Caused Motion

• The Caused-Motion Construction
  (Goldberg 1995)

  [ Subject [ Verb Object Directional ] ]

  (1) a. Norman kicked the ball into the room.
      b. Mary hit the ball out of the park.
      c. Fred sprayed paint onto the wall.

• Causation is central

  (2) a. The bottle floated into the cave.
      b. The boat sailed into the cave.
      c. * The boat burned into the cave.

• Several arguments against a compositional analysis
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• CM constructions do not always predicate the same relation to the direct object as their transitive counterparts

(3) a. Sam sawed a piece off the block.
    b. ∉ Sam sawed a piece.

(4) a. Sam rinsed the soap out of his eyes.
    b. ∉ Sam rinsed the soap.

(5) a. Sam stirred the paint thinner into the paint.
    b. ∉ Sam stirred the paint thinner.
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• Sometimes verbs that appear in CM constructions do not independently take a direct object at all

(6) a. The audience laughed the poor guy off the stage.
    b. * The audience laughed the poor guy.

(7) a. Frank sneezed the napkin off the table.
    b. * Frank sneezed the napkin.

(8) a. In the last Star Trek episode, there was a woman who could think people into a different galaxy.
    b. * In the last Star Trek episode, there was a woman who could think people.
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- The CM construction is associated with a set of related senses

- Category A: “X CAUSES Y TO MOVE Z”

(9) a. Frank pushed the books into the box.
   b. Frank kicked the ball into the yard.
   c. Frank sneezed the tissue off the nightstand.
   d. Frank shoved Bill into the car.
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• Category B: The *conditions of satisfaction* associated with the act denoted by the predicate entail “X CAUSES Y TO MOVE Z” (as with communicative acts)

(10) a. Sam ordered John out of the house.
    b. Mary asked Norman into the room.
    c. Sue invited Norman out to her cabin.
    d. Hillary sent Sam to the market.

• These differ from previous cases in that motion is not strictly entailed, but only by the “conditions of satisfaction” of the predicate
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- Category C: “X ENABLES Y TO MOVE Z”

(11) a. Sam let John into the room.
    b. Sam allowed John out of the room.

- Includes verbs that encode the removal of a barrier (e.g., allow, let, free, release)

- These must be used agentively

(12) a. # Sara let John into the room by leaving the door open.
    b. Sara let John come into the room by leaving the door open.
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• Category D: “X PREVENTS Y FROM MOVING Complement(Z)”

(13) a. Harry locked Joe into the bathroom.
    b. Mary kept Fred at arm’s length.
    c. Sam barricaded him out of the room.

• Indicates the imposition of a barrier, causing the patient to stay in a location (and thus preventing moving to the complement of that location)
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- Category E: “X HELPS Y TO MOVE Z”

(14) a. Sam helped Fred into the car.
    b. Sam assisted Mary out of the room.
    c. Sue guided Sam through the terrain.
    d. Fred showed John into the living room.
Alternations

• Alternations with verbs like *load* and *spray*

  (15) a. Pat sprayed paint onto the statue.
      b. Pat sprayed the statue with paint.

  (16) a. Norman loaded hay onto the truck.
      b. Norman loaded the truck with hay.

• Both constructions involve causation, but in different ways
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Five classes

1. *Slather*-class: simultaneous forceful contact and motion of a mass against a surface

   • *slather, smear, brush, dab, plaster, rub, smear,*...

2. *Heap*-class: vertical arrangement on a horizontal surface

   • *heap, pile, stack,*...

3. *Spray*-class: force is imparted to a mass, causing ballistic motion in a specified spatial distribution along a trajectory

   • *spray, spatter, splash, splatter, inject, sprinkle, squirt,*...
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Five classes

4. Cram-class: mass is forced into a container against the limits of its capacity
   - cram, pack, crowd, jam, stuff,...

5. Load-class: a mass is put into a container that is designed to hold it
   - load, pack, stock,...