

The Components of FrameNet

Miriam R. L. Petruck
miriamp@icsi.berkeley.edu



Road Map

- FrameNet
- Frames
 - Frame Elements
 - Lexical Units
- FrameNet Annotation
 - Lexicographic Annotation
 - “Full-Text” Annotation
- Frame-to-Frame Relations

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What is FrameNet?

- A unique knowledge base with information on the **mapping of meaning to form** through the theory of Frame Semantics (Fillmore 1975, 1985, Fillmore and Atkins 1986, Fillmore and Baker 2010, Fillmore 2012, Fontenelle 2003, Petruck 1996)
- A resource that provides **rich semantics** for the core English vocabulary based on manually annotated corpus evidence, including **valence descriptions** for each item analyzed

What's “in” FrameNet?

- ~ 1,200 semantic frames (including FEs)
- > 13,100 lexical units
- 200,000 manually annotated examples
- nearly 1,800 frame-to-frame relations constituting a hierarchy of semantic frames

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What's a Frame?

A Semantic Frame is a script-like **structure of inferences**, linked by linguistic convention to the meanings of linguistic units - here, lexical items - constituting a **schematic representation** of a situation, object, event, or relation providing the background structure against which words are **understood**. Each frame identifies a set of **frame elements** – participants in the frame.

Semantic Frames in FrameNet

- Situation: Being_attached, Being_necessary, Being_strong, Being_wet, etc.
- Event: Apply_heat, Borrowing, Catching_fire, Cooking_creation, Hiring, Replacing, etc.
- Object: Buildings, Containers, Intoxicants, Offenses, People_by_origin, etc .
- Relations: Locative_relation, Spacial_co-location, Interior_profile_relation, Similarity, etc.

What's “in” a Frame?

- **Frame Definition**

a prose description of a **situation** involving various participants and other conceptual roles, each of which constitutes a frame element

- **Frame Elements (FEs):**

semantic roles as the basic unit of a frame, defined specifically to each frame

- **Lexical Units (LUs):**

pairing of a lemma and a frame, i.e. “word” in one of its senses; LU **evokes** a frame

Apply_heat: Definition

A **Cook** applies heat to **Food**, where the **Temperature_setting** of the heat and **Duration** of application may be specified.

A **Heating_instrument**, generally indicated by a locative phrase, may also be expressed. Some cooking methods involve the use of a **Medium** (e.g. milk or water) by which heat is transferred to the **Food**.

This frame focuses on the process of handling the ingredients, rather than the end result (See `Cooking_creation`).

Apply_heat: Frame Elements

Cook

Food

Temperature_setting

Duration

Heating_instrument

Medium

Lila **FRIED** the eggs in a copper pan.

Frame Elements: Coreness

- Core: uniquely defines a frame
Commerce: BUYER, SELLER, MONEY, GOODS
- Peripheral: for aspects of events in general
e.g. TIME, PLACE, MANNER
- Extrathematic: situate an event against the backdrop of another state of affairs; conceptually do not belong to the frame in which they occur
– e.g. ITERATION, RECIPIENT
Sue **BAKED** the cookies [twice _{ITERATION}].
Sue **BAKED** the cookies [for me _{RECIPIENT}].

Frame Elements

Triple of Information

Frame Element

- semantic role

Grammatical Function

- External, Object, Dependent

Phrase Type

- full range of PTs for language

Apply_heat: Lexical Units

bake.v, baking.n barbecue.v, blanch.v, boil.v, braise.v, braising.n, broil.v, brown.v, char.v, coddle.v, cook.v, deep fry.v, fry.v, frying.n, grill.v, microwave.v, parboil.v, plank.v, poach.v, roast.v, saute.v, scald.v, scorch.v, sear.v, searing.n, simmer.v, singe.v, steam.v, steep.v, stew.v, toast.v

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Lexicographic Annotation

- What?
 - Dependents of **one TARGET** per example sentence
 - constituents that instantiate Frame Elements (semantic roles), including prepositions
 - Null Instantiated Core FEs
- Why?
 - show **TARGET** word (= LU) use in language
 - determine valence description of each **TARGET**
 - account for non-instantiated FEs
 - FN began as a computational **lexicography** project

Null Instantiation

- Constructional Null Instantiation (CNI)
 - construction licenses omission
 - imperative, agentless passive
- Definite Null Instantiation (DNI)
 - lexically specific, understood from discourse, knowledge of missing material required for determining referent
 - Frank **RETALIATED** after the bar incident. **OFFENDER DNI**
- Indefinite Null Instantiation (INI)
 - lexically specific, intransitive use of transitive verbs (e.g. eat, drink, sew, **bake**), knowledge of category of missing material, even if not mentioned in previous discourse or context

Lexicographic Annotation: Apply_heat.bake.v

→ BAKE the soufflés for 12 minutes .CNIINI
BAKE spanakopitta for about 40 minutes , then increase the heat for another 5 minutes to crisp the top .CNIINI
BAKE the elioti for about 45 minutes or until the base sounds hollow when tapped .CNIINI
BAKE the tart on a preheated baking sheet at 350°F (180°C) gas mark 4 for 40-45 min until the filling is creamily set .CNI

COOK

CNI

HEATING_INSTRUMENT INI

FE: BAKE [the soufflé_{FOOD}] [for 12 minutes_{DURATION}]

GF: Object Dep

PT: NP PP_{for}

Second Layer Annotation: Apply_heat.bake.v

BAKE the aubergines in a preheated 180°C/350°F/Gas 4 oven for half an hour or until limp and lightly browned .CNI
180°C/350°F/Gas
→ Cover and BAKE in a preheated 200°C/400°F/Gas 8 oven for 15-20 minutes .DNIDNI
200°C/400°F/Gas 8

Cover and **BAKE** [in a preheated 200°C/400°F/Gas 8 oven $H_{\text{HEATING_INSTRUMENT}}$] for 15-20 minutes.

[200°C/400°F/Gas 8 $T_{\text{TEMPERATURE_SETTING}}$]

Lexicographic Annotation Results:

Apply_heat.bake.v

Number Annotated	Patterns				
<u>1</u> TOTAL	Container	Cook	Duration	Food	
(1)	PP[in] Dep	CNI --	PP[for] Dep	NP Ext	
<u>1</u> TOTAL	Container	Cook	Duration	Food	Temperature setting
(1)	PP[on] Dep	CNI --	PP[for] Dep	NP Obj	PP[at] Dep
<u>5</u> TOTAL	Cook	Duration	Food	Heating instrument	
(2)	CNI --	PP[for] Dep	CNI --	INI --	
(3)	CNI --	PP[for] Dep	NP Obj	INI --	
<u>3</u> TOTAL	Cook	Duration	Food	Heating instrument	Temperature setting
(1)	CNI --	PP[for] Dep	CNI --	INI --	PP[at] Dep
(1)	CNI --	PP[for] Dep	NP Obj	PP[in] Dep	2nd --
(1)	DNI --	PP[for] Dep	DNI --	PP[in] Dep	2nd --
<u>1</u> TOTAL	Cook	Food	Heating instrument		
(1)	CNI --	NP Obj	INI --		
<u>1</u> TOTAL	Cook	Food	Heating instrument	Manner	
(1)	CNI --	NP Obj	PP[in] Dep	AVP Dep	
<u>1</u> TOTAL	Duration	Heating instrument	Temperature setting		
(1)	PP[for] Dep	PP[in] Dep	2nd --		

Cooking_creation: Definition

A **Cook** creates a **Produced_food** from (raw) **Ingredients**. The **Heating_Instrument** and/or the **Container** may also be specified. This frame describes food and meal preparation.

Cooking_creation: Frame Elements

Cook

Produced_food

Ingredients

Heating_Instrument

Container

Sam **MADE** vegetable soup for dinner last night.

Cooking_creation: Lexical Units

*bake.v, baking.n, concoct.v, cook up.v,
cooking_up.n, cook.n, cooking.n, cook.v,
make.v, put together.v, whip up.v,*

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Lexicographic Annotation: Cooking_creation.bake.v

429-s20-1coll-bread

1. The bread would then be slipped in , the oven door sealed , and when the oven cooled , **the bread** would be **BAKED** .**CNI**

429-s20-rcoll-bread

1. It is also illegal in Norway for **a bakery** to **BAKE** **bread on a Saturday or Sunday** .
2. Almost all the food is grown at camp ; **they** **BAKE** **their own bread** and the food is not only 100% nutritious but very delicious .
3. **Rosalind** **BAKES** **her own bread and croissants** and will prepare an evening meal with advance notice .
4. And **she** **BAKED** **some bread with the millet flour that she had brought from her own garden** .

429-s20-rcoll-cake

1. Some larger stores sell special tins of all the numbers so **you** can **BAKE** **a cake in the shape of your child 's age** .
2. Believing in economy , **Miss Lodsworth** had already **BAKED** **rock and fairy cakes** and spread hundreds of sandwiches with crusts still on with Marmite and plum jam which was cheaper than strawberry .

429-s20-rcoll-minute

429-s20-rcoll-oven

550-s20-np-np

1. And **she** would **BAKE** **a chocolate mousse torte** .
2. And for tomorrow 's Sunday dinner , **she** was going to roast a leg of mutton and **BAKE** **an apple pie** .
3. **I** **BAKED** **some currant buns for you** . "
4. **The wife of Senator Arlen Specter** even **BAKED** **Ali** **a double chocolate-mousse pie** .

570-s20-np-ppfor

1. **Louise** had **BAKED** **a pie for him** and was bringing a new pair of sheets from the airing cupboard .

620-s20-np-ppother

650-s20-np-pother

660-s20-trans-simple

670-s20-pass-by

680-s20-pass

1. **In Spain** , **bread** **flavoured with cinnamon and dried fruit** are **BAKED** **at Easter** , and some contain hard-boiled eggs , according to Elizabeth Luard 's European Festival Food .**CNI**
2. **A special birthday cake** was **BAKED** **to mark the occasion , which was held in Graham School** .**CNI**

Lexicographic Annotation Results: Cooking_creation.bake.v

Number Annotated	Patterns			
1 TOTAL	Container	Cook	Produced food	
(1)	PP[in] Dep	NP Ext	NP Obj	
2 TOTAL	Cook	Ingredients	Produced food	
(1)	NP Ext	PP[with] Dep	CNI --	
(1)	NP Ext	PP[with] Dep	NP Obj	
1 TOTAL	Cook	Place	Produced food	Time
(1)	CNI --	PP[in] Dep	NP Ext	PP[at] Dep
12 TOTAL	Cook	Produced food		
(2)	CNI --	NP Ext		
(1)	CNI --	NP Obj		
(1)	DNI --	DNI --		
(1)	DNI --	NP Obj		
(7)	NP Ext	NP Obj		
2 TOTAL	Cook	Produced food	Purpose	
(1)	CNI --	NP Ext	Vpto Dep	
(1)	DNI --	NP Obj	PP[for] Dep	
3 TOTAL	Cook	Produced food	Recipient	
(1)	NP Ext	NP Dep	NP Obj	
(2)	NP Ext	NP Obj	PP[for] Dep	
1 TOTAL	Cook	Produced food	Time	
(1)	NP Ext	NP Obj	PP[on] Dep	



Lexicographic Annotation Results:

Cooking_creation: bake.v


[CookThe wife of Senator Arlen Specter] even *BAKED*^{Target} [RecipientAli] [Produced_fooda double chocolate-mousse pie] .

→ [CookI] *BAKED*^{Target} [Produced_foodsome currant buns] [Recipientfor you] . "

[CookLouise] had *BAKED*^{Target} [Produced_fooda pie] [Recipientfor him] and was bringing a new pair of sheets from the airing cupboard .

FE:	[I _{COOK}]	BAKED	[some currant buns _{PRODUCED_FOOD}]	[for you _{RECIPIENT}].
GF:	External	Object		Dependent
PT:	NP	NP		PP _{for}

Road Map

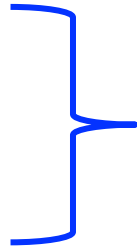
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- Postponed
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Frame-to-Frame Relations in FN

- Inheritance
- Using
- Subframes
- Precedes
- Perspective_on
- See also
- Inchoative_of
- Causative_of



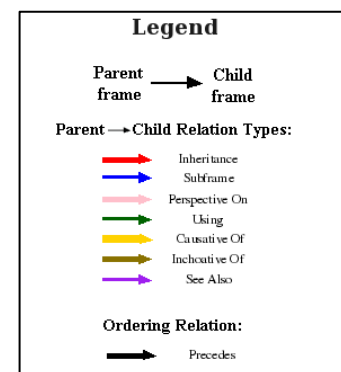
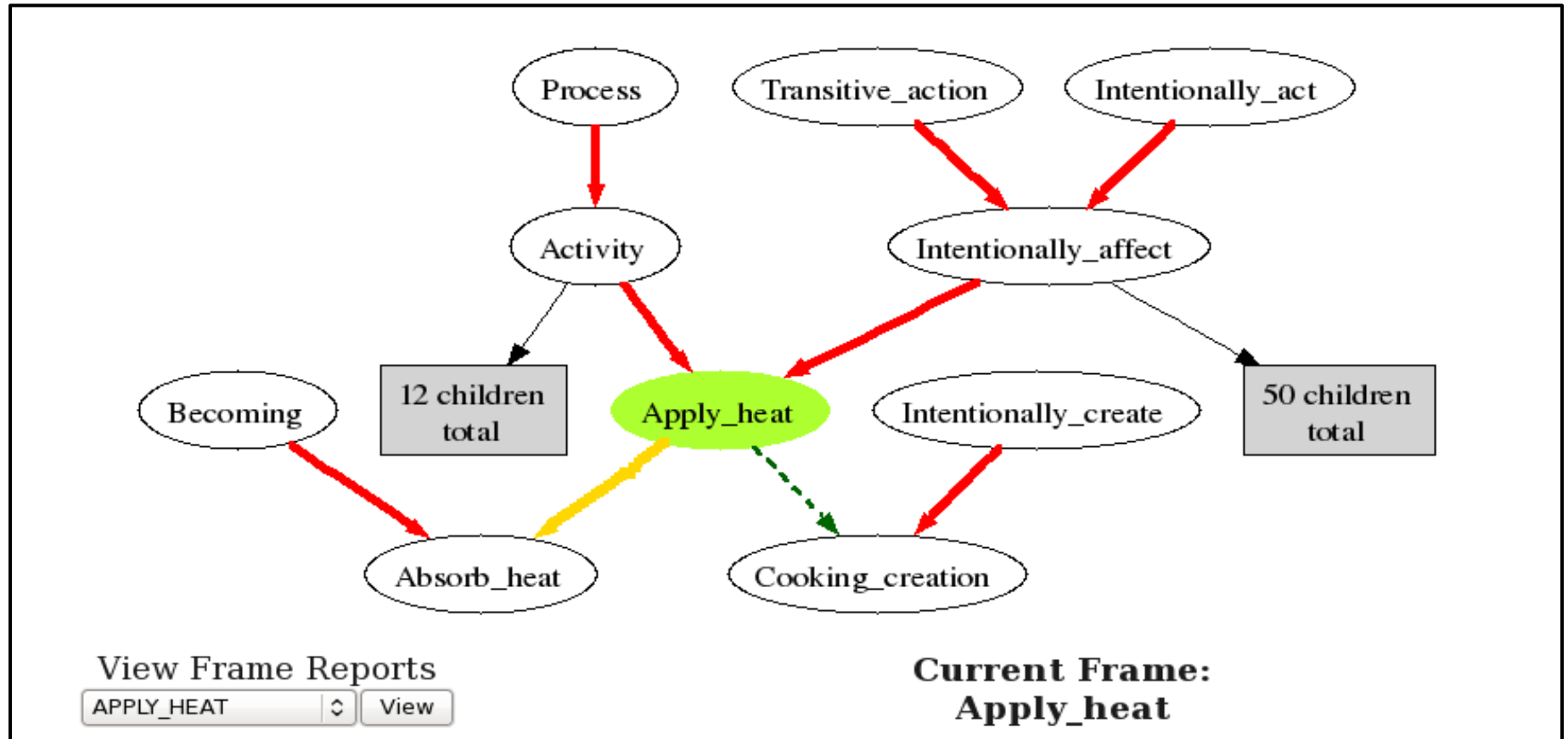
regular lexical relations

Inheritance

- Relationship between a more general frame, the **parent** frame, and a more specific one, the **child**
- Child frame **elaborates** parent frame
- **Corresponding entities**, FE, frame relation, and semantic characteristics, in both child and parent
- Child frame entity is the same as or more specific than in parent frame

Apply_heat *inherits* Intentionally_affect

FrameGrapher

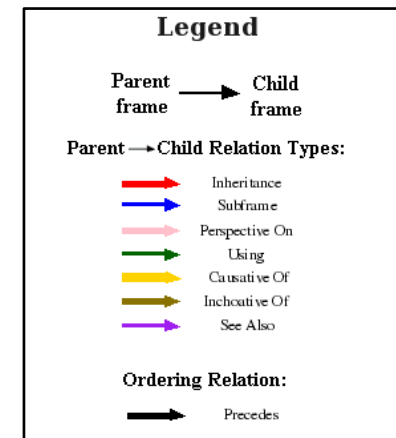
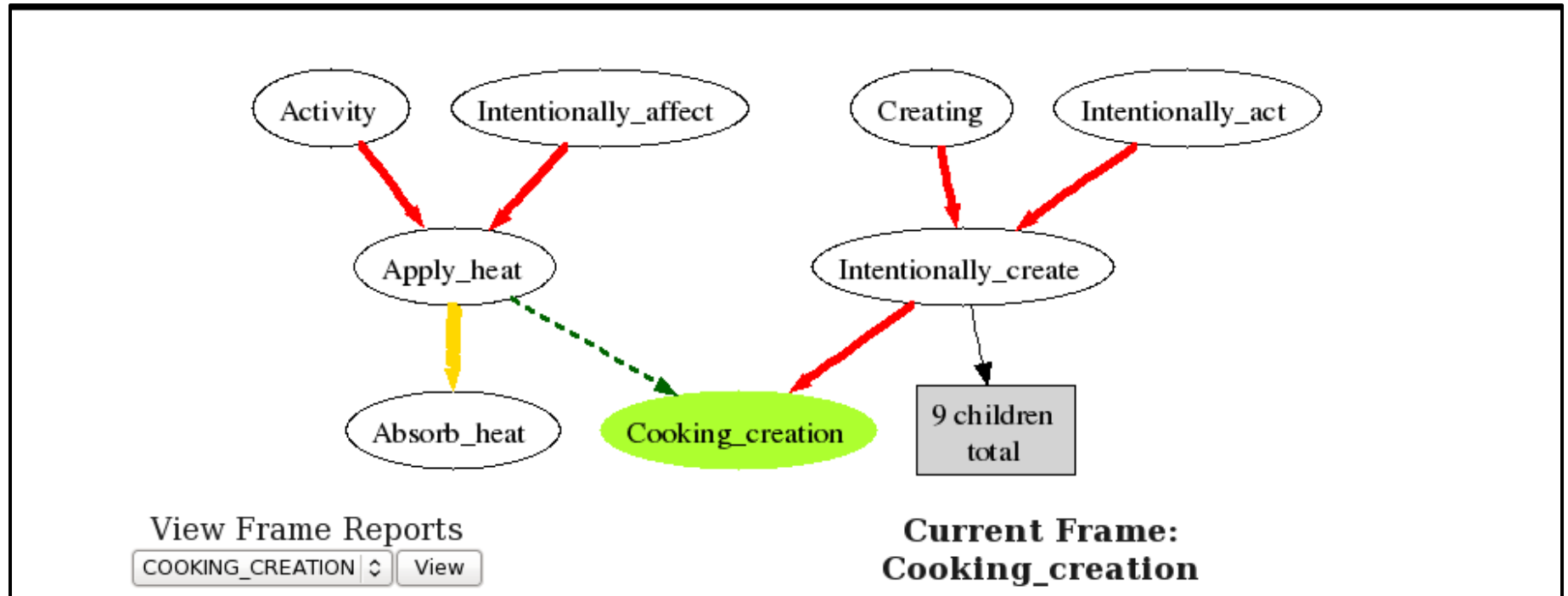


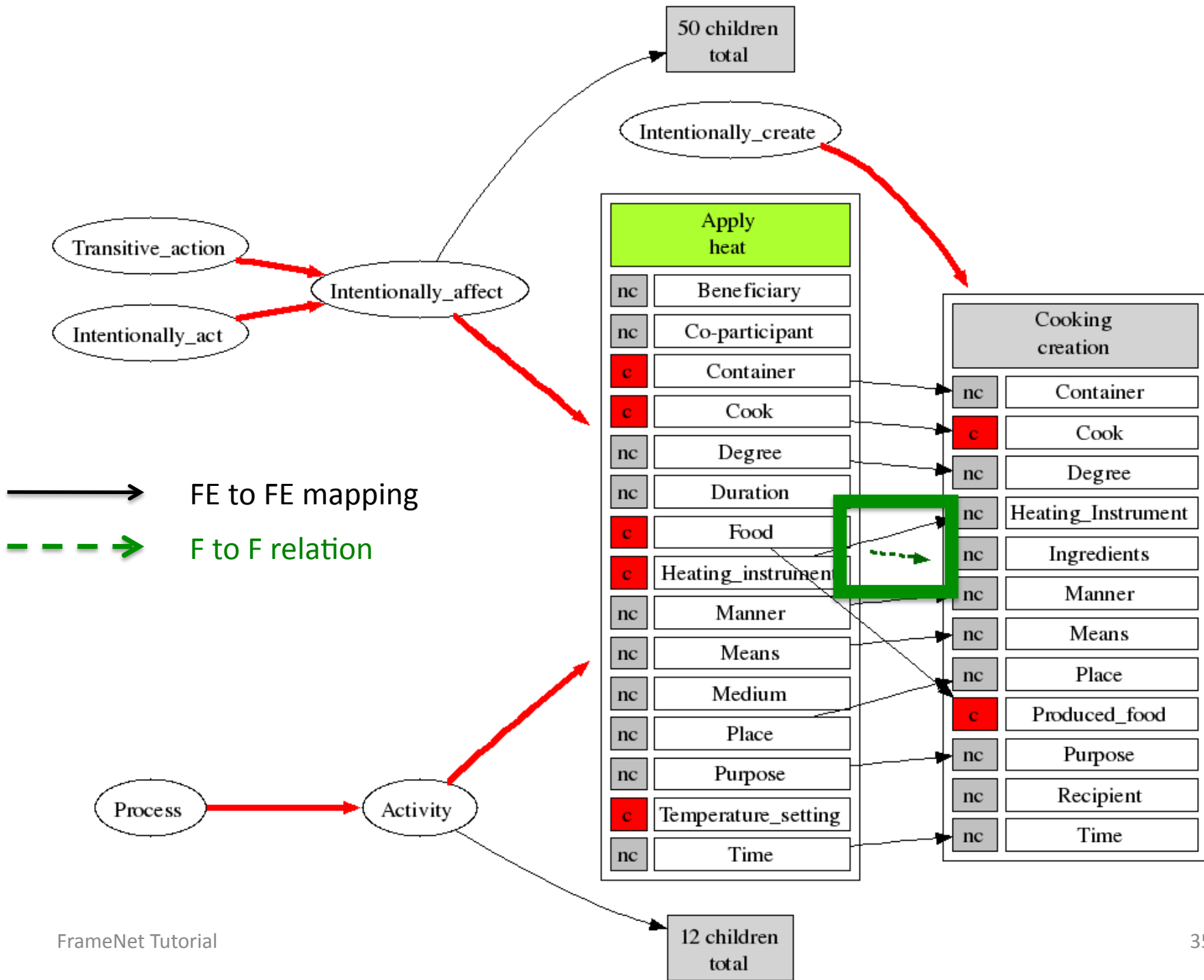
Using (weak inheritance)

- ...a relationship between a more general frame (*parent*) and a more specific frame (*child*) in which only *some* of the FEs in the parent frame have a corresponding entity in the child frame; if correspondences exist, they are more specific.

Cooking_creation *uses* Apply_heat

FrameGrapher





Subframes

- ...a relationship that characterizes the different (typically, ordered) **parts of a complex event** in terms of the sequences of states of affairs and transitions between them, each of which can itself be described as a frame.

Getting_a_job is a **subframe** of Employee_scenario

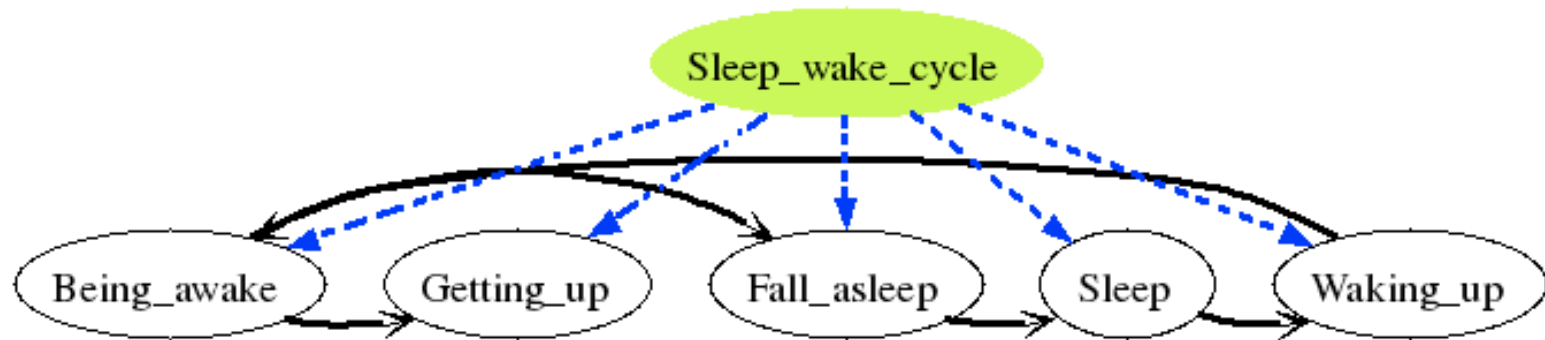
Hiring is a **subframe** of Employer_scenario

Precedes

...captures the temporal ordering of subevents within a complex event. The relation holds between component subframes of a single complex frame, and provides additional information to the set of **Subframe** relations

Being_aware **precedes** Falling_asleep

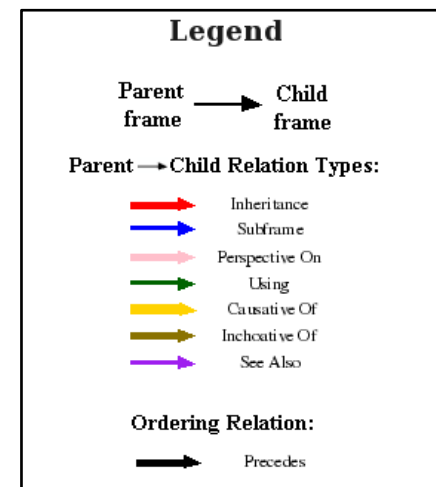
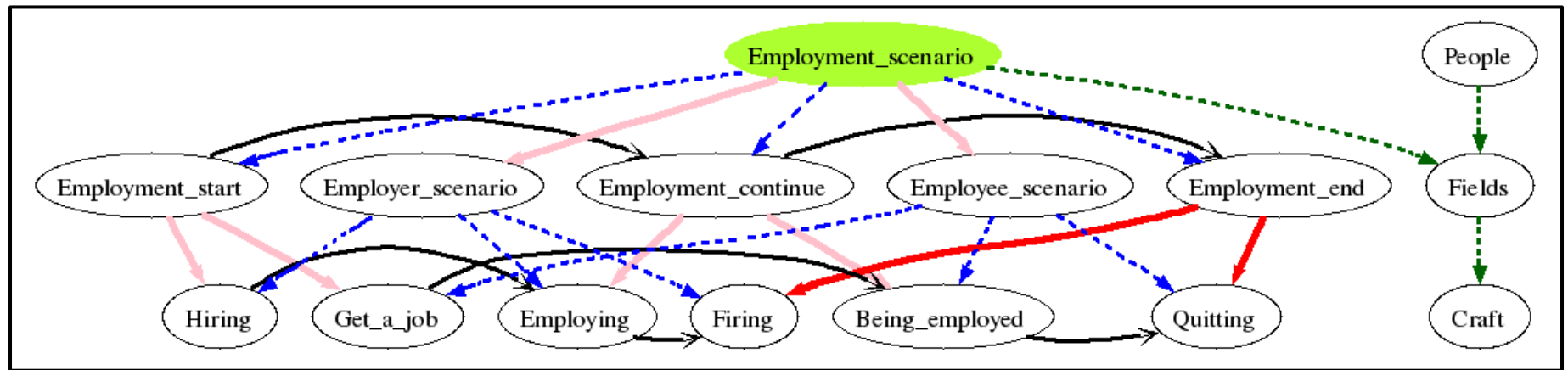
Subframes and Precedes



- - - ➤ Subframes

➔ Precedes

FrameGrapher



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Full-Text Annotation

- What is full-text annotation?
 - annotation with respect to every frame evoking element in a text
 - multiple layers of lexicographic annotation
- Why did FN *add* full-text annotation?
 - demonstrate the contribution of Frame Semantics to text understanding
 - client/user considerations

Full-Text Annotation

39. A series of **DISASTROUS**Catastrophe **DECISIONS**Deciding at the **BEGINNING**Temporal_subregion of the **20th CENTURY**Calendric_unit **BEGAN**Activity_start to **SOUND**Make_noise a **DEATH**Death_knell for the Ottoman **EMPIRE**Political_locales . The Turks **LOST**Finish_competition a **SHORT**Duration_description **WAR**Hostile_encounter with **Italy** , and were **FORCED**Causation to **RELINQUISH**Surrendering_possession the **Dodecanese ISLANDS**Natural_features to the **ITALIANS**People_by_origin . **Greece** took this opportunity to absorb the **ISLANDS**Natural_features of the **NORTHERN**Part_orientational and **EASTERN**Part_orientational **Aegean** and to add **Macedonia** to its mainland **TERRITORIES**Political_locales .
40. **FOLLOWING**Relative_time this **DEBACLE**Catastrophe , the **OTTOMANS**People_by_origin then allied themselves to **Germany** in the World **WAR**Hostile_encounter I , **LOSING**Earnings_and_losses **MORE**Increment **TERRITORY**Political_locales with the **DEFEAT**Beat_opponent of the **GERMANS**People_by_origin in that **WAR**Hostile_encounter . **Greece** was **HANDED**Giving_a **STRIP**Shapes_of_land along the **WESTERN**Part_orientational **COAST**Relational_natural_features of **Asia Minor** , which for over 2,000 **YEARS**Measure_duration had **HAD**Possession_a_substantial **GREEK**Origin **POPULATION**Aggregate . **Greece** moved in to **ADMINISTER**Leadership the land , but a **NEW**Age **INFLUENCE**Objective_influence **UPSET**Preventing_any **GRAND**Dimension_dreams_of **MAKING**Cause_change_this **REGION**Locale a **PART**Part_whole_of_greater **Greece** .
41. **IN**Temporal_collocation **1923** , **Turkey** broke away from the **TIRED**Biological_urge **OTTOMAN**People_by_origin **RULERS**Leadership , and **Kemal Atatürk** **ROSE**Motion_directional_to **POWER**Leadership on a **WAVE**Quantified_mass of **POPULAR**Desirability_support . He **PROMISED**Commitment_a **MODERN**Stage_of_progress **STATE**Leadership for his **PEOPLE**People , but as the situation **BECAME**Becoming_volatile , civil **STRIFE**Hostile_encounter **BROKE**Process_start **OUT**Process_start **IN**Interior_profile_relation **TURKISH**Origin **CITIES**Political_locales , and those **CONSIDERED**Categorization **GREEK**People_by_origin were **VICTIMS**Undergoing_of **THREATS**Commitment_and_violence . Many **HAD**Required_event_to **LEAVE**Departing_their_birthplaces , **FLEEING**Fleeing **TO**Goal **Lesvos** , **Chios** , and **Samos** , the Greek-ruled **ISLANDS**Natural_features just **OFFSHORE**Locative_relation . **THOUSANDS**Quantified_mass of **PEOPLE**People **ARRIVED**Arriving_with_little **MORE**Increment than the **CLOTHES**Clothing they **WORE**Wearing , **PUTTING**Placing_great_strain_on_the_resources_of_the **ISLANDS**Natural_features . **FINALLY**Time_vector , **Greece** was **OUSTED**Removing_from_its **NEW**Age **TERRITORY**Political_locales **IN**Interior_profile_relation **Asia Minor** , which **BECAME**Becoming **PART**Part_whole_of_the **NEW**Age **TURKISH**Origin **STATE**Political_locales .
42. **Greece** **ATTEMPTED**Attempt_to **STAY**State_continue_out_of World **WAR**Hostile_encounter II , but **Mussolini** **SAW**Categorization **Greece** as an **IDEAL**Usefulness_addition_to_his **ITALIAN**Origin **EMPIRE**Political_locales . His **FORCES**Military_made_a_series_of **ATTACKS**Attack_from_their **BASES**Locale_by_use **IN**Interior_profile_relation the **Dodecanese ISLANDS**Natural_features , **INCLUDING**Inclusion_sinking_a **GREEK**Origin **NAVAL**Military **VESSEL**Vehicle **IN**Interior_profile_relation the **HARBOR**Locale_by_use of **Tinos TOWN**Political_locales , but they only **SUCCEEDED**Success_or_failure_in **STRENGTHENING**Cause_change_of_strength the resolve of the **POPULATION**Aggregate **AGAINST**Taking_sides_them . **LATER**Time_vector the **GERMANS**People_by_origin **CAME**Arriving_in **FORCE**Military and occupied **MANY**Quantified_mass_of_the **ISLANDS**Natural_features .
43. **AFTER**Time_vector the **WAR**Hostile_encounter , **IN**Temporal_collocation **1949** , the **Dodecanese ISLANDS**Natural_features **FINALLY**Time_vector **BECAME**Becoming **PART**Part_whole_of_the **GREEK**Origin **NATION**Political_locales . But the **COUNTRY**Political_locales was politically **FRAGMENTED**Cause_to_fragment , with **ARGUMENTS**Quarreling_between_monarchists_and_republicans , right and left , and tension escalated into civil **WAR**Hostile_encounter . The **STRUGGLE**Hostile_encounter bypassed most of the **ISLANDS**Natural_features , **ALTHOUGH**Concessive **THERE**Existence **WAS**Existence fierce **FIGHTING**Hostile_encounter **ON**Spatial_contact **Samos** . Even **AFTER**Time_vector the **FIGHTING**Hostile_encounter **STOPPED**Process_stop **MORE**Increment_than_a **DECADE**Calendric_unit **LATER**Time_vector , the **COUNTRY**Political_locales was not stable .
44. At the same time , the massive **GROWTH**Change_position_on_a_scale_in_air_and **ROAD**Roadways_transport **SAW**Causation_shipping **DECLINE**Change_position_on_a_scale_in **IMPORTANCE**Importance . The **Aegean ISLANDS**Natural_features , which for **CENTURIES**Measure_duration had been **IMPORTANT**Importance **PORTS**Locale_by_use on the trading **ROUTES**Roadways , **BECAME**Becoming_the **BACKWATERS**Isolated_places_of_this **NEW**Age **TRANSPORT**Bringing **NETWORK**Network and the **ECONOMIES**Economy_of **SEVERAL**Quantified_mass **ISLANDS**Natural_features came close to collapse .
45. **IN**Temporal_collocation **1967** , the **MILITARY**Military took the reins of **POWER**Leadership **IN**Interior_profile_relation **Athens** , and **UNTIL**Time_vector **1974** , the `` Colonels `` held sway with a repressive and brutal **REGIME**Leadership . **MANY**Quantified_mass **GREEK**People_by_origin islanders **CHOSE**Choosing_to **LEAVE**Departing_rather_than_live_in **POVERTY**Wealthiness_and **TERROR**Fear , and **MANY**Quantified_mass **MADE**Intentionally_create **NEW**Age **HOMES**Buildings **IN**Interior_profile_relation the **United States** and **Australia** . The **EXPANSION**Expansion_of_air **TRAVEL**Travel **BEGAN**Activity_start the **AGE**Calendric_unit of mass **TOURISM**Touring , and **Greece** along with the **Aegean ISLANDS**Natural_features **BECAME**Becoming **EXCITING**Stimulus_focus destinations for **NORTHERN**Part_orientational **Europeans** **ESCAPING**Avoiding_their **DAMP**Being_wet , **COOL**Temperature **SUMMERS**Calendric_unit .

Full-Text Annotation

39. A series of **DISASTROUS**_{Catastrophe} **DECISIONS**_{Deciding at the} **BEGINNING**_{Temporal_subregion of the} **20th CENTURY**_{Calendric_unit} **BEGAN**_{Activity_start to} **SOUND**_{Make_noise a} **DEATH**_{Death knell for the Ottoman} **EMPIRE**_{Political_locales . The Turks} **LOST**_{Finish_competition a} **SHORT**_{Duration_description} **WAR**_{Hostile_encounter with} **Italy**, and were **FORCED**_{Causation to} **RELINQUISH**_{Surrendering_possession the} **Dodecanese ISLANDS**_{Natural_features to the} **ITALIANS**_{People_by_origin .} **Greece** took this opportunity to absorb the **ISLANDS**_{Natural_features of the} **NORTHERN**_{Part_orientational} and **EASTERN**_{Part_orientational} **Aegean** and to add **Macedonia** to its mainland **TERRITORIES**_{Political_locales .}

40. **FOLLOWING**_{Relative_time this} **DEBACLE**_{Catastrophe}, the **OTTOMANS**_{People_by_origin} then allied themselves to **Germany** in the World **WAR**_{Hostile_encounter I}, **LOSING**_{Earnings_and_losses} **MORE**_{Increment} **TERRITORY**_{Political_locales with the} **DEFEAT**_{Beat_opponent of} the **GERMANS**_{People_by_origin} in that **WAR**_{Hostile_encounter}. **Greece** was **HANDED**_{Giving a} **STRIP**_{Shapes_of_land along the} **WESTERN**_{Part_orientational} **COAST**_{Relational_natural_features of} **Asia Minor**, which for over 2,000 **YEARS**_{Measure_duration} had **HAD**_{Possession a} substantial **GREEK**_{Origin} **POPULATION**_{Aggregate}. **Greece** moved in to **ADMINISTER**_{Leadership} the land, but a **NEW**_{Age} **INFLUENCE**_{Objective_influence} **UPSET**_{Preventing any} **GRAND**_{Dimension} dreams of **MAKING**_{Cause_change this} **REGION**_{Locale a} **PART**_{Part_whole of} greater **Greece**.

TARGET


Named Entity
Italics

FrameNet annotation provided

Handled by named entity recognizer

No annotation provided

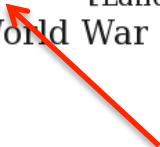
Full-Text Annotation



40. **FOLLOWING**_{Relative_time} *this* **DEBACLE**_{Catastrophe} , *the* **OTTOMANS**_{People_by_origin} *then* allied themselves to **Germany** in the World **WAR**_{Hostile_encounter} I , **LOSING**_{Earnings_and_losses} **MORE**_{Increment} **TERRITORY**_{Political_locales} with the **DEFEAT**_{Beat_opponent} of the **GERMANS**_{People_by_origin} in that **WAR**_{Hostile_encounter} . **Greece** was **HANDED**_{Giving_a} **STRIP**_{Shapes_of_land_along_the} **WESTERN**_{Part_orientational} **COAST**_{Relational_natural_features} of **Asia Minor** , which for over 2,000 **YEARS**_{Measure_duration} had **HAD**_{Possession} a substantial **GREEK**_{Origin} **POPULATION**_{Aggregate} . **Greece** moved in to **ADMINISTER**_{Leadership} the land , but a **NEW**_{Age} **INFLUENCE**_{Objective_influence} **UPSET**_{Preventing} any **GRAND**_{Dimension} dreams of **MAKING**_{Cause_change} this **REGION**_{Locale} a **PART**_{Part_whole} of greater **Greece** .

[Clear Sentences](#) [Turn Colors On](#)

[X] **FOLLOWING**^{Target} [Landmark_occasion>this debacle] , [Focal_occasion>the Ottomans then allied themselves to Germany in the World War I , losing more territory with the defeat of the Germans in that war] .



Full-Text Annotation

40. **FOLLOWING**_{Relative_time} this **DEBACLE**_{Catastrophe} , the **OTTOMANS**_{People_by_origin} then allied themselves to **Germany** in the World **WAR**_{Hostile_encounter} I , **LOSING**_{Earnings_and_losses} **MORE**_{Increment} **TERRITORY**_{Political_locales} with the **DEFEAT**_{Beat_opponent_of_the} **GERMANS**_{People_by_origin} in that **WAR**_{Hostile_encounter} . **Greece** was **HANDED**_{Giving_a} **STRIP**_{Shapes_of_land_along_the} **WESTERN**_{Part_orientational} **COAST**_{Relational_natural_features_of} **Asia Minor** , which for over 2,000 **YEARS**_{Measure_duration} had **HAD**_{Possession_a} substantial **GREEK**_{Origin} **POPULATION**_{Aggregate} . **Greece** moved in to **ADMINISTER**_{Leadership} the land , but a **NEW**_{Age} **INFLUENCE**_{Objective_influence} **UPSET**_{Preventing} any **GRAND**_{Dimension} dreams of **MAKING**_{Cause_change} this **REGION**_{Locale} a **PART**_{Part_whole} of greater **Greece** .

[Clear Sentences](#) [Turn Colors On](#)

[X] **FOLLOWING**^{Target} [Landmark_occasionthis debacle] , [Focal_occasionthe Ottomans then allied themselves to Germany in the World War I , losing more territory with the defeat of the Germans in that war] .

[X] Following this [Undesirable_Event**DEBACLE**^{Target}] , the Ottomans then allied themselves to Germany in the World War I , losing more territory with the defeat of the Germans in that war .[UndergoerDNI]

Full-Text Annotation

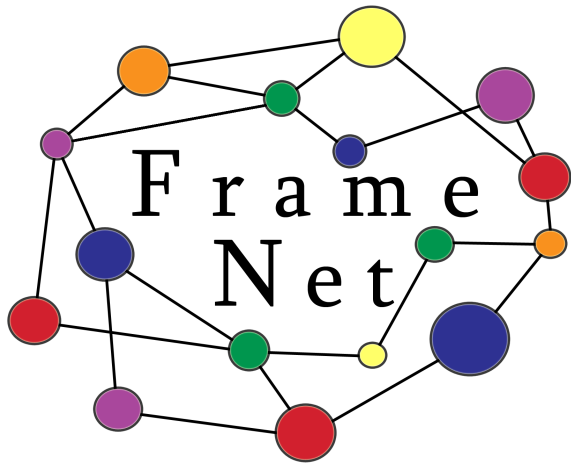
40. **FOLLOWING**_{Relative_time} *this* **DEBACLE**_{Catastrophe} , the **OTTOMANS**_{People_by_origin} then allied themselves to **Germany** in the World **WAR**_{Hostile_encounter} I , **LOSING**_{Earnings_and_losses} **MORE**_{Increment} **TERRITORY**_{Political_locales} with the **DEFEAT**_{Beat_opponent} of the **GERMANS**_{People_by_origin} in that **WAR**_{Hostile_encounter} . **Greece** was **HANDED**_{Giving_a} **STRIP**_{Shapes_of_land_along_the} **WESTERN**_{Part_orientational} **COAST**_{Relational_natural_features} of **Asia Minor** , which for over 2,000 **YEARS**_{Measure_duration} had **HAD**_{Possession_a} substantial **GREEK**_{Origin} **POPULATION**_{Aggregate} . **Greece** moved in to **ADMINISTER**_{Leadership} the land , but a **NEW**_{Age} **INFLUENCE**_{Objective_influence} **UPSET**_{Preventing} any **GRAND**_{Dimension} dreams of **MAKING**_{Cause_change} this **REGION**_{Locale} a **PART**_{Part_whole} of greater **Greece** .

[Clear Sentences](#) [Turn Colors On](#)

[X] **FOLLOWING**^{Target} [Landmark_occasionthis debacle] , [Focal_occasionthe Ottomans then allied themselves to Germany in the World War I , losing more territory with the defeat of the Germans in that war] .

[X] Following this [Undesirable_Event**DEBACLE**^{Target}] , the Ottomans then allied themselves to Germany in the World War I , losing more territory with the defeat of the Germans in that war .[UndergoerDNI]

[X] Following this debacle , the [Person**OTTOMANS**^{Target}] then allied themselves to Germany in the World War I , losing more territory with the defeat of the Germans in that war .



Thanks!

References

Atkins, B.T.S. Klavens, J., and B. Levin (1988) Anatomy of a verb entry: from linguistic theory to lexicographic practice. *International Journal of Lexicography* 1.2: 84-126.

Fillmore, Charles J. (1975) An alternative to checklist theories of meaning. In *Proceedings of the First Annual Meeting of the Berkeley Linguistics Society*, pp. 123-131

--- (1985) Frames and the semantics of understanding. *Quaderni di Semantica*, 6.2: 222-254.

--- (2012) Encounters with Language. *Computational Linguistics* 38.4: 701-718.

Fillmore and Atkins (1992) Towards a Frame-based organization of the lexicon: the semantics of RISK and its neighbors. In *Frames, Fields, and Contrasts: New Essays in Semantics and Lexical Organization*, ed. by Adrienne Lehrer and Eva Kittay, 75-102. Hillsdale: Lawrence Erlbaum.

References

- Fillmore, C. J. and C. Baker. 2010. A Frames Approach to Semantic Analysis. *The Oxford Handbook of Linguistic Analysis*. In Heine, B. and H. Narrog (eds.), *The Oxford Handbook of Linguistic Analysis*. Oxford: Oxford University Press, pp. 791-816.
- Fontenelle, T. (ed.) 2003. Special Issue on FrameNet and Frame Semantics. *International Journal of Lexicography* 16.3:231-385.
- Petruck, M. R. L. 1996. Frame Semantics. *Handbook of Pragmatics*, 8 pp.
- and G. de Melo. 2012. Precedes: A Semantic relation in FrameNet. *Proceedings of the Workshop on Language Resources for Public Security Applications*, 8th LREC Conference, Istanbul, pp.45-49.
- Ruppenhofer, J., M. Ellsworth, M. R. L. Petruck, C. R. Johnson, and J. Scheffczyk. 2010. *FrameNet II: Extended Theory and Practice*. Web Publication [The BOOK](#).