

## Aspects of English verbs of upward and downward motion

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Here we first give a summary of basic upward and downward motion verbs in English, and then consider how this set is further expanded in certain abstract contexts. We also take up more closely aspects of the activity verb CLIMB, which displays a wider range of uses than Japanese NOBORU.

### *Basic English verbs*

Basic verbs of upward and downward movement in Japanese are, respectively, AGARU and NOBORU, and SAGARU, ORIRU, OCHIRU and KUDARU (cf Yamada 1976, Nagashima 1976). Corresponding basic items for English are given below:

GO/COME UP	GO/COME DOWN
CLIMB	
RISE	FALL
LIFT	DROP
(ASCEND	DESCEND)

A major difference from Japanese concerns the presence of the prepositions UP and DOWN, which combine phrasally with the basic motion verbs GO and COME (and a wide range of other verbs, including CLIMB). A further difference is that while CLIMB is an agentive upward motion verb comparable to NOBORU, English lacks a basic non-phrasal agentive verb of downward motion corresponding to ORIRU. ASCEND and DESCEND are stylistically formal items; on this basis they are at best marginal members of basic verbs in this area and are placed in parentheses

for this reason.

Among upward motion verbs, GO/COME UP and CLIMB are prototypically agentive, RISE and LIFT non-agentive. Basic verbs are listed with common semantic types of subjects below, together with attested illustrative examples (from Cobuild (1995) unless otherwise stated) :

GO/COME UP : person / animal, vehicle, sun (COME UP), wind (COME UP), curtain, liquid, quantity level

- (1) *She started to go up and down the ladder, carrying the straw.* (BNC Corpus)
- (2) *Can David come up now?* (BNC Corpus)
- (3) *I can't go up the stairs yet.* (BNC Corpus)
- (4) *The lift went down...* (BNC Corpus)
- (5) *We climbed Storskarfjell on a long and hard day that started before the sun came up* (i. e. appeared over the horizon) *and finished long after it had gone down.* (BNC Corpus)
- (6) *Three days later a wind came up and revived the fire...* (BNC Corpus) (i. e. a wind began to blow)
- (7) *... the Passacaglia ends not when the curtain goes up but when it comes down.* (BNC Corpus)
- (8) *And it was a bit like a fountain, going in different directions, you know how water comes up and goes over.* (BNC Corpus)
- (9) *Lyn felt the blood come up into her face.* (BNC Corpus)
- (10) *Interest rates went up...*

CLIMB: person/animal, vehicle, sun, plant, land, quantity level

- (11) *Children love to climb.* (i. e. trees, walls etc)
- (12) *He picked up his suitcase and climbed the stairs.*
- (13) *The plane took off for LA, lost an engine as it climbed, and crashed just off the runway.*
- (14) *As the sun climbed higher in the sky, the heat grew gradually more oppressive...* (BNC Corpus)
- (15) *With bamboo canes I find the plants need to be trained to climb...* (BNC Corpus)

(16) *As the path climbed higher it got increasingly steep and narrow.* (BNC Corpus)

(17) *Prices have climbed by 21% since the beginning of the year...*

As noted, example (11), used intransitively and referring to children, suggests the climbing of trees, walls etc, rather than of mountains.

RISE: person, sun, curtain, smoke, wind, liquid, land, person (with respect to position in society etc), spirits, quantity level

(18) *Luther rose slowly from the chair.* (stylistically formal (Cobuild))

(19) *He wanted to be over the line of the ridge before the sun had risen.* (i. e. before the sun had appeared over the horizon)

(20) *The curtain rises towards the end of the Prelude.*

(21) *Wilson's ice-cold eyes watched the smoke rise from his cigarette...*

(22) *The wind was still rising, approaching a force nine gale.*

(23) *...the tides rise and fall*

(24) *...the blood rose to his face.* (BNC Corpus)

(25) *The ground begins to rise some 20 yards away...*

(26) *From an unlikely background he has risen rapidly through the ranks of government.*

(27) *Her spirits rose as they left the ugliness of London behind.* (BNC Corpus)

(28) *Investment levels have fallen, while the number of business failures has risen...*

(29) *The temperature has risen by around one degree centigrade over the last 150 years.* (BNC Corpus)

As noted, the first example (18), denoting agentive movement of a human subject, is a stylistically formal use; GET UP or STAND UP would be more neutral.

LIFT: body part, fog, clouds, spirits

(30) *Her eyebrows...lifted slightly.* (BNC Corpus)

(31) *The fog had lifted and revealed a warm, sunny day.*

(32) *As soon as she heard the telephone ring her spirits lifted.*

Note that LIFT as an upward motion verb has a relatively restricted

range. Finally we give examples for stylistically formal ASCEND:

ASCEND: person, vehicle, concrete object, land, person (re position in society etc)

(33) *Then we ascend steeply through forests of rhododendron.*

(34) *... as they waited for the slow-moving lift to ascend to the third floor.*  
(BNC Corpus)

(35) *Keep the drill centred in the borehole while it ascends and descends...*

(36) *... an ascending spiral path leading to a tower.*

(37) *Mobutu ascended through the ranks, eventually becoming commander of the army...*

All the uses in the Cobuild examples of ASCEND carry the comment 'used in written English' in that dictionary.

Downward motion verbs are characterized and illustrated below. Prototypically, GO DOWN is agentive, FALL and DROP non-agentive.

GO/COME DOWN: person/animal, vehicle, sun (GO DOWN), wind (GO DOWN), liquid, curtain, quantity level

(38) *... I came down to breakfast one morning...* (BNC Corpus)

(39) *She started to go up and down the ladder, carrying the straw.* (BNC Corpus)

(40) *... the glow left in the sky after the sun had gone down...* (i. e. after the sun had disappeared below the horizon)

(41) *The wind had gone down but the night had turned chilly...* (BNC Corpus)

(42) *Go to the top floor of your house and remain there till the water goes down...* (BNC Corpus)

(43) *Girls cheered and threw money on to the stage, but the curtain came down...* (BNC Corpus)

(44) *Income from sales tax went down...*

FALL: person/animal, concrete object, rain, night, wind, curtain, liquid, land, quantity level

- (45) *Prince Charles has again fallen from his horse...*
- (46) *Bombs fell in the town...*
- (47) *In the garden, the leaves of the horse chestnut had already fallen.*
- (48) *Winds reached up to 100mph in some places with an inch of rain falling within 15 minutes.*
- (49) *Finally night fell.*
- (50) *Piper drew a relieved breath as the wind fell.* (BNC Corpus)
- (51) *Act 2 is the object of loud acclaim as the curtain falls...* (BNC Corpus)
- (52) *... the heavier (cooler) water falls and the lighter (heated) water rises through the various connecting pipes.* (BNC Corpus)
- (53) *Along the coasts the ground falls gradually to about 100 fathoms.* (BNC Corpus)
- (54) *Her weight fell to under seven stones...*
- (55) *Fares had fallen about 20% in real terms.* (BNC Corpus)

DROP: concrete object, wind, spirits, quantity level

- (56) *Burning embers started dropping from the ceiling.*
- (57) *Bombs drop round us and the floor shudders.*
- (58) *The wind drops slightly as I am making myself another cup of tea and I like the idea of going out to watch the sun go down.* (BNC Corpus)
- (59) *Once again Sarah's spirits dropped.* (BNC Corpus)
- (60) *Temperatures can drop to freezing at night.*
- (61) *In 1990 the company saw its profits drop by 36%...* (BNC Corpus)
- (62) *His blood pressure had dropped severely...*

Finally, DESCEND:

DESCEND: person/animal, vehicle, night, land

- (63) *Things are cooler and more damp as we descend to the cellar...*
- (64) *... the huge crowd watched as Simon began to ascend rather than descend the pole.* (BNC Corpus)
- (65) *As winter comes and the mountain streams get cold, the yellow eels descend to lower, warmer stretches of the rivers.* (BNC Corpus)
- (66) *Then it is a relatively simple matter to descend and land in the field...*

(BNC Corpus) (i. e. in an aircraft)

(67) *Then the helicopter began to descend and only the rear of the house was in view.* (BNC Corpus)

(68) *Darkness has now descended and the moon and stars shine hazily in the clear sky.*

(69) *From here the path descends to the top of Summerhouse Crag...* (BNC Corpus)

Uses in examples (63) and (68) from Cobuild are characterized there as 'formal' and 'literary' respectively.

Focussing on basic verbs, it is clear from several of the examples that GO/COME UP vs GO/COME DOWN, and RISE vs FALL, function as opposites in relevant contexts:

(person) GO UP vs GO DOWN (ladder) (1)

(sun) COME UP vs GO DOWN (5)

(curtain) GO UP vs COME DOWN (7)

(liquids, quantity levels) RISE vs FALL (23, 28, 52)

The examples also illustrate patterns of combination of particular semantic types of subject nouns across upward/downward motion verbs. Human nouns, for example, appear to combine readily with all verbs except LIFT and DROP; and CURTAIN combines with GO UP, COME DOWN, RISE and FALL. Abstract nouns also combine with several different verbs: for example, nouns denoting quantitative values of various kinds appear to combine with all verbs other than LIFT. Working on the premise that there are no absolute synonyms in language, we assume that different choices of verbs in these cases convey different (semantic and/or stylistic) meanings. We examine this more closely below using two abstract subject nouns (PRICES, SPIRITS) illustrated with further attested examples.

### ***Extending the set***

Let us note first that PRICES and SPIRITS are both commonly described as HIGH or LOW, as examples of the common metaphorical extension of these adjectives from the domain of physical vertical position to

Aspects of English verbs of upward and downward motion that of position on quantitative or evaluative scales (Taylor 1995: 136–7).

(70) ... *those who aim to buy when prices are low and sell when they are high*  
... (BNC Corpus)

(71) *At supper, everyone was in high spirits...*

(72) *Tom Poole, who had nursed his father devotedly at the end, was in low spirits...*

Movements along this HIGH-LOW scale are thus naturally described in terms of the same metaphors by means of the present set of verbs.

First, examples for PRICES:

(73) *Prices have gone up 61 percent since deregulation.*

(74) *They expected house prices to rise...*

(75) (=17) *Prices have climbed by 21% since the beginning of the year...*

(76) *Prices have come down by between 30% and 50%...* (BNC Corpus)

(77) *If oil prices go down...* (BNC Corpus)

(78) *Between July and August, oil prices fell 0.2 per cent...*

(79) *Prices have dropped to a reasonable level...* (BNC Corpus)

Here we see all basic verbs except LIFT, for which examples are not readily attested in this use. Further examples of upward and downward movement make use of additional, non-basic verbs:

(80) *Oil prices have soared above forty dollars a barrel...* (BNC Corpus)

(81) *Share prices would have sunk—hurting small and big investors...*

(82) *When world oil prices plunged in the 1980s...* (BNC Corpus)

(83) *In Tokyo share prices have plummeted for the sixth successive day...*

These non-basic verbs serve to further amplify movement along the HIGH-LOW scale. In general, their use here is more typical of e. g. journalistic style than everyday conversation; in concrete contexts, SOAR is typically used of birds, such as eagles, flying high in the sky, SINK and PLUNGE of people or things moving downward into water (forcefully in the case of PLUNGE), PLUMMET of solid objects falling precipitously from a considerable height.

Basic examples for SPIRITS are:

(84) (=27) *Her spirits rose as they left the ugliness of London behind.* (BNC Corpus)

(85) (=32) *As soon as she heard the telephone ring her spirits lifted.*

(86) (=59) *Once again Sarah's spirits dropped.* (BNC Corpus)

Here GO/COME UP, GO/COME DOWN, CLIMB and FALL are absent, but LIFT appears. Non-basic verbs for SPIRITS are illustrated in the following. Again, these uses suggest written, rather than conversational, style.

(87) *For the first time in months, my spirits soared.*

(88) *Her spirits sank lower and lower.*

(89) *Leith's spirits, which had instantly lifted, at once plummeted.* (BNC Corpus)

PLUNGE is not readily attested with SPIRITS and, overall, it is noticeable that the affective scale for SPIRITS contains a smaller range of verbs than the quantitative scale for PRICES. The following expanded set of upward and downward motion verbs is thus typical for these two nouns:

PRICES: GO UP, CLIMB, RISE, SOAR

GO/COME DOWN, FALL, DROP, SINK, PLUNGE, PLUMMET

SPIRITS: RISE, LIFT, SOAR

DROP, SINK, PLUMMET

### **CLIMB**

Here we focus more closely on CLIMB, the basic English simple verb of agentive upward movement. CLIMB has attracted the attention of semanticians as an instance of polysemy. Taylor (1995: 105–9) considers the following examples:

(90) *The boy climbed the tree.*

(91) *The locomotive climbed the mountainside.*

(92) *The plane climbed to 30,000 feet.*

(93) *The temperature climbed into the 90s.*

(94) *Prices are climbing day by day.*

(95) *The boy climbed down the tree and over the wall.*



- (96) *We climbed along the cliff edge.*  
 (97) *John climbed out of his clothes.*  
 (98) \**The plane climbed (down) from 30,000 to 20,000 feet.*  
 (99) \**The locomotive climbed over the mountain.*  
 (100) \**The snail climbed along the top of the wall.*

In Taylor's analysis, (90) is a central example of CLIMB, denoting self-propelled upward motion involving laborious use of the limbs. This latter feature is weakened in the locomotive example (91), and totally absent in the case of the plane (92). The temperature and prices examples (93, 94) preserve the notion of upward movement, but now in the domain of a numerical scale rather than in physical space. In the next three examples (95–97), there is no upward motion, but CLIMB is acceptable insofar as laborious use of limbs is implied; this is further illustrated by the unacceptability of the final three examples, which involve non-upward motion with no use of the limbs. Based on these examples, Taylor analyzes CLIMB in terms of a chain of meaning resemblances, where links are clear between neighbouring uses but appear increasingly unconnected between more distant examples in the chain.

Below we supplement Taylor's apparently invented examples with attested examples of CLIMB, some repeated from above, arranged in a similar sequence of uses:

- (upward physical movement, use of limbs)  
 (101) (=11) *Children love to climb.*  
 (102) *Climbing the first hill took half an hour...*  
 (103) (=12) *He picked up his suitcase and climbed the stairs.*  
 (104) *I told her about him climbing up the drainpipe...*  
 (105) *He must have climbed out of his cot...*  
 (106) *He climbed into bed and immediately fell asleep.* (BNC Corpus)  
 (107) *The girls hurried outside, climbed into the car, and drove off...*

These all involve agentive human subjects, and are more or less central examples of CLIMB (although use of the limbs is not necessarily laborious in (102, 103)). In (105), cots normally have raised sides, requiring upward movement. This is less prominent in (106) and (107), although beds and

cars are both partially raised.

(upward physical movement, no limbs)

(108) (=15) *With bamboo canes I find the plants need to be trained to climb ...* (BNC Corpus)

(109) *The taxi climbed through gaunt, grey streets...* (BNC Corpus)

(110) (=13) *The plane took off for LA, lost an engine as it climbed, and crashed just off the runway.*

(111) (=14) *As the sun climbed higher in the sky, the heat grew gradually more oppressive...* (BNC Corpus)

These feature self-moving subjects. While none involve the use of limbs, climbing plants (108) make use of shoots, tendrils etc in a comparable way to the limbs of humans and animals, and CLIMB has no natural alternative in this example. In the other examples CLIMB conveys the notion of a sustained input of energy or effort. This would be absent with alternatives such as GO UP, which would be unnatural in all the examples; RISE would be natural in (111), but would again lack the more active focus of CLIMB.

(upward route of physical movement)

(112) (=16) *As the path climbed higher it got increasingly steep and narrow.* (BNC Corpus)

Here the effort conveyed by CLIMB is extended from the action of human subjects to the properties of the route itself: the notion is of a steadily rising path of some length, and RISE would again lack this focus.

(upward scalar movement, no limbs)

(113) (=17) *Prices have climbed by 21% since the beginning of the year...*

(114) *The nation's unemployment rate has been climbing steadily since last June...*

(115) *The FA Cup Final's audience climbed to 12.3 millions...*

(116) *Jaguar shares climbed from 43 pence to 510 pence.*

These all involve metaphorical movement of values along quantitative scales. GO UP and RISE are also natural in these examples, but CLIMB again ad-

ditionally suggests sustained upward movement rather than simply a change in level.

(non-upward physical movement, use of limbs)

(117) *Kelly climbed down the ladder into the water...*

(118) *He climbed down from the cab.*

(119) *He climbed out of the car to help her lift the load.* (BNC Corpus)

(120) *Willie climbed out of bed and joined him at the window.* (BNC Corpus)

These have agentive human subjects but, in varying degrees, the movement is downwards rather than upwards.

As pointed out earlier, both CLIMB and NOBORU are prototypically agentive verbs of upward movement, and they are translation equivalents in many contexts. Nevertheless, it seems clear that the two verbs differ quite widely in denotational range; in particular, CLIMB focusses on manner of movement, as well as direction, and this is reflected in uses which are not matched by NOBORU. A further related difference between the two verbs concerns opposites: while in most contexts NOBORU has clear opposites in ORIRU or KUDARU, it is much more difficult to identify a general opposite for CLIMB. CLIMB DOWN is an opposite of CLIMB in some contexts (e. g. climb the tree vs climb down the tree), but this involves a phrase, with the main contrastive weight being carried by prepositions.

### **Summary**

As in Japanese, English verbs of upward and downward motion include prototypically agentive and non-agentive items. A major difference arises from the presence of prepositions in English; in particular, basic expressions for agentive downward movement are phrases which combine verbs with the preposition DOWN. Upward/downward motion verbs are used metaphorically with abstract, as well as concrete, subject nouns; additional non-basic verbs are typical of written styles in these uses, with nouns of different semantic types collocating with different ranges of typical verbs. Among basic verbs, CLIMB overlaps to some extent with NOBORU as a

verb of agentive upward motion. Unlike GO/COME UP, however, CLIMB focusses on manner, as well as direction, of movement and this leads to a range of uses which have no parallel in the case of NOBORU.

### **References**

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