to justify the modelling decisions by comparing the resulting merged event table with the original narrative.

**Step 3. Occurrence Tabulation.** Step 2 produced the rows of our event table; now, we are populating the table by entering the data of which of the text representations in our list mentions each given event. We could either mark this on a binary basis ("occurs" vs "doesn’t occur"), or add some additional information about the form of occurrence. In our applications, we distinguished three levels of occurrence:

- **explicit occurrence**, the “normal” and obvious case (including strict implication and decomposition),
- **implicature** or some other kind of inferability
- **state references**

### 3.3 Evaluation.

After we produced the *event table*, we can now use it for evaluation and comparison. For a quantitative analysis, we should typically want to derive numerical data from the table by counting occurrences, overlaps and other features. A number of decisions have to be made concerning the counting process. The following are examples of different counting practices:
• (Don’t) count folded events as if every instance was mentioned;
• (don’t) count sub-events for super-events, or only in special cases;
• give different weights to events depending on their type or whether they are mentioned implicitly or explicitly.

3.4 Details of Merging

This section explains the decisions involved in executing the algorithm, using the construction of the event mapping for the data from the experiment *Summaries* as an example.

3.4.1 Constructing Super-Events and Unfolding.

If different text representations contain different levels of granularity of a given event, the modeller will need to make decisions about the sub-event structure in the event list. In general, containment relations between events are not trivial, and involve issues of implication, implicatures and unclear event boundaries.

**Example for different granularity: Fishing plan.** We introduced (sometimes anonymous) super-events in case that we felt that a certain event was mentioned *pars pro toto*, or that events form a unit in the original narrative. For instance, we used the label *fishing plan* to refer to the event “Shabarsha decides to go fishing with the intention to earn money to support his master”. This event essentially coincides in the narrative with “Shabarsha goes to the pond” and the fishing plan motivates the latter event. One summary omits the fishing plan and only lists the latter event. We decided to consider these two events as two sub-events of an unlabelled super-event in our event mapping.

3.4.2 Regrouping Repetitive Sequences: challenges and tasks.

Repetitive sub-events are often combined in the summaries: in *Shabarsha*, there are four competitions, each consisting of a challenge, a trick and the success); in *Ivanko*, both the mistakes made and the competitions with the devil occur in several forms. As discussed above, reordering super-events are not really events, but they are treated as such in the summaries. As we decided to follow the textual structure relatively closely, we retain this structure, and later add a significant amount of structure information. Without this structure information, a comparison to the *Propp* data would not have been not possible.

An example of such a regrouping is the following:

(3) a. <Iv5,8.1> Vom Großvater beauftragt <Iv5,8.2> geht der Teufel mehrere Wettkämpfe mit dem Sohn ein.
b. <Iv5,9> Der Sohn überlistet den Teufel jedes mal.

**To Unfold or Not to Unfold? The Devil in the Details.** In the *Propp* experiment, one test subject consistently marked challenge passages and passages corresponding to the devil’s turn in *Ivanko* (but not in *Shabarsha*), and we would like to represent this in our comparison. However, consider the following *Summary* data:

(4) a. <Iv1,6.1> Dort fordert Ivanko von einem Teufel eine Pacht <Iv1,6.2> und dieser ihn zu Wettkämpfen heraus.
b. <Iv2,9.1> Da der Teufel jede Wette verliert, <Iv2,9.2> gibt er anschließend klein bei.
c. <Iv3,9.1> Dort trifft er einen Teufel, <Iv3,9.2> von dem er einen Hut mit Gold und ihn selber ein Jahr als Knecht gewinnt.

We notice that in (4-a), we can infer that there were several competitions (“Wettkämpfe”), but in (4-b), the test subject confuses *Wettkampf* (*competition*) with *Wette* (*bet*). Strictly speaking, the word *Wette* does not allow us to infer that each of the contestants has a turn. In (4-c), we cannot infer that competitions
take place at all. Counting all of our summaries, we get two inferrable, one questionable (4-b) and three non-inferrable cases for Ivanko. For Shabarsha, the devil’s turn is always inferrable in Summary data (if you read “Wette” as “Wettkampf”, again); however, here we do not need to unfold the devil’s turn events because there is no similar annotation in the Propp data which necessitates this unfolding.

3.4.3 Decomposing a Trick: Success.

We give an example of an event that occurs in all summaries, but could be seen as an artifact of our method. We labelled this event as success. In Ivanko and Shabarsha, success refers to the protagonist’s victories over the devil(s), in Semyons, it refers to the success in getting Elena. This event is expressed in quite different forms in the various summaries, but in each summary it is at least implicated. We decided to count it as a separate event in order to compare it with the Propp annotations (where the Proppian function I (Victory) triggered the annotation). Consider the following examples:

(5) a. <Sh1,5> Schabarscha ist dem Teufel überlegen und gewinnt jede vorgeschlagene Wette.
   b. <Sh6,7> Bei jeder Aufgabe trickst Schabarscha den Seeteufel aus.

In the first example, only the challenges and the victory are mentioned, but in the second, the trick is focused, and ausstrICKen entails success of the trick. Therefore the challenge episodes are segmented into three sub-events: challenge, trick, and success. Yet success is also mentioned explicitly in similar cases (cf. next paragraph, ex. (6)), so that the separation as an event in its own right is justifiable.

3.4.4 Implicit and Implicated Events

In the Semyons, the following is the description of the return of the brothers: “[…] and soon [the ship] came to the shores of the Semyons native land. The tsar was overjoyed; he had not even dreamed of ever receiving Elena the Fair in his own house.” Note that in the original text, there is no explicit mention of the fact that Elena is actually delivered to the Tsar, but since the task was to steal Elena and the Tsar was “overjoyed”, it is implicated that Elena has been delivered. In contrast, this event is explicitly present in some of the summaries:

(6) a. <Se1,5> Seine Brüder helfen ihm und bringen sie zum Zaren.
   b. <Se3,7.2> und schaffen es sie zum Zar zu bringen.
   c. <Se4,7.2> schenken sie dem Zaren.

We decided to separate the state {Tsar’s Pleasure} from the event Gift to Tsar: they are ontologically different, but belong to a common super-event and occur simultaneously.

Implicature / Inference and Event Conflation. When measuring what information of the original narrative (in terms of events) is contained in the summaries, we find that certain events are only implicated; consider the following examples:

(7) a. <Se2,3> Der Zar bewundert den Fleiß der Kinder und will ihr Vater werden.
   b. <Se1,3> Später sollen sie, unter Anführung des Diebes-Simeon, die Prinzessin Helene stehlen.

Example (7-a) does not explicitly say that the Tsar indeed adopts the children, but is close to the original narrative where the Tsar utters the sentence “I will be your father.” This utterance only expresses a wish or commitment, not its fulfillment, but (uttered by the Tsar) can be seen as a performative formula that also executes the action. The successful adoption is later presupposed in the narrative by showing that the Tsar listens to the children’s plans and dismisses them “having bound the Semyons as apprentices”.

In (7-b), the obligation to steal is reported, but we understand this to also report the event of Permission/Assignment to steal the princess. As there is no negation of the fact, this also implicates that they accept the assignment and are going to (try to) steal Elena, which is reported in the next sentence. In our application, there was nothing to be gained by adding these additional implicated events, and so we
decided to understand *Permission/Assignment* to include the acceptance. This differs from the Tsar’s order to execute the first Semyon, which is later cancelled by the *Permission/Assignment* to steal Elena.

**Implicature, Non-Occurring Events and TimeML.** As we are concerned with processing events in texts, one might consider an annotation language like TimeML [24] to be close to our goals. Yet the two approaches are quite different: our event mapping follows the text quite closely, but does not link the lists directly to the original text, thus alleviating some of the difficulties of annotation. In particular, our method differs from TimeML annotations in the treatment of events that are reported or are assigned a modality or aspectual information, because our event lists only contain events that are real (within the story).

We need not treat what TimeML calls *REPORTING_VERBS* or *I[nentional]_STATES*, since we only check whether descriptions perform, presuppose or conversationally (and hence defeasibly) implicate the reported or intended action. In our approach, we would just add reported events to the event list in the order they happened (not in the order they were told); however, our three narratives did not have examples of this. We have examples of intentions stated but not carried out: e.g., the execution of the seventh Semyon which we didn’t add to the event list as a modeller’s decision.

4 Empirical Study: Propp vs. Summaries

In this section, we present an application of the event mapping described in §3, comparing a particular formal framework (Propp) to natural summaries of human readers untrained in any of the frameworks. The analysis of the event mapping allows us to compare Propp’s framework with the untrained summaries, thereby allowing us to make judgments about which parts of Propp’s system are natural. This analysis of one particular formal framework also serves as a test case for our technique of event mapping.

While a full quantitative analysis of the two experiments was not in order due to the small numbers involved (each of them had six test subjects), we still considered whether events and functions occurred reliably reusing a notion of stability used in [4] where we chose to set the cut-off point at 50% of the test subjects. We thus say that a event (or a Proppian function) occurs *stably* in one of the two experiments if at least four of the six test subjects list it. A given Proppian function can be assigned to different text passages (and even different events) by different annotators: we call a stable function *strongly stable* if there is a text overlap in the assigned text passages of at least four of the six annotators.

4.1 Experiment **Propp**

The experiment **Propp** is described in detail in [4, §2.3] where it is called **Propp II**: Six test subjects, all students of the University of Amsterdam, and all with native or near-native competence of English, read the three folktales *Ivanko*, *Semyons*, and *Shabarsha* and produced a list of the Proppian functions occurring in the folktales, and marked text passages corresponding to each of the functions that occurred. Table 1 gives the annotation string produced by the test subjects.

In *Ivanko*, β, I and ↓ were strongly stable and ↑ and H were weakly stable (of which ↑, H, I and ↓ are annotated by Propp); in *Shabarsha*, a and ↑ were strongly stable and H and I were weakly stable (of which ↑, H, and I were annotated by Propp); in *Semyons*, a, B, G, and W were strongly stable and ↑ and K were weakly stable. Note that in both *Ivanko* and *Shabarsha*, there is a strongly stable function not annotated by Propp (B and a, respectively).

4.2 Experiment **Summaries**

A summary of a text is an account “containing ... the chief points or the ... substance of the matter” (OED 1989, *summary*, adj.), i.e., a “distilled version of the original” [13, p. 294]. What the chief points or the substance of the matter are depends on the task and the context, and thus writing summaries is

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16For Propp’s formal system, cf. §2.3, *Propp’s Morphology.*
not a natural but a acquired skill. This skill features prominently in reading and writing education and is used frequently in everyday communication about narratives, even though there is no unique definition of what constitutes a good summary.\footnote{As an example for quality measures, consider the Writing Framework for the 2011 National Assessment of Educational Progress of the National Assessment Governing Board of the U.S. Department of Education (pp. 10–11). Cf. also the discussion of the differences in “holistic encoding” (holistische Kodierung) of texts between Germany and the United States in [5, pp. 38–39].}

Summaries are also a text type that has been extensively studied as a measure of adequacy of story understanding systems [3]. In this study, we assumed that test subjects have the general ability to construct adequate summaries. We were not concerned with the quality of the summaries of our test subjects.

**Experimental setup.** The experiment was conducted with six students of the Universität Hamburg; they all had native or near-native competence of German. In order to be able to compare the results with the Proppian annotations (cf. §4.1), we used German translations of the Russian folktales used in the experiment Propp (cf. §4.1).

Test subjects were given a sheet of instructions which was not only provided in written form, but also read aloud by a native speaker of German. The instructions highlighted that the story should be recognizable from the summary and that it should not give comments on style or order of events. No example of a summary was given, and similarly no precise algorithm was given how to determine the important facts to mention in the summary, nor even to focus on events. Test subjects were instructed to use “simple sentences”; and examples of simple sentences were provided containing at most one level of subordination or coordination (cf. Appendix A for the part of the instructions given to the test subjects that describe summaries).

Test subjects were then given 2.5 hours to write the summaries, and were given a modest financial compensation.

**Results.** The complete summaries can be found in Appendix B. In the following, we give an overview of the recurring features of the summaries:

In *Semyons*, test subjects agree least about which details to include in their summary. However, all agree to mention some events before the theft, in particular meeting the Tsar, presenting their plans what trade to learn and the test cases (four test subjects each). All agree in naming *Theft* and *Reward*, and all except one mention the *Wedding* of Tsar and Princess. The fact that a trick was performed is only mentioned by four.

<table>
<thead>
<tr>
<th>Test subject</th>
<th>Proppian Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a↑HIK↓</td>
</tr>
<tr>
<td>2</td>
<td>aβγ↑GHIK↓</td>
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<tr>
<td>3</td>
<td>B↑HI↓U</td>
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<td>4</td>
<td>aβ↑HI↓</td>
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<tr>
<td>5</td>
<td>aβ↑HIK↓</td>
</tr>
<tr>
<td>6</td>
<td>aβ↑HIK↓</td>
</tr>
</tbody>
</table>

### Table 1: The annotation strings for the three folktales in *Propp*. Preliminary functions are separated from the others by a bar.
In Ivanko and Shabarsha, test subjects agree on the central events: All mention some event leading up to the competition between the hero and the little devil (Ivanko’s blunders and assignment to go to the lake; Shabarsha’s fishing plans or presence at the lake). The competitions are always mentioned, so is receiving the gold. The trickery is only mentioned by four (one test subject fails to mention trickery in all three tales). The final trick to obtain the gold is completely omitted in Ivanko summaries but mentioned by four for Shabarsha.

The narratives Semyons and Shabarsha ended with a narrator’s commentary (which was quite surreal in the case of Shabarsha). Only very few test subjects mention these commentaries in their summaries.

4.3 The Event Tables based on the experimental data.

For each of the three narratives, we followed the description of the algorithm in §3, applied to the six summaries. We chose the granularity of the Summaries as the level of comparison. This means that we have not subdivided events occurring in the summaries unless necessary for merging event lists, even if they occur in a more fine-grained version in the original narrative. After doing the event mapping with the six summaries, we enriched the table by including the data from the Propp experiment: in two cases, we had to add events because they were annotated by test subjects in the Propp experiment.\textsuperscript{18} We tested the objectivity of our event mapping by having it repeated independently: the differences were relatively small.\textsuperscript{19} Figures 3, 4 and 5 show the event mappings for Ivanko, Semyons and Shabarsha, respectively. Columns S1 to S6 correspond to the six test subjects in the Summaries experiment and columns P1 to P6 correspond to the six test subjects in Propp.

4.4 Comparison of the Summaries with the Propp experiment

To show that the event-based comparison can deliver interesting results, we focus on three qualitative examples of differences in the following: storylines omitted from function assignment, \textit{stable events}, some (strongly) \textit{stable functions} from the Propp data that are not present in the summaries, and an example of a \textit{stable passage} which we find in all Propp annotations but in no summary.

\textbf{Framework Difference: Density.} Summary descriptions tend to be very dense, making use of certain implicatures (cf. the examples in §3.4). Since the Propp annotations refer to actual passages of the original text, this type of density cannot occur here. Rather, a reverse effect to density occurs in the Propp annotations: test subjects have a tendency to mark relatively long stretches of text as pertaining to one Proppian

\textsuperscript{18}Cf. §3.4.2, \textit{To Unfold or Not to Unfold? The Devil in the Details}, for a discussion of the interesting case; the less interesting case concerned the reaction of the stolen princess’s father in the Semyons, which were omitted in all of the summaries and hence had to be introduced in the merging process.

\textsuperscript{19}The repeated event mapping was done by Mira Viehstädt. Main differences were a lack of alignment of the introduction of sub-events and super-events.
<table>
<thead>
<tr>
<th>Event</th>
<th>Sub-Event</th>
<th>Sub-Sub-Event</th>
<th>TS1</th>
<th>TS2</th>
<th>TS3</th>
<th>TS4</th>
<th>TS5</th>
<th>TS6</th>
<th>PII 1</th>
<th>PII 2</th>
<th>PII 3</th>
<th>PII 4</th>
<th>PII 5</th>
<th>PII 6</th>
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<td>Peasant and Wife</td>
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<td>Meet the Devil</td>
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<td>G: Devil's Turn</td>
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<td>G: Trick</td>
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Figure 3: Synoptic annotations of *Ivanko* from *Summaries* and *Propp* (cf. Table 2 for explanation of labels).
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Figure 4: Synoptic annotations of Semyons from Summaries and Propp (cf. Table 2 for explanation of labels).
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Figure 5: Synoptic annotations of *Shabarsha* from **Summaries** and **Propp** (cf. Table 2 for explanation of labels).
Table 3: Stable events for the three stories; giving the minimal count (counting only events) / maximal count (counting all sub-events, states, state references)

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<td>Ivanko</td>
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function. We have many assignments of text to Proppian functions that mark several lines of text; three of these assignments annotate text that adds up to more than 25 lines. These long text passages correspond to several events, thus creating a mismatch between the functions and the listed events.

Focus on the main storyline. In both frameworks, test subjects tend to agree to concentrate on the main storyline: Both Ivanko and the Semyons have a prelude storyline that leads up to the central story line of the competition with the devil (Ivanko) and the theft of the princess (Semyons). Such a prelude does not fit Propp’s system as used in our experiment. Consequently, we find very few annotations in the part of the text corresponding to the prelude storylines. As mentioned, Shabarsha and Semyons also have a final narrator’s commentary; this is listed by only one summary and no Proppian annotation for the Semyons and by three summaries and three Proppian annotators for Shabarsha.

The missing representations of the prelude and the coda are an example of framework bias for the Propp annotations, but the fact that the summaries reproduce the Propp results in not representing these parts of the narrative can be seen as an argument that this particular framework bias is natural.

Similia contrariis annotantur. We observe that in the Propp annotations, similar events are sometimes assigned to different Proppian functions. E.g., in Shabarsha, we consider the four challenges (Wrestling, Running, Whistling, and Throwing) and their sub-events Challenge, Trick, and Success as largely parallel. However, in the some of the annotations, the Proppian functions H, I, M, and N are assigned parts of the text corresponding to these events.

Stable Events. A count of stable events is given in Table 3: the minimal count ignores states and state references and does not count sub-events; the maximal count includes all sub-events, states and state references. There is only a very small overlap in the stable events between the two experiments. For each of the stories, there is exactly one stable event in common between the Proppian annotations and the summaries: the Semyons are rewarded; Shabarsha goes to the pond; and Ivanko is assigned the task to go to the lake. Including not only events, but also states, we additionally get the Tsar’s pleasure at being given Elena by the Semyons, Shabarsha’s intention to help his master, and Shabarsha’s and his master’s rich life after winning the gold.

In determining agreement of stable events, there are a number of modelling decisions to be made. For instance, one can count just events, or events and states, or giving different weights to events and states (cf. §3.3). Modifications of this type had very little influence on the results. Another modelling decision is whether to count an event as occurring if at least one sub-event is occurring. This has a much bigger influence on the stability assessments.

Stable functions as a framework bias. In Semyons, four Propp annotators agree that the Tsar’s love for Elena constitutes a Lack (strongly stable function), while none of the summaries mentions this condition. Similarly so for the Lack that affects Shabarsha’s master right at the beginning of the story, which is, however, not mentioned in any summary. We interpret this as a framework bias: the function Lack plays an

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20Exceptions to this are annotations of the functions Absentation or Lack to the preludes. The correctness of these with respect to Propp’s system is questionable, as the prelude storyline (at least in the case of Ivanko) does not involve the dramatis personae.
important role in the Proppian framework (since it acts as a motivation for other functions), and so Proppian annotators are likely to include it in their representation. The fact that this is not explicitly mentioned in the summaries indicates that it is a genuine framework bias that does not have a direct natural correspondence.

5 Conclusion and future work

Methodologically, the event mapping approach was adequate for the task at presented in §4: We were able to compare natural language summaries with annotations in the Proppian formal system. The comparison allowed us to identify phenomena that are due to framework bias, as well as judgments whether some instances of framework bias are natural. A similar comparison could be done with other event-based frameworks. In order to use the technique of event mapping for more general narratives, a number of modifications would be necessary:

More flexible chronology. The table structure does not allow for breaking the chronological order (with the exception of event merging) or simultaneous events. A generalization of the technique in this direction will help us to treat more complex narratives.

Higher-order concepts. Our current technique focuses solely on the events themselves and not on the relations between events (e.g., that one event is the motivation for another one). In more complex narratives, the inclusion of these higher-order concepts would be necessary.

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References


A Instructions for the experiment Summaries


Die Zusammenfassung sollte auch deutlich kürzer als das Original sein; Sie sollen also keine Nacherzählung verfassen. Das bedeutet, dass natürlich nicht alle Details der Geschichte vorkommen können, auch unter Umständen nicht alle wichtigen Personen. Die Zusammenfassung muss auch nicht besonders unterhaltsam oder witzig sein.

Die Zusammenfassung sollte keine stilistischen Kommentare, Kommentare über den Verlauf des Textes oder Wertungen enthalten. Die folgenden durchgestrichenen Texte würden also nicht in eine Zusammenfassung gehören:

(a) Der Text ist schwer verständlich.
(b) Dann wird es ganz sprunghaft: Der Prinz heiratet die Prinzessin.
(c) Es folgt im dritten Absatz eine Beschreibung der Landschaft.
(d) Die Stelle, wo der Prinz die Prinzessin küsst, gefällt mir besonders gut.

Schließlich sollte die Zusammenfassung im Wesentlichen im Präsens (Gegenwart) verfasst sein.

A.0.1 Was sind einfache Sätze?

Einfache Sätze im Sinne dieses Experiments sind solche Sätze, die: keine komplizierten grammatikalischen Strukturen enthalten, unter anderem wenige Nebensätze, und typischerweise aus weniger als 14 Wörtern bestehen.

Beispiele für einfache Sätze wären die folgenden:

(a) Drei Schwestern treten in ein Kloster ein.
(b) Er kauft ein schwarzes Pferd und durchquert die Wüste.
(c) Der Prinz heiratet die Prinzessin.
(d) Der Drache verwandelt sich in eine goldene Ziege.
(e) Der Magd wird es untersagt, die goldene Feder aufzuheben.
(f) Das Ei, in dem die Liebe der Zarentochter steckt, wird gestohlen.
(g) Die Kinder vertauschen heimlich ihre Kleider mit denen der Hexentöchter.
(h) Die Prinzessin zwingt die drei Streitenden, einen Wettlauf zu machen.
(i) Der Krieger bezwingt den Bewohner einer Waldhütte, der daraufhin flieht.
(j) Die Zauberin fliegt dem Offizier nach.
(k) Der Zwerg zerbricht den Becher, weil er ärgerlich ist.
B.1 Ivanko

B.1.1 Subject 1


B.1.2 Subject 2


B.1.3 Subject 3

In der Geschichte "Ivanko der Sohn des Bären", geht es um eine Frau, die von einem Bären in einer Höhle gefangen hielt und ihn ein Bärling, welcher halb Mann und halb Bär ist, gebar. Sie nennt ihn Ivanko. Die Mutter und der Bär ziehen in ein Dorf, in welchem sie ihren Mann wiedererkennt. Der Mann erteilt dem Bärling einen Auftrag,
er soll ein Schaf schlachten nämlich jenes ihn zuerst ansieht.
Da ihn alle ansahen schlachtet er alle.
Der Vater ist verärgert und sagt ihm, dass er das Fleisch in die Hütte bringen soll und das Tor bewachen soll.
Der Bärling bewacht das Tor, jedoch nicht das Fleisch, sodass es gestohlen wird.
Der Vater schickt ihn zum See. Dort trifft er einen Teufel, von dem er einen Hut mit Gold und ihn selber ein Jahr als Knecht gewinnt.

B.1.4 Subject 4
Die Frau eines Bauern trifft eines Tages im Wald auf einen Bären,
der mit ihr ein Kind zeugte.
Eines Tages kehrt die Frau und das Mensch-Bär-Wesen namens Ivanko zurück zum Bauern,
der beide glücklich aufnimmt.
Der Bauer erteilt Ivanko Aufgaben, welche dieser wörtlich aufnimmt und sie so, zum Erschrecken des Bauern, bewältigt.
Dieser entscheidet Ivanko zum Fluss zu schicken.
Ivanko trifft am Fluss angekommen auf einen Teufel, der ihm drei Aufgaben zu lösen erteilt.
Diese drei Aufgaben löst Ivanko, indem er drei mal den Teufel austrickst.
Als Belohnung gewinnt Ivanko eine Menge Gold und den Teufel als Sklaven.
Den Gewinn schenkt er dem Bauern.

B.1.5 Subject 5
Die Frau eines Bauerns verirrt sich in eine Höhle.
Dort behält ein Bär sie bei sich und sie gebärt einen Sohn.
Nachdem beide aus der Höhle flohen, gehen sie zum Bauern.
Die vom Bauern aufgetragenen Aufgaben erledigt der Sohn falsch.
Um ihn loszuwerden, schickt der Bauer ihn zum See.
Dort solle er Stricke aus Sand drehen, wobei ihm ein Teufel begegnet.
Nachdem er dem Teufel droht, dass er ihnen schaden wird, wird dieser ängstlich.
Von Großvater beauftragt geht der Teufel mehrere Wettkämpfe mit dem Sohn ein.
Der Sohn überlistet den Teufel jedesmal.
Somit zahlt der Teufel dem Sohn Pacht,
damit sie im See bleiben dürfen.
Den Teufel als Knecht und das erbeutete Geld bringt der dem Bauern.

B.1.6 Subject 6
Die Frau des Bauerns verirrte sich im Wald
und wurde vom Bären in seine Höhle gezogen.
Dort gebahr sie ihm ein Sohn:
Ein Mann bis zur Hüfte und ein Bär unter der Hüfte.
Eines Tages rannten die beiden Weg
und kamen ins Dorf zum Bauern zurück.
Der Bauer nahm Ivanko den Bärensohn auf.
Ivanko machte die Aufgaben des Bauern nach dem Wortlaut, nicht aber nach dem Sinn.
So verlor der Bauer alle seine Schafe.
Der Bauer wollte Ivanko loswerden
und schickte ihn zum See mit Seeteufeln.
Ivanko trickste den kleinen Seeteufel aus.
Die Seeteufel haben Ivanko die Pacht gezahlt.
Der kleine Seeteufel musste 1 Jahr lang als Knecht Ivanko dienen.
So ging Ivanko zurück zum Bauern mit einem Wagen voller Gold
und einem Seeteufel als Knecht.

B.2 Shabarsha
B.2.1 Subject 1
Der Knecht Schabarscha will für seinen Herrn etwas Geld verdienen.
Er geht zu einem Teich
um zu angeln,
doch darin wohnen Teufel.
Schabarscha fordert Gold und
droht, die Teufel herauszumangeln.
Doch der Teufel will erst einen Ringkampf ausfechten.
Schabarscha lässt ihn zuerst gegen einen Bären, seinen vermeintlichen "Bruder", kämpfen,
woraufhin der Teufel aufgibt.
Beim Wettlauf überlistet Schabarscha den Teufel wieder
und dieser verliert.
Beim Wettpfeifen wird der Teufel,
eigentlich der Bessere,
ieder überlistet.
Als Letztes besiegt Schabarscha den Teufel beim Wettwerfen,
weil Schabarscha seinen kaputten Hut auf ein Loch stellt.
Seitdem lebt der Knecht wie ein König,
doch sein Met und Bier sollen trübe sein.

B.2.2 Subject 2
Der Knecht Schabarscha versucht für seinen Herrn etwas Geld zu verdienen.
Um Fische zu fangen und danach zu verkaufen,
setzt sich Schabarscha an den See.
Aus dem See springt ein kleiner Teufel
und fragt Schabarscha nach seinem Tun.
Um nicht von Schabarscha gefischt zu werden,
schlägt er ihm mehrere Wetten vor.
Schabarscha ist dem Teufel überlegen und gewinnt jede vorgeschlagene Wette.
Der Teufel verwettet fast die Keule seines Großvaters.
Da befehlt der Großvater dem Treiben ein Ende zu setzen.
Schabarscha erhält alle Geldreserven des Teufels Großvaters.
Seit dem hat Schabarscha keine Geldsorgen mehr und lebt in Saus und Braus.

B.2.3 Subject 3


B.2.4 Subject 4

Schabarscha ist ein Knecht eines Herrn, der ihm eines Tages einen Tag frei gibt, weil Schabarscha es sich so gewünscht hat. An diesem Tag nimmt er sich vor Fische zu fangen und diese zu verkaufen. Am See angekommen trifft er auf einen Teufel, welchem er droht, dass er alle anderen Teufel aus dem See ziehen will. Der Teufel aber will sich zuerst mit ihm in verschiedenen Duellen messen. Schabarscha schafft es durch Tricks den Teufel zu überlisten und fordert darauf hin viel Gold. Mit diesem Gold lebt Schabarscha bis heute glücklich und zufrieden.

B.2.5 Subject 5


B.2.6 Subject 6

Schabarscha ist ein Knecht und will seinem Herrn aus der Not helfen. Schabarscha geht zum See um die Fische zu fangen und sie gegen Geld zu verkaufen.
Dann taucht aus dem Wasser ein kleiner Seeteufel auf.
Schabarscha sagt ihm, dass er den See von den Seeteufeln befreien wird.
Er fordert vom Seeteufel Gold und Silber für die Pacht.
Das Seeteufelchen berät mit seinem Großvater
und will es mit Schabarscha in einem Ringkampf austragen.
Bei jeder Aufgabe trickst Schabarscha den Seeteufel aus.
Er selbst macht die Aufgaben nicht,
sondern findet einen Weg, den Seeteufel auf schlaue Art zu besiegen.
Die Teufel zahlen Schabarscha die Pacht in seine Mütze.
Seite dem leben Schabarscha und sein Herr gut und kennen keine Not.

B.3 The Seven Semyons

B.3.1 Subject 1

Die sieben Waisenjungen, die alle den Namen Simeon tragen,
werden vom Zaren in Obhut genommen.
Sie werden Schmied, Späher/Bote, Schiffsbaumeister, Steuermann, Schiffsverstecker und Dieb.
Später sollen sie, unter Anführung des Diebes-Simeon, die Prinzessin Helene stehlen.
Seine Brüder helfen ihm und bringen sie zum Zaren.
Dieser ist hocherfreut, heiratet Helene und macht die Simeons reich.
Doch die Reichtümer scheinen nicht für die Ewigkeit zu sein, und nicht zu befriedigen.

B.3.2 Subject 2

Die sieben Simeons sind allesamt Waisenjungen.
In der Erntezeit arbeiten sie auf dem Feld.
Die Simeons bauen einen Pfeiler und ein Schiff.
Den Zaren erfreut es,
dass seine Zeichnung ihm Nützliches tun wollen.
Einer der Simeons beschließt Dieb zu werden
und wird dafür vom Zaren gerügt.
Er bekommt vom Zaren die Möglichkeit, die weit entfernt lebende Prinzessin Helena zu stehlen.
Durch eine List wird Helena auf das Schiff der Simeons gelockt.
Im Reich des Zaren angekommen befreit er die Simeons aus Dank von Pacht.
Der Zaren heiratet Helena und gibt ein großes Fest.

B.3.3 Subject 3

In der Geschichte "Die sieben Simeons", geht es um sieben Waisen,
welche von einem Zar aufgenommen werden sollen.
Der Zar will Kinder haben
und trifft auf die Simeons
und fragt nach deren Handwerk.
Alle wollen einem Handwerk nachgehören,
außer einer, der Dieb werden möchte.
Der Zar ist erbost darüber und will ihn hinrichten.
Der Zar nimmt die anderen Simeons auf. Als der Zar den Dieb erhängen will, trifft er mit ihm ein Abkommen, die Prinzessin Helena zu ihm zu bringen. Die Simeons reisen zu der Prinzessin und schaffen es sie zum Zar zu bringen. Der Zar ist glücklich und belohnt die Simeons. Der Zar heiratet die Prinzessin.

**B.3.4 Subject 4**


**B.3.5 Subject 5**


**B.3.6 Subject 6**

Der siebte Simeon holt Helena die schöne durch List auf das Schiff und sie verschwinden.
Der Zar ist bei ihrer Ankunft sehr glücklich und zufrieden mit den Brüdern.
Er heiratet die Prinzessin und es gibt ein großes Fest.