The predicate and argument(s) of a proposition may be represented in tree diagrams, as follows:

1. 1-place
   - prop
   - pred
   - arg
   - burn
   - the house

2. 2-place
   - prop
   - pred
   - arg
   - break
   - Mary
   - the glasses

3. 3-place
   - prop
   - pred
   - arg
   - donate to
   - we
   - the clothes
   - charity

Note that arguments include only the nuclear elements of sentences, not adverbial elements. Thus, in the sentence *Patsy is knitting a sweater in the living room,* "in the living room" is not an argument (because *knit* is a transitive verb), while in the sentence *Patsy put the sweater in the living room,* "in the living room" is an argument (because *put* is a complex transitive verb). The second sentence is a single 3-place predicate:

(An analysis of the first sentence is given in the Self-Testing Exercise.)

Now that propositions have been analyzed into the predicate and argument(s), we can examine how these parts are related semantically.

**Self-Testing Exercise: Do Exercise 10.1.**

### 2. Thematic roles

The concept of thematic roles (or θ-roles) is a means of accounting for the functions of arguments in respect to the predicate; thematic roles are the “grammatically relevant semantic relations between predicates and arguments” (Frawley, 1992, p. 201). This approach was first proposed by Charles Fillmore (1968; 1977) and was originally known as “case grammar.” To define the roles of arguments, Fillmore borrows the notion of case used in the analysis of grammatical categories, but applies it in a slightly different way.
1. Traditionally, case is understood as a formal marking on nouns (typically expressed by inflection), with a number of these formal markers of case distinguished: nominative, genitive, dative, accusative, and so on. But the meaning of a case ending (the function of the noun carrying a particular case inflection) may be complex. This is perhaps most obvious with the genitive, which can express possessive, subjective, objective, descriptive, partitive, or adverbial meaning (as we discussed in Chapter 5). The nominative case, which denotes the grammatical function of subject of the sentence, would seem to be fairly unified in meaning, but even it expresses a variety of concepts, including agent, cause, recipient, object, or instrument of an action.

2. Traditionally, it is also unclear whether the notion of case should be restricted to case inflections — what is known as morphological case — which are used almost exclusively in a synthetic language, or should embrace other formal means to express the same grammatical functions, namely periphrases (using prepositions) and word order, which are the primary means for the expression of case in an analytic language such as English.

Since languages seem to make use of various surface forms for the same grammatical function and to express the same grammatical function with different surface forms, Fillmore decides to use case in a new way: to indicate “semantic case” or the underlying semantic-syntactic functional relationships. He conceives of these semantic cases as finite in number and universal, not language specific, much like semantic features. They are a matter of D-structure, while their formal marking is a matter of S-structure.

This approach to the function of noun phrases offers certain advantages over the purely structural approach of syntactic analysis (as we undertook in Chapters 7–9). In this approach, case refers to the position of a noun phrase in D-structure; thus, the “subject” is the NP to the left of the verb or directly dominated by S, while the “direct object” is the NP to the right of V or directly dominated by VP. As is obvious from the terms “right” and “left”, these relations are considered for SuVO word order only. While the structural approach could be modified to account for other word orders, such as SuOV, VOSu, and OVSu, where O is adjacent to V, it would be more difficult to account for VSO or OSuV. Case grammar abandons the idea that noun phrases are ordered in the base; rather, it sees them as assigned a particular surface position according to their thematic role.

---

1. A synthetic language is one such as Latin or Old English, in which grammatical categories are expressed primarily by inflection. In contrast, a synthetic language such as Modern English or French expresses grammatical categories with a few inflections, but primarily through word order and periphrasis.
Another advantage of case grammar is that it is able to recognize a relationship among sentences such as the following:

- The chef roasted the meat (over the fire).
- The fire roasted the meat.
- The meat roasted (over the fire).

In a purely structural approach, we would need to postulate three separate verbs roast with similar semantic features but different subcategorization rules:

- roast __ NP (PP)
- __ NP
- __ (PP)

In case grammar, it is possible to see the three instances as a single verb selecting certain thematic roles, which then appear in different surface syntactic positions.

While Fillmore envisages a finite number of universal thematic roles, there is not yet general agreement on the inventory of these roles, on their designations, or on their definitions. Despite the fact that determination of thematic roles is described by one scholar as “intuitionism run wild” (Dillon, 1977, p. 73), we may consider the following as a list of some of the possible thematic roles served by arguments in a sentence:

1. **Agent**: the animate initiator, causer, doer, or instigator of an action who acts by will or volition, takes responsibility for the action, and is its direct cause;
2. **Force**: the inanimate cause of an action, which does not act by will or volition;
3. **Instrument**: the means by which an event is caused, or the tool, generally inanimate, used to carry out an action; an instrument does not act but is acted upon; (Agent, Force, and Instrument together could be considered “Cause”)
4. **Experimenter**: the animate being affected inwardly by a state or action;
5. **Source**: the place-from-which or person-from-whom an action emanates;
6. **Goal**: the place-to-which or person-to-whom an action is directed, including indirect objects and directional adverbs;
7. **Path**: the path taken in moving from one place to another in the course of an action;
8. **Location**: the place-at/in-which or the time-at-which an action occurs;
9. **Possessor**: the possessor of a thing, really a special kind of locative, since the thing and the possessor must coincide; there are two kinds of possession, depending on whether the possessor and the thing possessed are inherently connected, such as Judy’s head (inalienable possession) or not, such as Judy’s car (alienable possession);

- Many of these thematic roles have alternative names: Agent and Force are also known as “actor”, Instrument is known as “means”, Experimenter as “dative” or “affected”, Goal as “recipient”, Location as “place” or “temporal”, Factitive as “result” or “effected”, Patient as “affected”, “object(ive)”, or “theme”, Neutral as “theme”, and range as “extent”.
10. **Benefactive**: the person or thing for which an action is performed or the person who derives something from the actions of another;

11. **Factive**: the object resulting from an action or state, having no prior existence but coming about by virtue of the action or state;

12. **Patient**: the person or thing affected by an action, or the entity undergoing a change;

13. **Theme**: the person or thing which undergoes an action, or that which is transferred or moved by an event but otherwise unchanged;

14. **Neutral**: the person or thing which is not changed or even acted upon, but simply present at an action;

15. **Range**: the specification or limitation of an action; and

16. **Role**: a person playing a role or part in an action or state.

**HINT**: Note the differences between Patient, Theme, Neutral, and Factive:

- *Jane broke the vase.* (Patient)
- *Jane moved the vase.* (Theme)
- *Jane saw the vase.* (Neutral)
- *Jane made a vase.* (Factive)

A Patient is changed in some way by the action, while a Theme is affected by the action, often by changing location, but is itself unchanged. A Neutral is present at the event but does not undergo an action. A Factive comes about by virtue of the action itself.

### 2.1 The expression of thematic roles in English

Each underlying thematic role is expressed in a variety of ways on the surface in English, including case inflection, function word, and word order. In Table 10.2 are examples of the most common ways in which the different cases are expressed syntactically.

Both Agent and Force are generally expressed as the subject of an active sentence or in the *by*-phrase of a passive sentence and only rarely as object. Instrument is most often expressed in a *with* or *by* phrase. Experiencer is normally the subject of a state verb. The roles of Source, Goal, Path, and Location are normally expressed prepositionally: Source typically with *from*, *out of*, or *off*, Goal with *to*, Path with *via*, *along*, or *over*, and Location with *on*, *in*, *over*, *behind*, or *under*. However, Goal is a complex role including indirect objects (occurring in three different positions in the sentence) as well as locative goals and directional adverbs.

**HINT**: Note that the expression of inalienable possession is more varied than the expression of alienable possession. In fact, the only meaning attributable to *The brown hair belongs to her* or *The brown hair is hers* is one of alienable possession — perhaps one of her hairs has fallen into the soup!
Table 10.2. The Syntactic Expression of Thematic Roles in English

<table>
<thead>
<tr>
<th>Role</th>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGENT</td>
<td>The logger felled the tree.</td>
<td>The tree was felled by the logger.</td>
</tr>
<tr>
<td>FORCE</td>
<td>The wind felled the tree.</td>
<td>The tree was felled by the wind.</td>
</tr>
<tr>
<td>INSTRUMENT</td>
<td>The logger felled the tree with a single blow.</td>
<td>The tree was felled with an axe.</td>
</tr>
<tr>
<td></td>
<td>The sweater was knitted by hand.</td>
<td>He used an axe to fell the tree.</td>
</tr>
<tr>
<td></td>
<td>Liquor killed him.</td>
<td>His insights impressed us.</td>
</tr>
<tr>
<td></td>
<td>His insights impressed us.</td>
<td>He impressed us with his insights.</td>
</tr>
<tr>
<td>EXPERIENCER</td>
<td>Marianne is lonely/ feels lonely/ is suffering.</td>
<td>I like the book.</td>
</tr>
<tr>
<td></td>
<td>The news pleases me. The news enraged me.</td>
<td>The news is pleasing to me.</td>
</tr>
<tr>
<td></td>
<td>I got the book from the library.</td>
<td>The sun gives off heat.</td>
</tr>
<tr>
<td></td>
<td>I got some money out of the bank.</td>
<td>A caterpillar turns into a butterfly.</td>
</tr>
<tr>
<td></td>
<td>The child took the book off the shelf.</td>
<td>The plane left (from) Boston.</td>
</tr>
<tr>
<td></td>
<td>I borrowed the book from my teacher.</td>
<td>I sent a card to my grandmother.</td>
</tr>
<tr>
<td></td>
<td>His leaving pleases me ('is a source of pleasure to').</td>
<td>I sent my grandmother a card.</td>
</tr>
<tr>
<td></td>
<td>(My grandmother) was sent a card.</td>
<td>My grandmother got a card from me.</td>
</tr>
<tr>
<td></td>
<td>She reached the coast.</td>
<td>She did it (for love, to gain attention).</td>
</tr>
<tr>
<td></td>
<td>I hung the picture on the wall.</td>
<td>Hannibal traveled over the mountains.</td>
</tr>
<tr>
<td></td>
<td>Susy jumped onto the step.</td>
<td>We walked along the railroad tracks.</td>
</tr>
<tr>
<td></td>
<td>I sent the child home.</td>
<td>The package came via London.</td>
</tr>
<tr>
<td></td>
<td>I walked upstairs.</td>
<td>The dog is in the house/on the chair/ under the table/behind the couch.</td>
</tr>
<tr>
<td>SOURCE</td>
<td>I got the book from the library.</td>
<td>I will return on Tuesday/ at noon.</td>
</tr>
<tr>
<td></td>
<td>I got some money out of the bank.</td>
<td>There are many people in the room.</td>
</tr>
<tr>
<td>PATH</td>
<td>The sun gives off heat.</td>
<td></td>
</tr>
<tr>
<td>LOCATION</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 10.2. (Continued)

<table>
<thead>
<tr>
<th>POSSESSOR</th>
<th>The room has many people in it.</th>
</tr>
</thead>
<tbody>
<tr>
<td>alienable</td>
<td>That bottle contains alcohol.</td>
</tr>
<tr>
<td></td>
<td>People filled the room.</td>
</tr>
<tr>
<td></td>
<td>Vancouver is a rainy city.</td>
</tr>
</tbody>
</table>

| inalienable | He has/owns/possesses a dog. |
|            | The dog belongs to him.       |
|            | The dog is his.               |
|            | The jewels are in his possession. |
|            | That dog of his is a nuisance.|
|            | His dog is a nuisance.        |
|            | The man with the dog/who has the dog ... |

| BENEFACTIVE | Jack answered the phone for José. |
|            | The store special-ordered the book for me. |
|            | The maître d' reserved a place for our party. |

| FACTITIVE  | They formed a circle.          |
|           | Sir Christopher Wren designed St. Paul's. |
|           | The coach turned into a pumpkin. |
|           | He baked a cake.               |

| PATIENT    | I baked the chicken.           |
|            | The chicken was baked by me.   |
|            | The chicken baked in the oven. |

| THEME      | I put the letter on the table. |
|            | The letter flew out of the window |
|            | We read the letter.            |

| NEUTRAL    | The house costs a lot.         |
|            | The table measures three feet by three feet. |
|            | Richard saw a tree on the horizon. |

| RANGE      | The dress costs a hundred dollars. |
|            | The man weighs 80 kilograms.       |
|            | We drove ten miles.                |
|            | He hummed a silly tune.            |
|            | He lived out his life happily.     |

| ROLE       | We made Lise treasurer of the club. |
|            | Hilda is the principal of the school. |

Benefactive should r for phrase: Benefactive is animate. Goal may under: answered José the phone by the noun phrase imm Patient, and Theme, but they can become the sub dred dollars is cost by th Role is denoted by subj.

There appears to bition. Fillmore (1968) p this says that if Agent is Patient will be subject, in subject position wh marked option, as in th

2.2 Dual thematic

Often an argument ments of certain classe 1. With verbs of m travel, an animate

Lucille sat do

The subject both changes location fall, slip, slide, or

Jack fell do

Here Jack may l Agent and Ther that simply befel Agent). The sec

2. Ditransitive ve: award, issue, sh

They presen

3. The subject hie formulation is Agen
Benefactive should not be confused with Goal, though they are both expressed in a for phrase: Benefactive is paraphrasable with 'in the place of' or 'in the stead of,' and only animate Goal may undergo indirect object movement (note the ungrammaticality of *Jack answered José the phone*). While Factitive, Theme, Patient, and Range are all expressed by the noun phrase immediately following the verb in an active sentence, only Factitive, Patient, and Theme, but not Range, are what are traditionally known as direct objects since they can become the subject in a passive sentence (note the ungrammaticality of *A hundred dollars is cost by the dress*). Neutral is expressed by both subjects and direct objects. Role is denoted by subject and subject or object complements.

There appears to be a hierarchy among thematic roles in their filling of subject position. Fillmore (1968) proposed a "subject hierarchy" of Agent > Instrument > Patient; this says that if Agent is present, it will be subject, then Instrumental will be subject, then Patient will be subject. Choices of subject which violate this hierarchy, such as a Patient in subject position when an Agent is expressed in the same sentence, always represent a marked option, as in the case described, the passive.

### 2.2 Dual thematic roles

Often an argument may have more than one thematic role. Dual roles occur with arguments of certain classes of verbs:

1. With verbs of motion, such as run, walk, swim, wade, climb, stand up, roll over, or travel, an animate subject is both Agent and Theme:

```
Lucille sat down. Lucille = Agent and Theme
```

The subject both performs an intentional action (sitting) and is acted upon, that is, changes location (from standing to sitting). However, some verbs of motion, such as fall, slip, slide, or sink, may be ambiguous in respect to thematic role:

```
Jack fell down, slipped over the edge, slid down the slope.
```

Here Jack may have intentionally performed these actions (in which case Jack is both Agent and Theme), but another interpretation of the sentences is that these are events that simply befell Jack, without his being responsible (in which case Jack is Theme but not Agent). The second reading is obvious if one inserts "accidentally" in the sentences above.

2. Ditransitive verbs and related verbs such as give, sell, lend, hire, rent, supply, furnish, award, issue, show, or tell show the following thematic structures:

```
They presented an award to Sam. They = Agent and Source
Sam = Goal
award = Theme
```

3. The subject hierarchy has been formulated in different ways by different scholars. Another formulation is Agent > Benefactive > Theme/Patient > Instrument > Location.
They presented Sam with an award. They = Agent and Source
Sam = Theme and Goal
award = Neutral

In each case, the subject is both an Agent performing the action of presenting and the Source of the award, while the indirect object, Sam, is the Goal of the award in the first sentence. However, since the position immediately following the verb seems to be closely associated with the Theme (or Patient) role, the movement of the indirect object to this position in the second sentence makes it Theme as well, or part of what the sentence is “about”, as we will see in the next chapter.

3. Verbs such as spray, cram, pile, stack, smear, mark, engrave, or plant, show the following thematic structures:

She sprayed paint on the wall
She = Agent
paint = Patient
wall = Location

She sprayed the wall with paint.
She = Agent
the wall = Patient and Location
paint = Theme

Again, the position directly following the verb seems to correlate with the Patient role. The second sentence has a strong implication of ‘completeness’ or ‘total affectedness’, that is, that the wall is completely covered, since the wall is not only Location but also Patient in this case – the thing affected by the action – whereas in the first sentence the wall is merely Location. Further evidence that the sense of ‘total affectedness’ is associated with the role of Patient or Theme is provided by sentences such as the following, in which the relevant argument is in subject position:

Bees swarmed in the garden.
the garden = Location

The garden swarmed with bees.
The garden = Location and Patient

The second sentence likewise has the implication of completeness. Note that not all verbs (with similar meanings) permit both variants. For example cover or fill allow only the first, while put allows only the second:

She [covered the wall with a quilt, filled the glass with water].
She [covered a quilt on the wall, filled water into the glass].
She put the wall with a quilt.
She put a quilt on the wall.

4. This sense of completeness seems to hold up even when the sentences are passivized (suggesting that thematic roles are assigned at D-structure, before arguments are moved): The wall was sprayed with paint (completive) vs. Paint was sprayed on the wall (noncompletive).

Verbs like steal, take, b following thematic str
The thief stole

The thief stole

cf. The thief robb

While the thief is Agent a lead to different focuses, with all these verbs, then, the of intentional action. Note Theme, not Agent. In the: Theme) but is also the bei

Dual roles also com thematic role by virtue of virtue of being the subjec

Susan forced Kat

(Actually, it is PRO in the fine point here.) In conti

5. Patient supersedes Neu assumes the Patient role an
4. Verbs like steal, take, borrow, rent, hire, snatch, grab, get, rob, strip, and empty allow the following thematic structures:

- **The thief stole her jewels.**
  - The thief = Agent and Goal
  - her = Possessor
  - jewels = Theme

- **The thief stole the jewels from her.**
  - The thief = Agent and Goal
  - her = Source
  - jewels = Theme

- **cf. The thief robbed her of the jewels.**
  - The thief = Agent and Goal
  - her = Theme and Source
  - jewels = Neutral

While the thief is Agent and Goal in all of these sentences, note that the three structures lead to different focuses, depending on the thematic roles of the other arguments. With all these verbs, then, the effect of moving a word to the position immediately following the verb is to give the noun the role of Patient or Theme, in addition to any other role it may have. A final example of dual roles in simple sentences occurs in object complement constructions:

- **Howard jumped the horse over the fence.**
  - Howard = Agent
  - the horse = Theme and Agent
  - the fence = Location

- **We made Alexandra captain.**
  - We = Agent
  - Alexandra = Theme and Experiencer
  - captain = Role

In the first sentence, the horse is acted upon by Howard (hence Theme), but itself acts by jumping (hence Agent); this interpretation depends upon a view of horses as beings capable of intentional action. Note that in **Howard drove the car out of the driveway**, “the car” is only Theme, not Agent. In the second sentence, Alexandra is the entity acted upon by us (hence Theme) but is also the being affected inwardly by serving as captain (hence Experiencer).

Dual roles also come about in embedded structures, where a noun phrase has one thematic role by virtue of being the direct object of the higher verb, and another role by virtue of being the subject of the lower verb:

- **Susan forced Katy to write the letter.**
  - Susan = Agent
  - Katy = Theme and Agent
  - the letter = Factive

(Actually, it is PRO in the embedded clause that has the role of Agent, but we ignore this fine point here.) In contrast, the same argument, when it follows an expect-type verb, as
in Susan expects Katy to write the letter has the sole role of Agent since it is the subject of write, but not the object of expect. In the following sentences, Stu is the Goal of her teaching, but in the first sentence he also has – by virtue of his position as direct object of the upper clause – the role of Theme:

She taught Stu to cook.  Stu = Theme and Goal
She taught cooking to Stu.  cooking = Theme, Stu = Goal

Again, the Theme role carries the implication of completeness, so that to say She taught Stu to cook, but he can’t cook a thing is illogical, while to say She taught cooking to Stu, but he can’t cook a thing seems acceptable.

HINT: It is important to distinguish dual thematic roles from ambiguous ones, as in the following:

Crane made a speech for Crawford.
Vanessa drowned in the river.
Bill floated in the lake.
Alex tasted the wine.

In the first sentence, Crawford is ambiguous between Goal and Benefactive, depending on whether Crane made a speech in support of Crawford or whether he made a speech in his stead. In the second sentence, Vanessa is Agent (and Patient) if she intentionally drowned herself, but only Patient if she accidentally drowned; likewise, Bill is Agent (and Theme) if he made himself float in the lake, but only Theme if through no actions of himself he floated (if it were, for example, his dead body that was being talked about). Finally, Alex may be Agent (and Experiencer) if he deliberately sampled the wine, but Experiencer only if he just happened to detect wine in a dish he was eating.

2.3 Thematic role grids

If we consider again the sentences given above:

The chef roasted the meat (over the fire).
The fire roasted the meat.
The meat roasted (over the fire).

we can see that the verb roast (or more specifically the predicate roast over) seems to occur with an Agent role (the chef), an Instrument role (the fire), and a Patient role (the meat). It can be said that the predicate roast “assigns” thematic roles to its arguments. If we consider predicates more generally, we find that any particular predicate occurs uniquely with its own set of arguments serving particular thematic roles, just as it occurred with its own set of NP/AP/PP complements filling syntactic functions such as direct object, indirect object, etc. Some of these roles will I complement structures, info in the lexicon.

The thematic role assign:

motic role grid”, which is “it each predicate” (Frawley, 19 frame – is much like the syn
Consider the verb open,

The key (In) opened
The intruder (Ag) of.
The wind (Fo) open
The door (Th) open
*The intruder (Ag) of

It assigns only one obligator
ally Instrument. Note that A 
resent the thematic grid as and mutually exclusive choi

open  Theme + (A

Note that any optional adv 
not considered in the subc midnight, at midnight is a ) thematic grid.

Sample thematic grids

The verbs melt and co and an optional Agent, Fo 
to be elliptical and also in 
verbs kill, die, and murder assign Agent and
the Agent; die assigns only 
such as Location, which co in the train station (Locat:

6. The thematic grids sho
Instrument may occur either

Harry melted the l
"The flame melted t
Lily cooked the ric
"The heat cooked th
etc. Some of these roles will be obligatory and some will be optional. As was the case with complement structures, information concerning the thematic roles of a predicate is given in the lexicon.

The thematic role assignment of a predicate can be specified in what is called a "thematic role grid", which is "the abstract specification of the thematic role possibilities for each predicate" (Frawley, 1992, p. 241). A thematic grid – what used to be called a case frame – is much like the syntactic subcategorization frame of a verb.

Consider the verb open, for example:

\[
\begin{align*}
\text{The key (In) opened the door (Th).} \\
\text{The intruder (Ag) opened the door (Th) with the key (In).} \\
\text{The wind (Fo) opened the door (Th).} \\
\text{The door (Th) opened.} \\
* \text{The intruder (Ag) opened.} * \text{The wind (Fo) opened.} * \text{The key (In) opened.}
\end{align*}
\]

It assigns only one obligatory role, Theme, and optionally either Agent or Force and optionally Instrument. Note that Agent or Force or Instrument cannot appear alone. We thus represent the thematic grid as follows. It indicates optional case roles by the use of parentheses and mutually exclusive choices by or:

\text{open Theme + (Agent or Force) + (Instrument)}

Note that any optional adverbial elements would not be considered here, just as they are not considered in the subcategorization of verbs. Thus, in \text{The intruder opened the door at midnight, at midnight is a Locative Role, but as an adjunct adverbial, it is ignored in the thematic grid.}

Sample thematic grids are given in Table 10.3.

The verbs melt and cook are similar in both assigning the obligatory role of Patient and an optional Agent, Force, or Instrument. The verb cook differs in permitting Patient to be elliptical and also in allowing Factitive to replace Patient\(^6\). The semantically-related verbs kill, die, and murder differ in their thematic role assignments. While both kill and murder assign Agent and Patient roles, kill allows a nonintentional Force role to replace the Agent; die assigns only the Patient role. We are ignoring various circumstantial roles such as Location, which could optionally accompany these predicates, as in Smithers died in the train station (Location) or The gangster murdered Smithers last night (Location).

\(^6\) The thematic grids shown in Table 10.3 for melt and cook are somewhat simplified. In fact, Instrument may occur either on its own (as shown) or with Agent (but not with Force):

\[
\begin{align*}
\text{Harry melted the butter with a microwave.} \\
* \text{The flame melted the butter with a microwave.} \\
\text{Lily cooked the rice with a rice-cooker.} \\
* \text{The heat cooked the rice with a rice-cooker.}
\end{align*}
\]
Table 10.3. Thematic Grids for English Verbs

<table>
<thead>
<tr>
<th>Verb</th>
<th>Patient or Agent</th>
<th>Patient + (Agent of Force or Instrument)</th>
<th>Patient + (Agent of Instrument)</th>
</tr>
</thead>
<tbody>
<tr>
<td>melt</td>
<td>Harry (Ag)</td>
<td>The flame (Fo) melted the butter (Pa).</td>
<td>The microwave (In) melted the butter (Pa).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Harry (Ag) melted. *The heat (Fo) melted.</td>
<td>*The microwave (In) melted.</td>
</tr>
<tr>
<td>cook</td>
<td>Lily (Ag)</td>
<td>The rice (Pa) is cooking.</td>
<td>The rice-cooker (In) cooked the rice (Pa).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Lily (Ag) is cooking.</td>
<td>The heat (Fo) cooked the rice (Pa).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*The rice (Pa) is cooking.</td>
<td>Dinner (Pa) is cooking.</td>
</tr>
<tr>
<td>kill</td>
<td>Agent (Instrument) or Force + Patient</td>
<td>The man (Ag) killed Smithers (Pa).</td>
<td>*The man (Ag) killed Smithers (Pa).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*The knife (In) killed Smithers (Pa).</td>
<td>*Smithers (Pa) killed. *The (man, blow) (Ag, Fo) killed.</td>
</tr>
<tr>
<td>murder</td>
<td>The gangster (Ag)</td>
<td>The gangster (Ag) murdered Smithers (Pa).</td>
<td>*The gangster (Ag) murdered.</td>
</tr>
<tr>
<td></td>
<td>Smithers (Pa) died.</td>
<td>*Smithers (Pa) murdered.</td>
<td>*Smithers (Pa) murdered.</td>
</tr>
<tr>
<td>dis</td>
<td>Patient</td>
<td>*The man (Ag) died Smithers.</td>
<td>*The accident (Fo) died Smithers.</td>
</tr>
</tbody>
</table>

Perception verbs fall into sets, depending on whether the subject is Experiencer or Agent, as in:

- **hear**
  - Experience + Neutral
  - I (Ex) heard the noise (Neu).
- **listen to**
  - Agent + Goal
  - I (Ag) listened intently to the lecture (Go).
- **see**
  - Experiencer + Neutral
  - I (Ex) saw a sudden light (Neu).
- **look at**
  - Agent + Goal
  - I (Ag) looked at the old book (Go).

Another use of the verb *look* occurs in *The dog looked happy (to me)*, or *The room looked clean (to me)*, where Neutral or Location is an obligatory role and Experiencer is optional. In the case of visual and auditory perception, there are separate lexical verbs, but in the case of tactile perception (as well as olfactory and gustatory perception), there is only one verb:

Thus, our rules would need to be rewritten as follows:

- **melt** Patient + (Agent of Instrument) or Force or Instrument
- **cook** Patient or Factive + (Agent of Force or Instrument)
- **kill** Agent (Instrument) or Force + Patient
- **murder** Agent + Patient + (Instrument)
- **dis** Patient
  - Patient

For *feel*, one would also see

- **feel**
  - Patient + (Agent or Force or Instrument)
  - feel, Experiencer

**feel** can also have an Experiencer role. Within their thematic grids, various arguments that particular into eleven major classes.

Another use of them: consider the sentence

She (Ag) sprayed the wall.

Passive can move only Pa

Paint was sprayed.

But we cannot move Lo:

The wall was spr

(look) *Paint was spray.*

(look) *Paint was spray.*

(look) *Paint was spray.*

But in most cases not the

Self-Testing Exercise: Do E

3. Predications

Now that we have examined the way that the verb may be called predication...