Relation 6: Entity-Destination

Preamble

Nastase & Szpakowicz (2003) have a relation LOCATION_TO(*X*,*Y*) meaning that "the destination of *Y* is *X*".

Framenet has a Motion_scenario frame

http://framenet.icsi.berkeley.edu/index.php?option=com_wrapper&Itemid=118&frame=Motion_scenario&source=frame&sourcevar=Motion

which binds together the various parts of movement, from setting out, to traveling, to arriving. In that scenario the Goal is the location where an entity ends up.

Definition

Entity-Destination(*X*, *Y*) is true for a sentence *S* that mentions the entities *X* and *Y* if and only if:

(1) *S*, *X* and *Y* are in accordance with the general annotation guidelines:

http://docs.google.com/Doc?docid=dfhkmm46_0f63mfvf7

(2) the situation described in *S* entails the fact that *Y* is the destination of *X* in the sense of *X* moving (in a physical or abstract sense) toward *Y*.

Definition - Restrictions

(a) *X* should not be the origin of *Y*, so we exclude (*X*,*Y*) such that Entity-Origin(*Y*, *X*) holds.

Note: restriction (a) mostly applies to result/state ends of chemical, physical, and production processes such as olive(*X*)/oil(*Y*), steam(*X*)/water(*Y*), water(*X*)/ice(*Y*) that we annotate as instances of the Entity-Origin(*X*,*Y*) relation.

(b) The Destination can be:

1. abstract, BUT only if the Entity is abstract (e.g., "case/*X* is taken to court/*Y*")
2. physical (spatial/geographical) location (e.g., "water/*X* is moving to a tank/*Y*")
3. a person or company (e.g. "letter/*X* sent to my mother/*Y*")
4. temporal (e.g., "meeting/*X* rescheduled to next day/*Y*")

(c) The Destination CANNOT be:

1. part of the Entity; we exclude in this way people's feelings (e.g., "the director/*X* flew into temper/*Y*" is a negative example).
2. the result of a mental activity or a mental event, e.g., a decision, thought, opinion, conclusion, etc (e.g., "The team/*X* arrived at a conclusion/*Y*." is a negative).
3. a state, e.g., "people/*X* are put into bankruptcy/*Y*", "the rebel/*X* went into hiding/*Y*".

(d) An entity can have several destinations and each of them separately will count as a destination (e.g., "The letter/*X* was sent to his home/*Y* and company/Y" both home and company are possible destinations).

(e) If the Destination *Y* is a metonymous reference to a destination of a kind described in (b), it will also be considered a destination. For example, in "painting/*X* to exhibition/*Y*", "exhibition" stands for the building or the geographical location where the exhibition takes place.

Definition - Overlaps

Potentially overlapping relations:

• Entity-Origin: the difference is the direction of movement ("spaceship/*X* to outer space/*Y*").

- Message-Topic: Entity-Destination describes the connection between the message and the receiver of the message ("broadcast/*X* for citizens/*Y*"), rather than between the message and the topic ("books/*X* on military history/*Y*").
- Content-Container, Member Collection, Component-Whole: the difference is that here the entity is already at the destination (at the container, collection, or whole). The overlap is prevented by the restriction involving the "motion verbs".

In accordance with the general annotation guidelines, we consider examples involving motion verbs (e.g., "put", "remove", "run", "enter", etc.) that is verbs actually describing a movement activity, as Entity-Destination or Entity-Origin examples, according to the direction of the motion.

Positive Examples

"The<e1>boy</e1> ran into the school <e2>cafeteria</e2>."

Entity-Destination(e1,e2)

Comment: *school cafeteria* is a spatial/geographical destination.

"The <e1>letter</e1> was sent to the <e2>post office</e2> in the afternoon."

Entity-Destination(e1,e2)

Comment: *post office* is an abstract destination.

"Accidentally, Kim poured too much <e1>sugar</e1> into her <e2>coffee</e2>."

Entity-Destination(e1,e2)

Comment: *coffee* is a location destination for *sugar*.

"He sent his <e1>painting</e1> to an <e2>exhibition/e2>."

Entity-Destination(e1,e2)

Comment: *exhibition* as a metonymy of spatial/geographical destination, exhibition place.

"The <e>man</e> visits his <e>mother</e> every week."

Entity-Destination(e1,e2)

Comment: *mother* as a person destination.

"<e1>Suspects</e1> were handed over to the <e2>police station</e2>."

Entity-Destination(e1,e2)

Comment: *police station* as a spatial/geographical destination.

"The famous <e1>philosopher</e1> was exiled to a small <e2>island</e2> far away from his home."

Entity-Destination(e1,e2)

Comment: *island* as a spatial/geographical destination.

"Finally, this strange <e1>case</e1> has been moved to a <e2>higher court</e2>."

Entity-Destination(e1,e2)

Comment: *higher court* is abstract destination of *case*.

"Her <e>resignation notice</e> was sent to her <e>company</e> yesterday."

Entity-Destination(e1,e2)

Comment: *company* is a company destination.

"Humidifier spreads <e1>water vapor</e1> into the <e2>air</e2>."

Entity-Destination(e1,e2)

Comment: When vapor was water, it was not in the air; once it became vapor, it traveled into the air.

"Every fall, <e1>geese</e1> migrate to <e2>south</e2> for winter."

Entity-Destination(e1,e2)

Comment: This is a prototypical example of a spatial/geographical destination.

"The unit chair brought this <e1>issue</e1> to the <e2>committee</e2> for discussion."

Entity-Destination(e1,e2)

Comment: abstract entity and abstract destination - allowed by b.1

"I put the <e1>apples</e1> in the <e2>basket</e2>."

Entity-Destination(e1, e2)

Comment: The lexical choice and perspective focus on the movement relation. A "stative" relation such as Content-Container would describe what is only a possible eventual outcome that we do not care about.

"The spectator put the <e1>card</e1> back in the <e2>deck</e2> of cards."

Entity-Destination(e1, e2)

Comment: The lexical choice and perspective focus on the movement relation. A "stative" relation such as Member-Collection would describe what is only a possible eventual outcome that we do not care about.

Near-Miss Negative Examples

"The <e1>team</e1> arrived at a <e2>conclusion</e2>."

Other

Comment: The conclusion is the result of a mental activity; see restriction c.2

"He reversed the position of the <e1>batteries</e1> in the <e2>flashlights</e2> to prevent them from accidentally switching on and losing power."

Component-Whole(e1,e2)

Comment: *batteries* are in the *flashlights* not moving into the *flashlights*; this is Component-Whole (rather than Content-Container) since there is a functional dependency between the batteries and the flashlights.

"John couldn't control his <e1>emotions</e1> toward the <e2>girl</e2> in the market."

Cause-Effect(e2,e1)

Comment: *emotions* are not moving toward the girl, instead they are caused by the *girl*.

"Lately, many houses are equipped with <e1>rain water</e1> <e2>tanks</e2> at home."

Other

Comment: The context does not clearly suggest that *rain water* is moving to the *tanks*, thus, it is not Entity-Destination.

"The <e1>water</e1> <e2>pipe</e2> is broken."

Other

Comment: The context does not clearly suggest that *water* is moving to the *pipe*, thus, it is not Entity-Destination.

"The government has taken <e1>people</e1> into <e2>poverty</e2>."

Other

Comment: violates c.3

"The <e1>employee</e1> went into <e2>management</e2>."

Other

Comment: violates b.1