

**Please cite as:**

Bowerman, M. (1992). Topological Relations Pictures: Static Relations. In S. C. Levinson (Ed.), *Space stimuli kit 1.2* (pp. 25-28). Nijmegen: Max Planck Institute for Psycholinguistics. doi:[10.17617/2.3512672](https://doi.org/10.17617/2.3512672)

---

**REGULATIONS ON USE**

**Stephen C. Levinson and Asifa Majid**

This website and the materials herewith supplied have been developed by members of the Language and Cognition Department of the Max Planck Institute for Psycholinguistics (formerly the Cognitive Anthropology Research Group). In a number of cases materials were designed in collaboration with staff from other MPI departments.

**Proper citation and attribution**

Any use of the materials should be acknowledged in publications, presentations and other public materials. Entries have been developed by different individuals. Please cite authors as indicated on the webpage and front page of the pdf entry. Use of associated stimuli should also be cited by acknowledging the field manual entry. Intellectual property rights are hereby asserted.

**Creative Commons license**

This material is provided under a Creative Commons Attribution-NonCommercial-ShareAlike license (CC BY-NC-SA 4.0). This means you are free to share (copy, redistribute) the material in any medium or format, and you are free to adapt (remix, transform, build upon) the material, under the following terms: you must give appropriate credit in the form of a citation to the original material; you may not use the material for commercial purposes; and if you adapt the material, you must distribute your contribution under the same license as the original.

**Background**

The field manuals were originally intended as working documents for internal use only. They were supplemented by verbal instructions and additional guidelines in many cases. If you have questions about using the materials, or comments on the viability in various field situations, feel free to get in touch with the authors.

**Contact**

Email us via [library@mpi.nl](mailto:library@mpi.nl)

Max Planck Institute for Psycholinguistics

P.O. Box 310, 6500 AH, Nijmegen, The Netherlands

# Melissa Bowerman's Topological Relations Pictures

25

## 2. Static Relations

Stimulus Kit ideas for eliciting descriptions of STATIC topological spatial relations. (I'm making a separate set of notes about topological ACTIONS).

Several of you have used or plan to use the set of pictures of static spatial relations (mostly topological, but with a few others like 'under' and 'in front on/behind' as well) that I originally designed for use with young children. As you know, I in fact abandoned these in favor of real objects because 1) kids had a hard time interpreting some pictures, and I often felt uncertain whether they were thinking of the relations in the way I intended, and 2) children find it strange to be asked "where is X?" when the same picture is right in front of both subject and experimenter (it seems harder to get responses other than "right here" and the like for pictures than for objects). The pictures seem to work better with adults, who get the hang of what they should do more easily. Interpretation is still a problem for certain pictures, though, e.g., those showing things hanging to or stuck on walls. Also, for pictures of shoe on foot, glove on hand, hat on head, etc., it has proved hard to get "X is on Y"-type responses; people generally prefer "a man/woman is WEARING X"-type responses, and it is often unclear whether "X is on Y" is possible.

When Lourdes and I used these pictures with Tzotzil speakers, and I used them with a Tarascan speaker, we often found it helpful to show a particular picture, but then to try to illustrate what was intended more exactly by arranging topologically similar objects that happened to be around, or already hanging on or stuck to walls, wrapped or wrappable around other objects, etc. In other words, we sometimes used a picture as a sort of prototype for a small family of other similar relations.

### I. 'ON' use types

In eliciting descriptions of surface-contact ON-type relations in a number of different languages, I have come to think informally in terms of a certain number of categories of 'contact/support' relations, what could be called "use types"--Herskovits's term, but broken down much more finely. In general, it seemed to me that, with exceptions (of course!), once I knew the appropriate locative terms for one instantiation of an ON-use type, I could predict that other instantiations of the same use type would take the same term (Tzeltal is a big exception, since so many different verbs are needed for different Figures). However, knowing how a language encoded one use type did not necessarily allow me to predict how it would encode another. I list some ON-use types here in the hopes that you will at least try to get descriptions of one or two members of each use type in 'your' language. Some, but not all of these, are tapped by one or more pictures in the set.

1. Figure resting on and supported by a more-or-less horizontal surface.  
(Cup on table, etc.)

This 'use type' is not actually a very good one, in light of Meso-American (and other) languages. Even in Germanic languages, objects of different dimensions--e.g., a pencil (1-D), piece of paper (2-D), a telephone (3-D with base), a stone (3-D without base) often need different verbs, even though the preposition stays the same. And then there is Tzeltal... An additional problem, of course, is that 'the horizontal surface' may need different descriptions depending on what 'body part' of some object it represents. (See III. below for elicitation ideas about this.)

Further considerations: find out whether it matters to the description...

- a. ...whether the Ground surface is the floor or ground, or is raised above the ground;
- b. ...whether the Ground provides a usual support for Figures. (In Finnish, for instance, you need different descriptions for 'cat on table' and 'cat on television set', since the top of a TV is not a canonical supporting surface.

- c. ...whether the Figure actually touches the Ground, or is above it.
2. Figure is supported by hanging from Ground.  
(Clothes on line, apple(s) on a tree, picture on a wall, coat on a hook, pendant on necklace...  
  
Also check clothing draped OVER a Ground, e.g., coat on railing or over back of chair; these may be different)
  3. Discrete Figure stays in contact with Ground by sticking; adhesion.  
(Piece of Scotch Tape stuck onto various surfaces; piece of plasticine stuck here and there. Bandaid on various body parts, stamp on a letter, stickers.....Check whether the ORIENTATION of the surface matters.)
  4. Wet, powdery, or smeary substance on a surface.  
(Sweat on forehead, raindrops on a window, powder spilled on one's blouse, dust on the walls, blood on the skin, glue or toothpaste on a pair of scissors or other object...  
  
Something to keep in mind...how does the language describe X ALL OVER Y: e.g., blood all over my hands, water all over the table? English says 'X is all over Y.' Dutch says 'Y sits completely UNDER X'. Finnish says 'Y is IN X'.
  5. Marks on a surface.  
(Writing on a page or on a blackboard, stain on clothing or a piece of cloth (this may also be treated as an 'in' relation), picture drawn or painted directly on a wall, picture on the side of a cup...)
  6. Blemish on skin of some body part (typically falls together with 5.)  
(Freckles on cheeks/hands, blister on hand, mole somewhere, birthmark, rash, mosquito bite....find instances to demonstrate with.)
  7. Living creature on a (nonhorizontal) surface.  
(Fly/snail/spider on wall/ceiling, woodpecker on tree...)
  8. (Somewhat) rigid Figure firmly attached to/projecting from Ground.  
(Handle on pan, handle on door or drawer, handle on suitcase, lamp affixed to wall or ceiling, button on jacket...See whether orientation matters.)
  9. 'Tied to' relations.  
(Balloon on a string, string on a balloon, leash on a dog, dog on a leash, pull-toy on a string...)
  10. Lids.  
(Cap on pen, lid on jar, top on the toothpaste tube...Some languages resist giving spatial descriptions to these, also true for some instances in 8, like handle on door.)
  11. Encirclement.  
(Ribbon on candle, bracelet/watch on wrist, necklace/scarf-neck, belt-waist, ring-finger, ring on a pencil, toilet paper roll on a pencil, napkin ring on a napkin, ring on a stacking toy or upright stick, bandana-head, armband-arm, rubber band around a jar or can, string on a package...  
  
'Spitting' is a special case of encirclement: beads on a string, meat on a spit, apple on a stick, papers on a stick...)

Find out if it matters whether the encircling object touches and is supported by the encircled object. In English it does: on is often used in the case of supporting encirclement, but around otherwise. In Dutch it does not: om is used in either case. Also, find out if it matters whether the encircling object is WRAPPED around the Ground, or is 'put over it' it, like a ring on a pole.

Also important: find out if the SAME DESCRIPTION can be used for both (e.g.) 'ring on pole' AND 'pole in ring'; 'bead on string' AND 'string in/through bead', 'apple on stick' AND 'stick in apple'... Many languages seem to use words that prototypically have to do with containment not only for the location of the penetrating (i.e., 'contained') object (e.g., 'stick in apple,' 'string in/through bead' but also for the penetrated and encircling (i.e., 'containing') object ('apple IN stick', 'bead IN string'...)

12. Envelopment.

(Pillowcase on a pillow, cover on a cushion, wrapper on a bar of soap or piece of chewing gum...)

13. Miscellaneous.

(Shadow on a wall or other surface; meat on a bone; man lying on his back, standing on his hands; 'don't put your dirty fingers ON my new shirt'; house on a lake; village on the road to X...)

II. IN use types.

I haven't explored variations in this domain as thoroughly as for the ON (surface contact) domain. But here are a few distinctions and questions to keep in mind.

1. Complete containment (e.g., an apple in a bowl, bag, box) vs. partial containment (e.g., a candle in a jar (sticking up out of it), a cigarette in a mouth, flowers in a vase). Correlated, possibly the same distinction: visible vs. invisible containment.

2. Containment in discrete object vs. in liquid or other mass. NB English 'the marble is IN/INSIDE the bucket', but 'The marble is IN/\*INSIDE the water. The presence or absence of an 'inside cavity' is sometimes thought to be the critical thing here, but I think perhaps it is 'discrete objecthood' instead, at least for English, since you can say 'there are seeds inside a watermelon', 'There's a silver dollar baked inside this cake', etc.

3. Containment 'in or among' members of an aggregate. Languages differ in whether they readily can use the equivalents of in for this relation. In general, the bigger or more distinct the objects of the aggregate are, the more likely the language will use a word similar to among and reject in (it is apparently harder to conceive of big distinct objects as forming a containing 'medium' of some kind). But English is rather tolerant, e.g., in offering you a gritty box of chocolates I can say 'Look out, there's gravel IN the bonbons'; you can also search for a small object 'IN the beads' or 'In the peas'. Dutch, for example, is less tolerant, and wants its 'media' finer, by and large: e.g., 'IN het zand' (in the sand) is OK, but you would say 'TUSSEN (=among) [not \*IN] de bonbons/peulen/kraaltjes' (among the bonbons/peas/beads). To say 'IN de bonbons' etc. would imply INSIDE each discrete object.

4. Containment by an encircling object: see #10 above, under 'ON use types.'

5. 'Strange containers' or 'strange containees'--e.g., is water IN a sponge? Is a hole IN a surface? (In Swedish, holes in cloth can be described as either IN or ON the cloth. Some speakers feel there is some difference, e.g., "I have holes ON my stockings" may suggest it is accidental, "...IN my stockings" suggests I made holes on purpose.

III. 'Body parts' of Ground object

Lourdes and I discovered that a useful technique for exploring what the body parts are of various objects is to stick a small ball of plasticine here and there: e.g., on the seat of a chair, on the front of its back, on the back of its back, on its leg...on various parts of a lightbulb, on various parts of a pair of scissors, etc. (Sometimes we used a pin instead of the plasticine, depending on the Ground object.) This can be done with one informant, but it was terrific with two. The informants sit so they can't see each other, and they each have a ball of plasticine and the same Ground object (this can be shared if necessary). The 'experimenter' shows Informant 1 a 'placement', e.g., the plasticine stuck to the side of a lightbulb, where it bulges out, or on its screw-base, or on its top. Informant 1 now tells Informant 2 where to put his plasticine to get the same arrangement. Informant 2 can ask questions. When 2 thinks he has it, he shows his arrangement to 1, who is either satisfied or says 'no' and proceeds to give further verbal instructions to 2 so that 2 can correct his arrangement. Our 2 informants took turns being the director. We ran through many placements with many different Ground objects rather quickly this way, and the informants liked the game, since things move fast, there is quick feedback, and there are entertaining mistakes!

For Ground objects, use both familiar objects and novel ones (e.g., a stapler, a Scotch-tape dispenser, a Popbead, a meatgrinder, a videocamera...). The novel ones are important for finding out how body parts are assigned creatively. We found that a pair of scissors had a nose and TWO butts; an odd flashlight composed of two block-shapes had two butts but no nose, and so on.